

**AP - 63**

**STAGE 1 & 2  
REPORTS**

**DATE:**

**10-10-08**



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October 10, 2008

Mr. Ed Hansen  
New Mexico Energy, Minerals and Natural Resources  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

Re: Addendum to the 34 Junction South Station Stage 1 and 2 Abatement Plan  
Section 2, T-17-S, R-36-E  
Plains SRS # 2005-00138  
Lea County, NM  
NMOCD Reference AP-63 (was 1R-1456)

Dear Mr. Hansen,

NOVA Safety and Environmental (NOVA), on behalf of Plains Marketing, L.P. (Plains) respectfully submits the following Addendum to the 34 Junction South Station *Stage 1 and 2 Abatement Plan* report dated October 2006. The site is located in Section 2, Township 17 South, Range 36 East in Lea County, NM. A Site Location Map is presented as Attachment Figure 1.

On July 22, 2008, two (2) monitor wells and two (2) soil borings were installed at the site. The new monitor wells, MW-13 and MW-14, are located to the southeast of existing monitor well MW-5 and to the south of existing well MW-12, respectively. Each well was advanced to a depth of approximately 70 feet below ground surface (bgs). The two soil borings, SB-1 and SB-2, were drilled adjacent to existing recovery well RW-1 and monitor well MW-3, respectively. Each soil boring was advanced to approximately 60 feet bgs. The soil borings and monitor wells were installed by Straub Corporation (Straub) of Stanton, Texas, a licensed monitor well driller in the State of New Mexico. The soil borings/monitor wells were drilled utilizing guidelines set forth by the office of the New Mexico State Engineer. A site map depicting the new well location is presented as Attachment Figure 2. The Boring Log and Monitor Well Details along with the State of New Mexico Well Record and Log are presented in the Attachments.

Soil samples collected during installation of the soil borings/monitor wells were collected utilizing a split-spoon sampling tool. Representative soil samples were divided into two separate portions using clean, disposable gloves and clean sampling tools. One portion of the soil sample was placed in a sterile glass container equipped with a Teflon-lined lid furnished by the laboratory. The container was filled to capacity to limit the amount of headspace present, labeled and placed on ice in an insulated cooler. Proper chain-of-custody documentation was maintained throughout the sampling and shipping process. The other portion of the soil sample was placed in a disposable zip-lock baggie. The baggie was labeled and sealed for headspace

analysis using a photoionization detector (PID) calibrated to a 100-ppm isobutylene standard. Each bagged sample was allowed to volatilize for approximately thirty minutes in the sunlight at ambient temperature prior to field screening activities. The samples with the highest recorded PID readings were submitted for laboratory analysis for BTEX by EPA Method 8021B and TPH by EPA Method 8015M GRO/DRO.

Laboratory analytical results on the soil samples collected from soil boring SB-1 on July 22, 2008 indicated that BTEX concentrations ranged from <0.050 mg/Kg to 137.53 mg/Kg and that TPH concentrations ranged from 299 mg/Kg to 17,480 mg/Kg. These are in comparison to previous analytical results of soil samples collected in September 2005 during the installation of recovery well RW-1 which reported BTEX concentrations ranging from <0.025 mg/Kg to 0.785 mg/Kg and TPH concentrations ranging from 2,440 mg/Kg to 9,680 mg/Kg. Total BTEX concentrations appear to have slightly increased with depth, but remain below NMOCD regulatory limits with the exception being the sample collected at 55 ft. bgs which exhibited a total BTEX concentration of 137.53 mg/Kg. TPH concentrations appear to have slightly decreased with depth with the exception being the sample collected at 55 ft. bgs which exhibited a TPH concentration of 17,480 mg/Kg.

Laboratory analytical results on the soil samples collected from soil boring SB-2 on July 22, 2008 indicated that BTEX concentrations ranged from 0.4984 mg/Kg to 14.439 mg/Kg and that TPH concentrations ranged from 762 mg/Kg to 5,220 mg/Kg. These are in comparison to previous analytical results of soil samples collected in September 2005 during the installation of monitor well MW-3 which reported BTEX concentrations ranging from 0.47 mg/Kg to 14.482 mg/Kg and TPH concentrations ranging from 1,800 mg/Kg to 15,300 mg/Kg. Total BTEX concentrations appear to have fluctuated with depth, but remain below NMOCD regulatory limits. TPH concentrations appear to have significantly decreased with depth. Attachment Table 2 summarizes the BTEX and TPH concentrations in soil samples collected during drilling activities.

Laboratory analytical results on soil samples collected during the drilling activities for the new monitor wells, MW-13 and MW-14, were below the NMOCD regulatory guidelines of 50 mg/Kg and 100 mg/Kg, respectively. See Attachment Table 2 for BTEX and TPH concentrations in soil.

Following completion of well installation activities, the new monitor wells (MW-13 and MW-14) were purged of a minimum of three well volumes of water using a disposable polyethylene bailer. Purge water was collected in a polystyrene tank and disposed of at a licensed disposal facility.

On August 13, 2008, groundwater samples were collected from MW-13 and MW-14 and analyzed for BTEX by method 8021B. On August 22, 2008, as per the NMOCD directive for Initial Groundwater Sampling Parameters, additional groundwater samples were collected and field monitored for temperature, specific conductance and pH. The samples were subsequently submitted to the laboratory and analyzed for Volatile Organic Compounds (VOCs), EPA Method 8260, Semi-Volatile Compounds (SVOCs), EPA Method 8270, Anions/cations, RCRA and WQCC Metals.

Laboratory analytical results on groundwater samples collected from MW-13 and MW-14 indicated that BTEX constituent concentrations were below the NMOCD regulatory guidelines. A listing of BTEX concentrations is summarized in Attachment Table 3. Attachment Tables 4 through 6 summarize the VOCs, SVOCs, Anion/Cation and Metals concentrations for the initial groundwater sampling of monitor wells MW-13 and MW-14. Laboratory analytical reports are attached.

Should you have any questions regarding this information, please contact me at 432-520-7720 or Mr. Daniel Bryant of Plains Marketing, L.P. at 432-557-5865.

Sincerely,



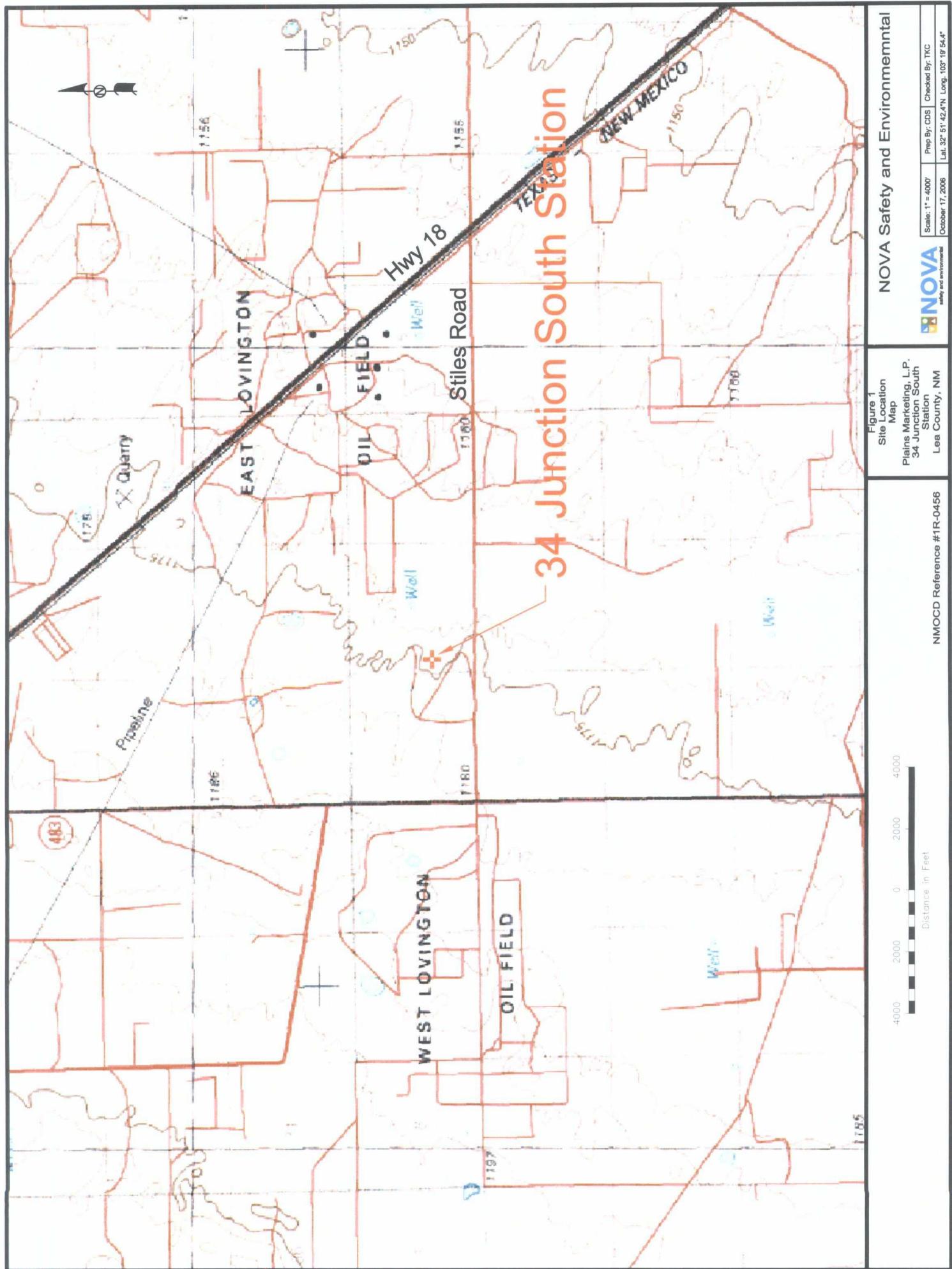
Ronald K. Rounsville  
Project Manager  
NOVA Safety and Environmental

**Attachments:**

- Figure 1 - Site Location Map
- Figure 2 - Site Map
- Table 1 – Groundwater Elevation Data
- Table 2 – Concentrations of BTEX and TPH in Soils
- Table 3 – Concentrations of BTEX in Groundwater
- Table 4 – Concentrations of Volatiles in Groundwater
- Table 5 – Concentrations of Semi-Volatiles in Groundwater
- Table 6 – Concentrations of Anions/Cations in Groundwater
- Table 7 – Concentrations of RCRA/WQCC Metals in Groundwater
- Laboratory Analytical Reports
- Boring Log and Monitor Well Details including State of New Mexico Well Record and Log

cc:

Larry Johnson, NMOCD, Hobbs, NM  
Daniel Bryant, Plains Marketing, L.P., Midland, TX  
Jeff Dann, Plains Marketing, L.P., Houston, TX  
file



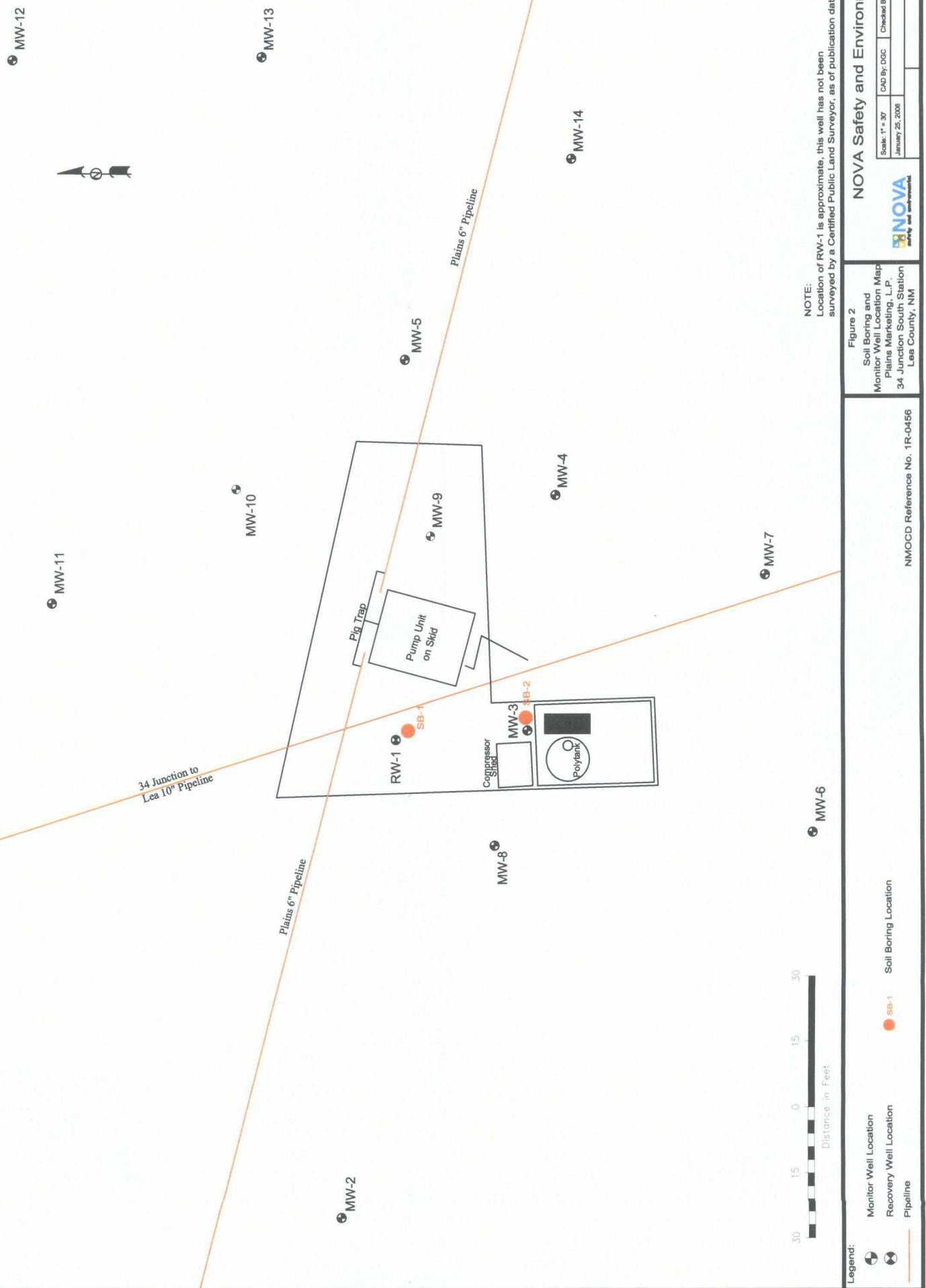


TABLE 1  
GROUNDWATER ELEVATION DATA - 2008

PLAINS MARKETING, L.P.  
34 JUNCTION SOUTH STATION  
LEA COUNTY, NEW MEXICO  
PLAINS EMS NO. 2005-00138

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW - 1	02/11/08	3,850.68	-	59.78	0.00	3,790.90
MW - 1	05/12/08	3,850.68	-	59.88	0.00	3,790.80
MW - 1	08/13/08	3,850.68	-	60.05	0.00	3,790.63
MW - 2	02/11/08	3,850.67	-	59.29	0.00	3,791.38
MW - 2	05/12/08	3,850.67	-	59.42	0.00	3,791.25
MW - 2	08/13/08	3,850.67	-	59.58	0.00	3,791.09
MW-3	11/02/05	3,850.43	57.21	65.36	8.15	3,792.00
MW-3	05/12/08	3,850.43	59.80	60.46	0.66	3,790.53
MW-3	08/13/08	3,850.43	59.96	60.73	0.77	3,790.35
MW - 4	01/04/08	3,850.26	59.75	60.21	0.46	3,790.44
MW - 4	01/10/08	3,850.26	59.92	60.22	0.30	3,790.30
MW - 4	01/16/08	3,850.26	59.79	60.36	0.57	3,790.38
MW - 4	01/18/08	3,850.26	59.81	60.30	0.49	3,790.38
MW - 4	01/22/08	3,850.26	59.84	60.34	0.50	3,790.35
MW - 4	02/07/08	3,850.26	59.92	60.67	0.75	3,790.23
MW - 4	02/11/08	3,850.26	59.91	60.16	0.25	3,790.31
MW - 4	02/20/08	3,850.26	59.85	60.28	0.43	3,790.35
MW - 4	02/27/08	3,850.26	59.86	60.39	0.53	3,790.32
MW - 4	03/13/08	3,850.26	59.82	60.72	0.90	3,790.31
MW - 4	03/20/08	3,850.26	59.82	60.53	0.71	3,790.33
MW - 4	03/22/08	3,850.26	59.86	60.52	0.66	3,790.30
MW - 4	04/03/08	3,850.26	59.88	60.47	0.59	3,790.29
MW - 4	04/09/08	3,850.26	59.91	60.48	0.57	3,790.26
MW - 4	04/16/08	3,850.26	59.91	60.40	0.49	3,790.28
MW - 4	04/23/08	3,850.26	59.90	60.46	0.56	3,790.28
MW - 4	05/01/08	3,850.26	59.89	60.70	0.81	3,790.25
MW - 4	05/12/08	3,850.26	59.88	60.67	0.79	3,790.26
MW - 4	05/29/08	3,850.26	59.94	60.71	0.77	3,790.20
MW - 4	06/06/08	3,850.26	59.07	60.65	1.58	3,790.95
MW - 4	06/11/08	3,850.26	60.02	60.47	0.45	3,790.17
MW - 4	06/18/08	3,850.26	59.59	60.64	1.05	3,790.51
MW - 4	06/24/08	3,850.26	60.00	60.66	0.66	3,790.16
MW - 4	07/01/08	3,850.26	60.02	60.56	0.54	3,790.16
MW - 4	07/15/08	3,850.26	60.06	60.57	0.51	3,790.12
MW - 4	07/23/08	3,850.26	60.03	60.74	0.71	3,790.12
MW - 4	08/02/08	3,850.26	60.02	60.83	0.81	3,790.12
MW - 4	08/13/08	3,850.26	60.00	61.05	1.05	3,790.10
MW - 4	08/13/08	3,850.26	60.00	61.05	1.05	3,790.10
MW - 4	09/11/08	3,850.26	59.95	61.57	1.62	3,790.07
MW-5	02/11/08	3,849.77	-	59.74	0.00	3,790.03
MW-5	05/12/08	3,849.77	-	59.84	0.00	3,789.93
MW-5	08/13/08	3,849.77	-	59.98	0.00	3,789.79
MW-6	02/11/08	3,851.10	-	60.08	0.00	3,791.02
MW-6	05/12/08	3,851.10	-	60.21	0.00	3,790.89
MW-6	08/13/08	3,851.10	-	60.37	0.00	3,790.73
MW-7	02/11/08	3,847.03	-	56.46	0.00	3,790.57
MW-7	05/12/08	3,847.03	-	56.59	0.00	3,790.44
MW-7	08/13/08	3,847.03	-	56.78	0.00	3,790.25
MW-8	01/04/08	3,851.00	60.30	60.49	0.19	3,790.67
MW-8	01/10/08	3,851.00	60.23	60.24	0.01	3,790.77
MW-8	01/16/08	3,851.00	60.06	60.30	0.24	3,790.90
MW-8	01/18/08	3,851.00	60.10	60.17	0.07	3,790.89
MW-8	01/22/08	3,851.00	60.09	60.23	0.14	3,790.89
MW-8	02/07/08	3,851.00	60.36	60.51	0.15	3,790.62
MW-8	02/11/08	3,851.00	60.10	60.28	0.18	3,790.87
MW-8	02/20/08	3,851.00	60.06	60.44	0.38	3,790.88
MW-8	02/27/08	3,851.00	60.10	60.44	0.34	3,790.85

**TABLE 1**  
**GROUNDWATER ELEVATION DATA - 2008**

PLAINS MARKETING, L.P.  
34 JUNCTION SOUTH STATION  
LEA COUNTY, NEW MEXICO  
PLAINS EMS NO. 2005-00138

WELL NUMBER	DATE MEASURED	CASING WELL ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUNDWATER ELEVATION
MW-8	03/13/08	3,851.00	60.06	60.74	0.68	3,790.84
MW-8	03/20/08	3,851.00	60.11	60.47	0.36	3,790.84
MW-8	03/22/08	3,851.00	60.12	60.46	0.34	3,790.83
MW-8	04/03/08	3,851.00	60.10	60.64	0.54	3,790.82
MW-8	04/09/08	3,851.00	60.17	60.47	0.30	3,790.79
MW-8	04/16/08	3,851.00	60.15	60.53	0.38	3,790.79
MW-8	04/23/08	3,851.00	60.15	60.58	0.43	3,790.79
MW-8	05/01/08	3,851.00	60.14	60.73	0.59	3,790.77
MW-8	05/12/08	3,851.00	60.16	60.76	0.60	3,790.75
MW-8	05/29/08	3,851.00	60.20	60.67	0.47	3,790.73
MW-8	06/06/08	3,851.00	60.21	60.72	0.51	3,790.71
MW-8	06/11/08	3,851.00	60.24	60.58	0.34	3,790.71
MW-8	06/18/08	3,851.00	60.23	60.66	0.43	3,790.71
MW-8	06/24/08	3,851.00	60.26	60.64	0.38	3,790.68
MW-8	07/01/08	3,851.00	60.25	60.68	0.43	3,790.69
MW-8	07/15/08	3,851.00	60.31	60.62	0.31	3,790.64
MW-8	07/23/08	3,851.00	60.28	60.73	0.45	3,790.65
MW-8	08/02/08	3,851.00	60.31	60.80	0.49	3,790.62
MW-8	08/13/08	3,851.00	60.27	61.01	0.74	3,790.62
MW-8	08/13/08	3,851.00	60.27	61.01	0.74	3,790.62
MW-8	09/11/08	3,851.00	60.24	61.33	1.09	3,790.60
MW-9	01/16/08	3,851.04	59.24	66.78	7.54	3,790.67
MW-9	05/12/08	3,851.04	59.32	67.21	7.89	3,790.54
MW-9	06/06/08	3,851.04	59.37	67.22	7.85	3,790.49
MW-9	08/13/08	3,851.04	59.49	67.21	7.72	3,790.39
MW-9	08/13/08	3,851.04	59.49	67.21	7.72	3,790.39
MW-10	01/04/08	3,851.07	60.33	62.49	2.16	3,790.42
MW-10	01/10/08	3,851.07	60.70	60.90	0.20	3,790.34
MW-10	01/16/08	3,851.07	60.73	60.90	0.17	3,790.31
MW-10	05/12/08	3,851.07	60.91	61.06	0.15	3,790.14
MW-10	06/06/08	3,851.07	60.71	62.09	1.38	3,790.15
MW-10	08/13/08	3,851.07	61.05	61.18	0.13	3,790.00
MW-10	08/13/08	3,851.07	61.05	61.18	0.13	3,790.00
MW-11	02/11/08	3,850.96	-	60.74	0.00	3,790.22
MW-11	05/12/08	3,850.96	-	60.83	0.00	3,790.13
MW-11	08/13/08	3,850.96	-	60.98	0.00	3,789.98
MW-12	02/11/08	3,850.45	-	61.19	0.00	3,789.26
MW-12	05/12/08	3,850.45	-	61.24	0.00	3,789.21
MW-12	08/13/08	3,850.45	-	61.40	0.00	3,789.05
MW-13	08/13/08			61.22		
MW-13	08/22/08			61.38		
MW-13	08/26/08			61.38		
MW-14	08/13/08			61.37		
MW-14	08/22/08			61.22		
MW-14	08/26/08			61.22		
RW-1	01/16/08	-	58.42	64.78	6.36	-
RW-1	05/12/08	-	58.40	65.66	7.26	-
RW-1	06/06/08		58.41	65.76	7.35	
RW-1	08/13/08		58.48	66.11	7.63	
RW-1	08/13/08		58.48	66.11	7.63	

**TABLE 2**  
**CONCENTRATIONS OF BTEX AND TPH IN SOIL**

PLAINS MARKETING, L.P.  
34 JUNCTION SOUTH STATION  
LEA COUNTY, NEW MEXICO  
EMS: 2005-00138

SAMPLE LOCATION	SAMPLE DEPTH	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030						METHOD: 8015M			TOTAL TPH (mg/Kg)
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- (mg/Kg)	M,P- (mg/Kg)	O-XYLENE (mg/Kg)	TOTAL BTEX (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)	DRO C <sub>12</sub> -C <sub>15</sub> (mg/Kg)		
<b>NMOCD REGULATORY LIMIT</b>			<b>10</b>					<b>50</b>				<b>100</b>
RW-1 5'	5' bgs	09/19/05	<0.025	0.096	0.036	0.112	<0.025	0.244	269	2170	2440	
RW-1 15'	15' bgs	09/19/05	<0.025	0.032	<0.025	0.049	<0.025	0.081	431	3330	3760	
RW-1 25'	25' bgs	09/19/05	0.025	0.129	0.042	0.520	0.069	0.785	1030	5400	6430	
RW-1 35'	35' bgs	09/19/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	228	2710	2940	
RW-1 45'	45' bgs	09/19/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	528	4530	5060	
RW-1 55'	55' bgs	09/19/05	<0.025	0.027	0.027	0.067	<0.025	0.121	1080	8600	9680	
MW-1 5'	5' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-1 15'	15' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-1 25'	25' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-1 35'	35' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-1 45'	45' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-1 55'	55' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-2 5'	5' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-2 15'	15' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-2 25'	25' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-2 35'	35' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-2 45'	45' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-2 55'	55' bgs	10/17/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-3 5'	5' bgs	10/18/05	<0.025	0.082	0.080	0.209	0.099	0.47	311	1490	1800	
MW-3 15'	15' bgs	10/18/05	0.242	1.95	2.19	7.33	2.77	14.482	2300	6770	9070	
MW-3 25'	25' bgs	10/18/05	0.325	3.46	4.52	13.5	5.53	27.335	2710	7280	9990	
MW-3 35'	35' bgs	10/18/05	<0.025	0.060	0.113	0.381	0.147	0.701	482	3030	3510	
MW-3 45'	45' bgs	10/18/05	0.028	0.299	0.542	1.90	0.764	3.533	1930	8200	10100	
MW-3 55'	55' bgs	10/18/05	0.057	0.742	1.43	3.58	2.02	7.829	3340	12000	15300	
MW-3 60'	60' bgs	10/18/05	<0.025	0.052	0.085	0.276	0.096	0.509	485	4090	4580	
MW-4 5'	5' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-4 15'	15' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-4 25'	25' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-4 35'	35' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-4 45'	45' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-4 55'	55' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-5 5'	5' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-5 15'	15' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-5 25'	25' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-5 35'	35' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-5 45'	45' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-5 55'	55' bgs	10/18/05	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-6 5'	5' bgs	02/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-6 15'	15' bgs	02/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-6 25'	25' bgs	02/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-6 55'	55' bgs	02/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-7 5'	5' bgs	02/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-7 15'	15' bgs	02/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-7 25'	25' bgs	02/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-7 55'	55' bgs	02/28/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	

**TABLE 2**  
**CONCENTRATIONS OF BTEX AND TPH IN SOIL**

PLAINS MARKETING, L.P.  
34 JUNCTION SOUTH STATION  
LEA COUNTY, NEW MEXICO  
EMS: 2005-00138

SAMPLE LOCATION	SAMPLE DEPTH	SAMPLE DATE	METHOD: EPA SW 846-8021B, 5030						TOTAL BTEX (mg/Kg)	METHOD: 8015M		TOTAL TPH (mg/Kg)
			BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL- (mg/Kg)	M,P- (mg/Kg)	O-XYLENE (mg/Kg)	GRO C <sub>6</sub> -C <sub>12</sub> (mg/Kg)		DRO C <sub>12</sub> -C <sub>35</sub> (mg/Kg)		
NMOCD REGULATORY LIMIT			10						50			100
MW-8 5'	5' bgs	03/01/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-8 15'	15' bgs	03/01/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-8 25'	25' bgs	03/01/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-8 50'	50' bgs	03/01/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-8 60'	60' bgs	03/01/06	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<10.0	<10.0	<10.0	
MW-9 @ 15'	15' bgs	09/13/06							<10.0	<10.0	<10.0	
MW-9 @ 35'	35' bgs	09/13/06							<10.0	<10.0	<10.0	
MW-9 @ 55'	55' bgs	09/13/06							1280	3130	4410	
MW-10 @ 15'	15' bgs	09/13/06							<10.0	<10.0	<10.0	
MW-10 @ 35'	35' bgs	09/13/06							<10.0	<10.0	<10.0	
MW-10 @ 55'	55' bgs	09/13/06							<10	62.6	62.6	
MW-11 @ 15'	15' bgs	11/29/06							<10.0	<10.0	<10.0	
MW-11 @ 30'	35' bgs	11/29/06							<10.0	<10.0	<10.0	
MW-11 @ 55'	55' bgs	11/29/06							<10.0	<10.0	<10.0	
MW-12 @ 15'	15' bgs	11/29/06							<10.0	<10.0	<10.0	
MW-12 @ 30'	35' bgs	11/29/06							<10.0	<10.0	<10.0	
MW-12 @ 55'	55' bgs	11/29/06							<10.0	<10.0	<10.0	
MW-13 @ 15'	15' bgs	07/22/08	<0.010	<0.010	<0.010	0.0345	0.0345	11.4	<50	<50	<50	
MW-13 @ 30'	35' bgs	07/22/08	<0.010	<0.010	<0.010	<0.010	<0.010	3.95	<50	<50	<50	
MW-13 @ 55'	55' bgs	07/22/08	<0.010	<0.010	<0.010	<0.010	<0.010	2.47	<50	<50	<50	
MW-14 @ 15'	15' bgs	07/22/08	<0.010	<0.010	<0.010	<0.010	<0.010	2.18	<50	<50	<50	
MW-14 @ 30'	35' bgs	07/22/08	<0.010	<0.010	<0.010	<0.010	<0.010	1.69	<50	<50	<50	
MW-14 @ 55'	55' bgs	07/22/08	<0.010	<0.010	<0.010	<0.010	<0.010	1.35	<50	<50	<50	
SB-1, 4-5' (RW-1)	5' bgs	07/22/08	<0.050	<0.050	<0.050	<0.050	<0.050	36.7	262	299		
SB-1, 14-15' (RW-1)	15' bgs	07/22/08	<0.100	0.598	1.15	5.84	7.588	293	3170	3463		
SB-1, 24-25' (RW-1)	25' bgs	07/22/08	0.316	3.95	3.88	17.5	25.65	892	4540	5432		
SB-1, 34-35' (RW-1)	35' bgs	07/22/08	<0.050	0.108	0.235	0.924	1.267	86.4	976	1062		
SB-1, 44-45' (RW-1)	45' bgs	07/22/08	<0.100	1.76	2.28	8.74	12.78	542	3520	4062		
SB-1, 54-55' (RW-1)	55' bgs	07/22/08	2.83	34.8	28.8	71.1	137.53	5280	12200	17480		
SB-2, 4-5' (MW-3)	5' bgs	07/22/08	<0.050	0.0731	0.165	0.49	0.728	77.3	685	762		
SB-2, 14-15' (MW-3)	15' bgs	07/22/08	<0.100	0.119	1.01	3.48	4.609	374	1730	2104		
SB-2, 24-25' (MW-3)	25' bgs	07/22/08	<0.100	0.329	2.04	7.15	9.519	989	3530	4519		
SB-2, 34-35' (MW-3)	35' bgs	07/22/08	<0.020	<0.020	0.0924	0.406	0.4984	122	2620	2742		
SB-2, 44-45' (MW-3)	45' bgs	07/22/08	<0.020	0.0712	0.439	1.6	2.11	271	2370	2641		
SB-2, 54-55' (MW-3)	55' bgs	07/22/08	<0.050	0.559	3.08	10.8	14.439	1400	3820	5220		
SB-2, 59-60' (MW-3)	60' bgs	07/22/08	<0.050	<0.050	0.3	0.902	1.202	504	1770	2274		

**TABLE 3**  
**CONCENTRATIONS OF BENZENE AND BTEX IN GROUNDWATER**

**PLAINS MARKETING, L.P.**  
**34 JUNCTION SOUTH STATION**  
**LEA COUNTY, NEW MEXICO**  
**PLAINS SRS NO: 2005-00138**

SAMPLE LOCATION	SAMPLE	METHODS: EPA SW 846-8021B				
		BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P-XYLENES (mg/L)	O-XYLENES (mg/L)
<b>NMOCD REGULATORY STANDARD</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>TOTAL XYLENES 0.62</b>	
MW-1	09/29/06	<0.001	<0.001	<0.001	<0.001	<0.001
MW-1	12/12/06	<0.001	<0.001	<0.001	<0.001	<0.001
MW-1	03/19/07	<0.001	<0.001	<0.001	<0.001	<0.001
MW-1	05/31/07	<0.001	<0.001	<0.001	<0.001	<0.001
MW-1	08/29/07	<0.001	<0.001	<0.001	<0.001	<0.001
MW-1	11/12/07	<0.005	<0.005	<0.005	<0.005	<0.005
MW-1	02/11/08	<0.001	<0.001	<0.001	<0.001	<0.001
MW-1	05/12/08	<0.001	<0.001	<0.001	<0.001	<0.001
MW-1	08/13/08	<0.001	<0.001	<0.001	<0.001	<0.001
MW-2	09/29/06	<0.001	<0.001	<0.001	<0.001	<0.001
MW-2	12/12/06	<0.001	<0.001	<0.001	<0.001	<0.001
MW-2	03/19/07	<0.001	<0.001	<0.001	<0.001	<0.001
MW-2	05/31/07	<0.001	<0.001	<0.001	<0.001	<0.001
MW-2	08/29/07	<0.001	<0.001	<0.001	<0.001	<0.001
MW-2	11/12/07	0.0015	<0.001	<0.001	<0.001	<0.001
MW-2	02/11/08	<0.001	<0.001	<0.001	<0.001	<0.001
MW-2	05/12/08	<0.001	<0.001	<0.001	<0.001	<0.001
MW-2	08/13/08	<0.001	<0.001	<0.001	<0.001	<0.001
MW-3	09/29/06	<b>4.85</b>	<b>4.42</b>	<b>0.439</b>		<b>1.55</b>
MW-4	09/29/06	0.0092	0.0048	<0.001		0.0021
MW-4	12/12/06	<b>0.415</b>	0.331	0.062		0.194
MW-4	03/19/07	<b>2.49</b>	<b>1.86</b>	0.282		<b>0.95</b>
MW-4	05/31/07	<b>6.27</b>	<b>3.8</b>	0.302		<b>0.981</b>
MW-5	09/29/06	<0.001	<0.001	<0.001		<0.001
MW-5	12/12/06	<0.001	<0.001	<0.001		<0.001
MW-5	03/19/07	<b>0.163</b>	<0.001	0.0359		0.0469
MW-5	05/31/07	<b>2.39</b>	<0.02	0.155		0.275
MW-5	08/29/07	<b>4.72</b>	<0.02	0.33		0.635
MW-5	11/12/07	<b>6.1</b>	<0.2	0.451		<0.2
MW-5	02/11/08	<b>7.66</b>	<0.100	0.441		0.276
MW-5	05/12/08	<b>9.04</b>	<0.0500	0.543		0.118
MW-5	08/13/08	<b>6.6</b>	<0.0500	0.22		<0.0500

**TABLE 3**

**PLAINS MARKETING, L.P.  
34 JUNCTION SOUTH STATION  
LEA COUNTY, NEW MEXICO  
PLAINS SRS NO: 2005-00138**

**TABLE 3**  
**CONCENTRATIONS OF BENZENE AND BTEX IN GROUNDWATER**

**PLAINS MARKETING, L.P.**  
**34 JUNCTION SOUTH STATION**  
**LEA COUNTY, NEW MEXICO**  
**PLAINS SRS NO: 2005-00138**

<b>SAMPLE LOCATION</b>	<b>SAMPLE</b>	<b>METHODS: EPA SW 846-8021B</b>				
		<b>BENZENE</b> (mg/L)	<b>TOLUENE</b> (mg/L)	<b>ETHYL-BENZENE</b> (mg/L)	<b>M,P-XYLENES</b> (mg/L)	<b>O-XYLENES</b> (mg/L)
<b>NMOCD REGULATORY STANDARD</b>		<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>TOTAL XYLENES 0.62</b>	
MW-12	12/12/06	<0.001	<0.001	<0.001	<0.001	
MW-12	12/12/06	<0.001	<0.001	<0.001	<0.001	
MW-12	03/19/07	<0.001	<0.001	<0.001	<0.001	
MW-12	05/31/07	<0.001	<0.001	<0.001	<0.001	
MW-12	08/29/07	<0.005	<0.005	<0.005	<0.005	
MW-12	11/12/07	<0.001	<0.001	<0.001	<0.001	
MW-12	02/11/08	<0.001	<0.001	<0.001	<0.001	
MW-12	05/12/08	<0.001	<0.001	<0.001	<0.001	
MW-12	08/13/08	<0.001	<0.001	<0.001	<0.001	
MW-13	08/13/08	<0.00500	<0.00500	<0.00500	<0.00500	
MW-14	08/13/08	<0.00500	<0.00500	<0.00500	<0.00500	
RW-1	09/29/06	<b>7.86</b>	<b>8.8</b>	<b>0.986</b>	<b>3.2</b>	

Table 4

## CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN WATER

Plains Marketing, L.P.

34 Junction South

LEA COUNTY, NEW MEXICO

NMOCRD REFERENCE NUMBER IR-0456

All water concentrations are in mg/L

Date Sampled	Sample Location	Bromochloromethane	Dichlorodifluoromethane	Chloromethane (methyl chloride)	Vinyl Chloride	Bromomethane (methyl bromide)	Trichlorofluoromethane	Acetone	Iodomethane (methyl iodide)	Carbon Disulfide	Acrylonitrile	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	2-Hexanone	
		-	-	-	-	-	-	-	-	-	-	-	-	-	-
08/22/08	MW-13	<0.001	<0.001	<0.001	<0.005	<0.001	<0.010	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005
08/22/08	MW-14	<0.001	<0.001	<0.001	<0.005	<0.001	<0.010	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005

Table 4

**CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN WATER**

PLAINFIELD ORGANIC  
Plains Marketing, L.P.

TNM Red Byrd # 1

LEA COUNTY NEW MEXICO

EEA COUNCIL, NEW MEALCO  
IN MOGD REFERRED DUE TO GREF ID 045

INMUC REFERENCE NUMBER IR-3

All water concentrations are in mg/L

Table 4

## **CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN WATER**

PLAINES MARKETING, L.P.  
PLAINES ORUANIC

TNM Red Byrd # 1

LEA COUNTY, NEW MEXICO  
NMOCB REFERENCE NUMBER 1P-0056

ALL INFORMATION CONTAINED HEREIN IS UNPUBLISHED PROPRIETARY INFORMATION OF  
SCHNEIDER ELECTRIC INC.

All water concentrations are in mg/L

Table 4

## CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN WATER Pine® Maritime® LP

Plains Marketing, L.P.

INM Red Byrd #1

LEA COUNTY: NEW MEXICO

11-353-121-122-123  
NINETY-NINE REFERENCE NUMBER 1B 0456

ARMED REFERENCE NUMBER IR-436

All water concentrations are in mg/L

Table 4

## CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN WATER

Plains Marketing, L.P.

TNM Red Ryd # 1

LEA COUNTY, NEW MEXICO

NMOCD REFERENCE NUMBER 1R-0456

All water concentrations are in mg/L

Date Sampled	Sample Location	Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.	1,2,4-Triethylbenzene	1,4-Dichlorobenzene (para)	1,3-Dichlorobenzene (meta)	p-Isopropyltoluene	4-Chlorotoluene	1,2-Dichlorobenzene (ortho)	n-Butylbenzene	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
08/22/08	MW-13	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005
08/22/08	MW-14	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005

TABLE 5

## CONCENTRATIONS OF SEMI-VOLATILES IN GROUNDWATER

**PLAINS MARKETING, L.P.**  
**34 JUNCTION SOUTH STATION**  
**LEA COUNTY, NEW MEXICO**  
**NMOCID REFERENCE NUMBER 1B-10456**

TABLE 6

## CONCENTRATIONS OF ANIONS/CATIONS IN GROUNDWATER

PLAINS PIPELINE, L.P.  
34 JUNCTION SOUTH  
LEA COUNTY, NEW MEXICO  
NMOCG REFERENCE NUMBER 1D 0456

All water concentrations are reported in mg/L

TABLE 7

## CONCENTRATIONS OF RCRA AND WQCC METALS IN GROUNDWATER

PLAINS MARKETING, L.P.  
 34 JUNCTION SOUTH  
 LEA COUNTY, NEW MEXICO  
 NMOCRD REFERENCE NUMBER 1R-0456

All water concentrations are reported in mg/L

EPA SW846-6010B

SAMPLE LOCATION	SAMPLE DATE	Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.	0.1 mg/L Arsenic	1.0 mg/L Barium	0.01 mg/L Cadmium	0.05 mg/L Chromium	0.002 mg/L Mercury	0.05 mg/L Selenium	1.0 mg/L Silver	1.0 mg/L Copper	1.0 mg/L Iron	0.2 mg/L Zinc	5.0 mg/L Aluminum	0.75 mg/L Boron	0.05 mg/L Cobalt	1.0 mg/L Molybdenum	0.2 mg/L Nickel	
MW - 13	08/22/08	<0.010	0.312	<0.002	0.018	<0.005	<0.0002	<0.020	<0.005	0.012	5.73	0.036	8.88	0.131	0.005	<0.010	0.008	
MW - 14	08/22/08	<0.010	0.629	<0.002	0.044	<0.005	<0.0002	<0.020	<0.005	0.017	13.1	0.209	0.058	19.5	0.134	0.012	<0.010	0.016



6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 806•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  
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260  
E-Mail: lab@traceanalysis.com

## NELAP Certifications

Lubbock T104704219-08-TX      El Paso T104704221-08-TX      Midland T104704392-08-TX

## Analytical and Quality Control Report

Ron Rounsville  
Nova Safety & Environmental  
2057 Commerce St.  
Midland, TX, 79703

Report Date: July 29, 2008

Work Order: 8072320



Project Location: SW of Lovington, NM  
Project Name: 34 Junction South  
Project Number: SRS-2005-00138

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
167919	MW-13, 14-15'	soil	2008-07-22	09:05	2008-07-23
167922	MW-13, 29-30'	soil	2008-07-22	09:13	2008-07-23
167927	MW-13, 54-55'	soil	2008-07-22	09:28	2008-07-23
167933	MW-14, 14-15'	soil	2008-07-22	10:38	2008-07-23
167936	MW-14, 29-30'	soil	2008-07-22	10:53	2008-07-23
167941	MW-14, 54-55'	soil	2008-07-22	11:18	2008-07-23

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



---

Dr. Blair Leftwich, Director

**Standard Flags**

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

## Case Narrative

Samples for project 34 Junction South were received by TraceAnalysis, Inc. on 2008-07-23 and assigned to work order 8072320. Samples for work order 8072320 were received intact at a temperature of 3.7 deg. C.

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

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

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8072320 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: July 29, 2008  
SRS-2005-00138

Work Order: 8072320  
34 Junction South

Page Number: 4 of 16  
SW of Lovington, NM

## Analytical Report

Sample: 167919 - MW-13, 14-15'

Laboratory: Midland

Analysis: BTEX

QC Batch: 50804

Prep Batch: 43587

Analytical Method: S 8021B

Date Analyzed: 2008-07-27

Sample Preparation: 2008-07-27

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.839	mg/Kg	1	1.00	84	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.900	mg/Kg	1	1.00	90	48.2 - 155

Sample: 167919 - MW-13, 14-15'

Laboratory: Midland

Analysis: TPH DRO

QC Batch: 50725

Prep Batch: 43528

Analytical Method: Mod. 8015B

Date Analyzed: 2008-07-24

Sample Preparation: 2008-07-24

Prep Method: N/A

Analyzed By: LD

Prepared By: LD

Parameter	Flag	Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		134	mg/Kg	1	100	134	10 - 250.4

Sample: 167919 - MW-13, 14-15'

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 50806

Prep Batch: 43587

Analytical Method: S 8015B

Date Analyzed: 2008-07-27

Sample Preparation: 2008-07-27

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

*continued ...*

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sample 167919 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Parameter	Flag	Result	Units	Dilution	RL
GRO		11.4	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.03	mg/Kg	1	1.00	103	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.24	mg/Kg	1	1.00	124	63.8 - 141

Sample: 167922 - MW-13, 29-30'

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50804  
Prep Batch: 43587

Analytical Method: S 8021B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.822	mg/Kg	1	1.00	82	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.884	mg/Kg	1	1.00	88	48.2 - 155

Sample: 167922 - MW-13, 29-30'

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50725  
Prep Batch: 43528

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-24

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

Parameter	Flag	Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		148	mg/Kg	1	100	148	10 - 250.4

**Sample: 167922 - MW-13, 29-30'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50806  
Prep Batch: 43587

Analytical Method: S 8015B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
GRO		3.95	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.02	mg/Kg	1	1.00	102	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.13	mg/Kg	1	1.00	113	63.8 - 141

**Sample: 167927 - MW-13, 54-55'**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50804  
Prep Batch: 43587

Analytical Method: S 8021B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.841	mg/Kg	1	1.00	84	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.899	mg/Kg	1	1.00	90	48.2 - 155

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**Sample: 167927 - MW-13, 54-55'**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50725  
Prep Batch: 43528

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-24

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

Parameter	Flag	Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		136	mg/Kg	1	100	136	10 - 250.4

**Sample: 167927 - MW-13, 54-55'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50806  
Prep Batch: 43587

Analytical Method: S 8015B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
GRO		2.47	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.05	mg/Kg	1	1.00	105	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.10	mg/Kg	1	1.00	110	63.8 - 141

**Sample: 167933 - MW-14, 14-15'**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50804  
Prep Batch: 43587

Analytical Method: S 8021B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.852	mg/Kg	1	1.00	85	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.903	mg/Kg	1	1.00	90	48.2 - 155

**Sample: 167933 - MW-14, 14-15'**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50725  
Prep Batch: 43528

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-24

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

Parameter	Flag	Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		127	mg/Kg	1	100	127	10 - 250.4

**Sample: 167933 - MW-14, 14-15'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50806  
Prep Batch: 43587

Analytical Method: S 8015B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
GRO		2.18	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.07	mg/Kg	1	1.00	107	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.13	mg/Kg	1	1.00	113	63.8 - 141

**Sample: 167936 - MW-14, 29-30'**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50804  
Prep Batch: 43587

Analytical Method: S 8021B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

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Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.812	mg/Kg	1	1.00	81	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.857	mg/Kg	1	1.00	86	48.2 - 155

Sample: 167936 - MW-14, 29-30'

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50725  
Prep Batch: 43528

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-24

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

Parameter	Flag	Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		159	mg/Kg	1	100	159	10 - 250.4

Sample: 167936 - MW-14, 29-30'

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50806  
Prep Batch: 43587

Analytical Method: S 8015B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
GRO		1.69	mg/Kg	1	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.00	mg/Kg	1	1.00	100	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	1.00	107	63.8 - 141

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**Sample: 167941 - MW-14, 54-55'**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50804  
Prep Batch: 43587

Analytical Method: S 8021B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	1	0.0100
Toluene		<0.0100	mg/Kg	1	0.0100
Ethylbenzene		<0.0100	mg/Kg	1	0.0100
Xylene		<0.0100	mg/Kg	1	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.837	mg/Kg	1	1.00	84	68 - 136.9
4-Bromofluorobenzene (4-BFB)		0.893	mg/Kg	1	1.00	89	48.2 - 155

**Sample: 167941 - MW-14, 54-55'**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50725  
Prep Batch: 43528

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-24

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

Parameter	Flag	Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		135	mg/Kg	1	100	135	10 - 250.4

**Sample: 167941 - MW-14, 54-55'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50806  
Prep Batch: 43587

Analytical Method: S 8015B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
GRO		1.35	mg/Kg	1	1.00

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.05	mg/Kg	1	1.00	105	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		1.11	mg/Kg	1	1.00	111	63.8 - 141

**Method Blank (1) QC Batch: 50725**

QC Batch: 50725 Date Analyzed: 2008-07-24 Analyzed By: LD  
Prep Batch: 43528 QC Preparation: 2008-07-24 Prepared By: LD

Parameter	Flag	Result	MDL	Units	RL
DRO		<15.8		mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		64.5	mg/Kg	1	100	64	30.9 - 146.4

**Method Blank (1) QC Batch: 50804**

QC Batch: 50804 Date Analyzed: 2008-07-27 Analyzed By: AG  
Prep Batch: 43587 QC Preparation: 2008-07-27 Prepared By: AG

Parameter	Flag	Result	MDL	Units	RL
Benzene		<0.00580		mg/Kg	0.01
Toluene		<0.00470		mg/Kg	0.01
Ethylbenzene		<0.00530		mg/Kg	0.01
Xylene		<0.0136		mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.873	mg/Kg	1	1.00	87	48.3 - 132.5
4-Bromofluorobenzene (4-BFB)		0.874	mg/Kg	1	1.00	87	37.7 - 128.9

**Method Blank (1) QC Batch: 50806**

QC Batch: 50806 Date Analyzed: 2008-07-27 Analyzed By: AG  
Prep Batch: 43587 QC Preparation: 2008-07-27 Prepared By: AG

Parameter	Flag	Result	MDL	Units	RL
GRO		<0.739		mg/Kg	1

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.08	mg/Kg	1	1.00	108	39.2 - 135.2
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	1.00	107	16.8 - 138.1

## Laboratory Control Spike (LCS-1)

QC Batch: 5072  
Prep Batch: 4352

Date Analyzed: 2008-07-24  
QC Preparation: 2008-07-24

Analyzed By: LD  
Prepared By: LD

Param	LCS	Units	Dil.	Spike	Matrix	Rec.	
	Result			Amount	Result	Rec.	Limit
DRO	169	mg/Kg	1	250	<15.8	68	27.8 - 152.1

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

Param	LCSD		Dil.	Spike Amount	Matrix		Rec.	Rec. Limit	RPD	RPD Limit
	Result	Units			Result	Rec.				
DRO	165	mg/Kg	1	250	<15.8	66	27.8 - 152.1	2	20	

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

## Laboratory Control Spike (LCS-1)

QC Batch: 50804  
Prep Batch: 43587

Date Analyzed: 2008-07-27  
QC Preparation: 2008-07-27

Analyzed By: AG  
Prepared By: AG

Param	LCS		Dil.	Spike Amount	Matrix Result	Rec.	
	Result	Units				Rec.	Limit
Benzene	0.986	mg/Kg	1	1.00	<0.00580	99	73.3 - 116.6
Toluene	1.01	mg/Kg	1	1.00	<0.00470	101	78.6 - 115.1
Ethylbenzene	1.03	mg/Kg	1	1.00	<0.00530	103	77.4 - 114.9
Xylene	3.08	mg/Kg	1	3.00	<0.0136	103	78.2 - 114.7

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

Param	LCSD		Spike		Matrix		Rec.		RPD Limit
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	
Benzene	0.990	mg/Kg	1	1.00	<0.00580	99	73.3 - 116.6	0	20
Toluene	1.02	mg/Kg	1	1.00	<0.00470	102	78.6 - 115.1	1	20
Ethylbenzene	1.02	mg/Kg	1	1.00	<0.00530	102	77.4 - 114.9	1	20
Xylene	3.07	mg/Kg	1	3.00	<0.0136	102	78.2 - 114.7	0	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
Trifluorotoluene (TFT)	0.841	0.847	mg/Kg	1	1.00	84	85	45 - 124.2
4-Bromofluorobenzene (4-BFB)	0.870	0.876	mg/Kg	1	1.00	87	88	47.2 - 130.4

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

QC Batch: 50806  
Prep Batch: 43587

Date Analyzed: 2008-07-27  
QC Preparation: 2008-07-27

Analyzed By: AG  
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	8.92	mg/Kg	1	10.0	<0.739	89	57.5 - 106.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit	RPD	RPD Limit
GRO	9.21	mg/Kg	1	10.0	<0.739	92	57.5 - 106.4	3	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)	1.11	1.12	mg/Kg	1	1.00	111	112	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	1.12	1.13	mg/Kg	1	1.00	112	113	53.3 - 123.6

#### Matrix Spike (MS-1) Spiked Sample: 167919

QC Batch: 50725  
Prep Batch: 43528

Date Analyzed: 2008-07-24  
QC Preparation: 2008-07-24

Analyzed By: LD  
Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	155	mg/Kg	1	250	44.1	44	18 - 179.5

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit	RPD	RPD Limit
DRO	143	mg/Kg	1	250	44.1	40	18 - 179.5	8	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	144	142	mg/Kg	1	100	144	142	34.1 - 158

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Matrix Spike (MS-1) Spiked Sample: 167941

QC Batch: 50804  
Prep Batch: 43587

Date Analyzed: 2008-07-27  
QC Preparation: 2008-07-27

Analyzed By: AG  
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.954	mg/Kg	1	1.00	<0.00580	95	62.2 - 134.3
Toluene	0.988	mg/Kg	1	1.00	<0.00470	99	62.6 - 145.4
Ethylbenzene	1.02	mg/Kg	1	1.00	<0.00530	102	64.6 - 146.4
Xylene	3.07	mg/Kg	1	3.00	<0.0136	102	64.3 - 148.8

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.04	mg/Kg	1	1.00	<0.00580	104	62.2 - 134.3	9	20
Toluene	1.08	mg/Kg	1	1.00	<0.00470	108	62.6 - 145.4	9	20
Ethylbenzene	1.11	mg/Kg	1	1.00	<0.00530	111	64.6 - 146.4	8	20
Xylene	3.34	mg/Kg	1	3.00	<0.0136	111	64.3 - 148.8	8	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.825	0.856	mg/Kg	1	1	82	86	38.8 - 127.5	
4-Bromofluorobenzene (4-BFB)	0.895	0.912	mg/Kg	1	1	90	91	49.3 - 142.4	

Matrix Spike (MS-1) Spiked Sample: 168008

QC Batch: 50806  
Prep Batch: 43587

Date Analyzed: 2008-07-27  
QC Preparation: 2008-07-27

Analyzed By: AG  
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	9.95	mg/Kg	1	10.0	1.08	89	10 - 139.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	11.4	mg/Kg	1	10.0	1.08	103	10 - 139.3	14	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.06	1.05	mg/Kg	1	1	106	105	21.3 - 119	
4-Bromofluorobenzene (4-BFB)	1.13	1.14	mg/Kg	1	1	113	114	52.5 - 154	

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### Standard (ICV-1)

QC Batch: 50725      Date Analyzed: 2008-07-24      Analyzed By: LD

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	225	90	85 - 115	2008-07-24

### Standard (CCV-1)

QC Batch: 50725      Date Analyzed: 2008-07-24      Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	287	115	85 - 115	2008-07-24

### Standard (CCV-2)

QC Batch: 50725      Date Analyzed: 2008-07-24      Analyzed By: LD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	221	88	85 - 115	2008-07-24

### Standard (ICV-1)

QC Batch: 50804      Date Analyzed: 2008-07-27      Analyzed By: AG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.100	100	85 - 115	2008-07-27
Toluene		mg/Kg	0.100	0.103	103	85 - 115	2008-07-27
Ethylbenzene		mg/Kg	0.100	0.104	104	85 - 115	2008-07-27
Xylene		mg/Kg	0.300	0.311	104	85 - 115	2008-07-27

### Standard (CCV-1)

QC Batch: 50804      Date Analyzed: 2008-07-27      Analyzed By: AG

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Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Benzene		mg/Kg	0.100	0.0973	97	85 - 115	2008-07-27
Toluene		mg/Kg	0.100	0.0991	99	85 - 115	2008-07-27
Ethylbenzene		mg/Kg	0.100	0.0999	100	85 - 115	2008-07-27
Xylene		mg/Kg	0.300	0.300	100	85 - 115	2008-07-27

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

QC Batch: 50806 Date Analyzed: 2008-07-27 Analyzed By: AG

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
GRO		mg/Kg	1.00	1.03	103	85 - 115	2008-07-27

### Standard (CCV-1)

QC Batch: 50806 Date Analyzed: 2008-07-27 Analyzed By: AG

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
GRO		mg/Kg	1.00	1.11	111	85 - 115	2008-07-27









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•699•6301 FAX 432•699•6313  
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260

E-Mail: lab@traceanalysis.com

## NELAP Certifications

Lubbock T104704219-08-TX      El Paso T104704221-08-TX      Midland T104704392-08-TX

## Analytical and Quality Control Report

Ron Rounsville  
Nova Safety & Environmental  
2057 Commerce St.  
Midland, TX, 79703

Report Date: July 28, 2008

Work Order: 8072317



Project Location: SW of Lovington, NM  
Project Name: 34 Junction South  
Project Number: SRS-2005-00138

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
167898	SB-1, 4-5'	soil	2008-07-22	14:45	2008-07-23
167899	SB-1, 14-15'	soil	2008-07-22	14:52	2008-07-23
167900	SB-1, 24-25'	soil	2008-07-22	15:00	2008-07-23
167901	SB-1, 34-35'	soil	2008-07-22	15:09	2008-07-23
167902	SB-1, 44-45'	soil	2008-07-22	15:18	2008-07-23
167903	SB-1, 54-55'	soil	2008-07-22	15:25	2008-07-23
167905	SB-2, 4-5'	soil	2008-07-22	13:30	2008-07-23
167906	SB-2, 14-15'	soil	2008-07-22	13:35	2008-07-23
167907	SB-2, 24-25'	soil	2008-07-22	13:40	2008-07-23
167908	SB-2, 34-35'	soil	2008-07-22	13:48	2008-07-23
167909	SB-2, 44-45'	soil	2008-07-22	13:52	2008-07-23
167910	SB-2, 54-55'	soil	2008-07-22	14:25	2008-07-23

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
167911	SB-2, 59-60'	soil	2008-07-22	14:28	2008-07-23

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



Dr. Blair Leftwich, Director

#### Standard Flags

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

## Case Narrative

Samples for project 34 Junction South were received by TraceAnalysis, Inc. on 2008-07-23 and assigned to work order 8072317. Samples for work order 8072317 were received intact at a temperature of 3.7 deg. C.

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

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

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8072317 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: 167898 - SB-1, 4-5'

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50753  
Prep Batch: 43480

Analytical Method: S 8021B  
Date Analyzed: 2008-07-23  
Sample Preparation: 2008-07-23

Prep Method: S 5035  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0500	mg/Kg	5	0.0100
Toluene		<0.0500	mg/Kg	5	0.0100
Ethylbenzene		<0.0500	mg/Kg	5	0.0100
Xylene		<0.0500	mg/Kg	5	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.25	mg/Kg	5	5.00	85	68 - 136.9
4-Bromofluorobenzene (4-BFB)		4.20	mg/Kg	5	5.00	84	48.2 - 155

Sample: 167898 - SB-1, 4-5'

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50662  
Prep Batch: 43474

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-23  
Sample Preparation: 2008-07-23

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

Parameter	Flag	Result	Units	Dilution	RL
DRO		262	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		143	mg/Kg	1	100	143	10 - 250.4

Sample: 167898 - SB-1, 4-5'

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50734  
Prep Batch: 43480

Analytical Method: S 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-23

Prep Method: S 5035  
Analyzed By: DC  
Prepared By: DC

*continued ...*

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sample 167898 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Parameter	Flag	Result	Units	Dilution	RL
GRO		36.7	mg/Kg	5	1.00
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)		5.35	mg/Kg	5.00	107
4-Bromofluorobenzene (4-BFB)		6.14	mg/Kg	5.00	123

Sample: 167899 - SB-1, 14-15'

Laboratory: Midland

Analysis: BTEX

QC Batch: 50753

Prep Batch: 43480

Analytical Method: S 8021B

Date Analyzed: 2008-07-23

Sample Preparation: 2008-07-23

Prep Method: S 5035

Analyzed By: DC

Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.100	mg/Kg	10	0.0100
Toluene		0.598	mg/Kg	10	0.0100
Ethylbenzene		1.15	mg/Kg	10	0.0100
Xylene		5.84	mg/Kg	10	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.79	mg/Kg	10	10.0	88	68 - 136.9
4-Bromofluorobenzene (4-BFB)		9.24	mg/Kg	10	10.0	92	48.2 - 155

Sample: 167899 - SB-1, 14-15'

Laboratory: Midland

Analysis: TPH DRO

QC Batch: 50662

Prep Batch: 43474

Analytical Method: Mod. 8015B

Date Analyzed: 2008-07-23

Sample Preparation: 2008-07-23

Prep Method: N/A

Analyzed By: LD

Prepared By: LD

Parameter	Flag	Result	Units	Dilution	RL
DRO		3170	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	1	395	mg/Kg	1	100	395	10 - 250.4

Sample: 167899 - SB-1, 14-15<sup>1</sup>

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50734  
Prep Batch: 43480

Analytical Method: S 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-23

Prep Method: S 5035  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
GRO		293	mg/Kg	10	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		10.9	mg/Kg	10	10.0	109	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		11.5	mg/Kg	10	10.0	115	63.8 - 141

Sample: 167900 - SB-1, 24-25<sup>1</sup>

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50753  
Prep Batch: 43480

Analytical Method: S 8021B  
Date Analyzed: 2008-07-23  
Sample Preparation: 2008-07-23

Prep Method: S 5035  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.316	mg/Kg	10	0.0100
Toluene		3.95	mg/Kg	10	0.0100
Ethylbenzene		3.88	mg/Kg	10	0.0100
Xylene		17.5	mg/Kg	10	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.64	mg/Kg	10	10.0	86	68 - 136.9
4-Bromofluorobenzene (4-BFB)		10.8	mg/Kg	10	10.0	108	48.2 - 155

Sample: 167900 - SB-1, 24-25<sup>1</sup>

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50662  
Prep Batch: 43474

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-23  
Sample Preparation: 2008-07-23

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

<sup>1</sup>High surrogate recovery due to peak interference.

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Parameter	Flag	Result	Units	Dilution	RL
DRO		4540	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	2	567	mg/Kg	1	100	567	10 - 250.4

**Sample: 167900 - SB-1, 24-25'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50734  
Prep Batch: 43480

Analytical Method: S 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-23

Prep Method: S 5035  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
GRO		892	mg/Kg	10	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		10.6	mg/Kg	10	10.0	106	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		13.7	mg/Kg	10	10.0	137	63.8 - 141

**Sample: 167901 - SB-1, 34-35'**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50753  
Prep Batch: 43480

Analytical Method: S 8021B  
Date Analyzed: 2008-07-23  
Sample Preparation: 2008-07-23

Prep Method: S 5035  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0500	mg/Kg	5	0.0100
Toluene		0.108	mg/Kg	5	0.0100
Ethylbenzene		0.235	mg/Kg	5	0.0100
Xylene		0.924	mg/Kg	5	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.40	mg/Kg	5	5.00	88	68 - 136.9
4-Bromofluorobenzene (4-BFB)		4.44	mg/Kg	5	5.00	89	48.2 - 155

<sup>2</sup>High surrogate recovery due to peak interference.

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**Sample: 167901 - SB-1, 34-35'**

Laboratory: Midland

Analysis: TPH DRO

QC Batch: 50662

Prep Batch: 43474

Analytical Method: Mod. 8015B

Date Analyzed: 2008-07-23

Sample Preparation: 2008-07-23

Prep Method: N/A

Analyzed By: LD

Prepared By: LD

Parameter	Flag	Result	Units	Dilution	RL
D <sub>1</sub> RO		976	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		154	mg/Kg	1	100	154	10 - 250.4

**Sample: 167901 - SB-1, 34-35'**

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 50734

Prep Batch: 43480

Analytical Method: S 8015B

Date Analyzed: 2008-07-24

Sample Preparation: 2008-07-23

Prep Method: S 5035

Analyzed By: DC

Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
G <sub>1</sub> RO		86.4	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.39	mg/Kg	5	5.00	108	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		5.47	mg/Kg	5	5.00	109	63.8 - 141

**Sample: 167902 - SB-1, 44-45'**

Laboratory: Midland

Analysis: BTEX

QC Batch: 50753

Prep Batch: 43480

Analytical Method: S 8021B

Date Analyzed: 2008-07-23

Sample Preparation: 2008-07-23

Prep Method: S 5035

Analyzed By: DC

Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.100	mg/Kg	10	0.0100
Toluene		1.76	mg/Kg	10	0.0100
Ethylbenzene		2.28	mg/Kg	10	0.0100
Xylene		8.74	mg/Kg	10	0.0100

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.91	mg/Kg	10	10.0	89	68 - 136.9
4-Bromofluorobenzene (4-BFB)		9.84	mg/Kg	10	10.0	98	48.2 - 155

**Sample: 167902 - SB-1, 44-45'**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50662  
Prep Batch: 43474

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-23  
Sample Preparation: 2008-07-23

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

Parameter	Flag	Result	Units	Dilution	RL		
DRO		3520	mg/Kg	1	50.0		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	3	502	mg/Kg	1	100	502	10 - 250.4

**Sample: 167902 - SB-1, 44-45'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50734  
Prep Batch: 43480

Analytical Method: S 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-23

Prep Method: S 5035  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL		
GRO		542	mg/Kg	10	1.00		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		10.9	mg/Kg	10	10.0	109	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		12.5	mg/Kg	10	10.0	125	63.8 - 141

**Sample: 167903 - SB-1, 54-55'**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50753  
Prep Batch: 43480

Analytical Method: S 8021B  
Date Analyzed: 2008-07-23  
Sample Preparation: 2008-07-23

Prep Method: S 5035  
Analyzed By: DC  
Prepared By: DC

<sup>3</sup>High surrogate recovery. Sample non-detect, result bias high.

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Parameter	Flag	Result	Units	Dilution	RL
Benzene		2.83	mg/Kg	50	0.0100
Toluene		34.8	mg/Kg	50	0.0100
Ethylbenzene		28.8	mg/Kg	50	0.0100
Xylene		71.1	mg/Kg	50	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		43.7	mg/Kg	50	50.0	87	68 - 136.9
4-Bromofluorobenzene (4-BFB)		52.1	mg/Kg	50	50.0	104	48.2 - 155

**Sample: 167903 - SB-1, 54-55'**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50725  
Prep Batch: 43528

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-24

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

Parameter	Flag	Result	Units	Dilution	RL		
DRO		12200	mg/Kg	5	50.0		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	4	1960	mg/Kg	5	100	1960	10 - 250.4

**Sample: 167903 - SB-1, 54-55'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50734  
Prep Batch: 43480

Analytical Method: S 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-23

Prep Method: S 5035  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL		
GRO		5280	mg/Kg	50	1.00		
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		53.8	mg/Kg	50	50.0	108	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)	5	71.0	mg/Kg	50	50.0	142	63.8 - 141

<sup>4</sup>High surrogate recovery due to peak interference.

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

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**Sample: 167905 - SB-2, 4-5'**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50753  
Prep Batch: 43480

Analytical Method: S 8021B  
Date Analyzed: 2008-07-23  
Sample Preparation: 2008-07-23

Prep Method: S 5035  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0500	mg/Kg	5	0.0100
Toluene		0.0731	mg/Kg	5	0.0100
Ethylbenzene		0.165	mg/Kg	5	0.0100
Xylene		0.490	mg/Kg	5	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.46	mg/Kg	5	5.00	89	68 - 136.9
4-Bromofluorobenzene (4-BFB)		4.56	mg/Kg	5	5.00	91	48.2 - 155

**Sample: 167905 - SB-2, 4-5'**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50662  
Prep Batch: 43474

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-23  
Sample Preparation: 2008-07-23

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

Parameter	Flag	Result	Units	Dilution	RL
DRO		685	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		203	mg/Kg	1	100	203	10 - 250.4

**Sample: 167905 - SB-2, 4-5'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50734  
Prep Batch: 43480

Analytical Method: S 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-23

Prep Method: S 5035  
Analyzed By: DC  
Prepared By: DC

Parameter	Flag	Result	Units	Dilution	RL
GRO		77.3	mg/Kg	5	1.00

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.48	mg/Kg	5	5.00	110	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		5.13	mg/Kg	5	5.00	103	63.8 - 141

**Sample: 167906 - SB-2, 14-15'**

Laboratory: Midland

Analysis: BTEX

QC Batch: 50804

Prep Batch: 43587

Analytical Method: S 8021B

Date Analyzed: 2008-07-27

Sample Preparation: 2008-07-27

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.100	mg/Kg	10	0.0100
Toluene		0.119	mg/Kg	10	0.0100
Ethylbenzene		1.01	mg/Kg	10	0.0100
Xylene		3.48	mg/Kg	10	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.55	mg/Kg	10	10.0	86	68 - 136.9
4-Bromofluorobenzene (4-BFB)		9.35	mg/Kg	10	10.0	94	48.2 - 155

**Sample: 167906 - SB-2, 14-15'**

Laboratory: Midland

Analysis: TPH DRO

QC Batch: 50662

Prep Batch: 43474

Analytical Method: Mod. 8015B

Date Analyzed: 2008-07-23

Sample Preparation: 2008-07-23

Prep Method: N/A

Analyzed By: LD

Prepared By: LD

Parameter	Flag	Result	Units	Dilution	RL
DRO		1730	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	6	267	mg/Kg	1	100	267	10 - 250.4

**Sample: 167906 - SB-2, 14-15'**

Laboratory: Midland

Analysis: TPH GRO

QC Batch: 50806

Prep Batch: 43587

Analytical Method: S 8015B

Date Analyzed: 2008-07-27

Sample Preparation: 2008-07-27

Prep Method: S 5035

Analyzed By: AG

Prepared By: AG

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

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Parameter	Flag	Result	Units	Dilution	RL
GRO		374	mg/Kg	10	1.00
Surrogate	Flag	Result	Units	Dilution	Spike Amount
Trifluorotoluene (TFT)		10.6	mg/Kg	10	10.0
4-Bromofluorobenzene (4-BFB)		11.9	mg/Kg	10	10.0
					Percent Recovery
					Recovery Limits
					67.5 - 135.2
					63.8 - 141

Sample: 167907 - SB-2, 24-25'

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50804  
Prep Batch: 43587

Analytical Method: S 8021B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.100	mg/Kg	10	0.0100
Toluene		0.329	mg/Kg	10	0.0100
Ethylbenzene		2.04	mg/Kg	10	0.0100
Xylene		7.15	mg/Kg	10	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		8.46	mg/Kg	10	10.0	85	68 - 136.9
4-Bromofluorobenzene (4-BFB)		10.0	mg/Kg	10	10.0	100	48.2 - 155

Sample: 167907 - SB-2, 24-25'

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50662  
Prep Batch: 43474

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-23  
Sample Preparation: 2008-07-23

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

Parameter	Flag	Result	Units	Dilution	RL
DRO		3530	mg/Kg	1	50.0
Surrogate	Flag	Result	Units	Dilution	Spike Amount
n-Triacontane	7	462	mg/Kg	1	100
					Percent Recovery
					Recovery Limits
					10 - 250.4

<sup>7</sup>High surrogate recovery due to peak interference.

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Sample: 167907 - SB-2, 24-25'

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5035
Analysis: TPH GRO	Date Analyzed: 2008-07-27	Analyzed By: AG
QC Batch: 50806	Sample Preparation: 2008-07-27	Prepared By: AG
Prep Batch: 43587		

Parameter	Flag	Result	Units	Dilution	RL
GRO		989	mg/Kg	10	1.00
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)		10.8	mg/Kg	10	108
4-Bromofluorobenzene (4-BFB)		13.1	mg/Kg	10	131

Sample: 167908 - SB-2, 34-35'

Laboratory: Midland	Analytical Method: S 8021B	Prep Method: S 5035
Analysis: BTEX	Date Analyzed: 2008-07-27	Analyzed By: AG
QC Batch: 50804	Sample Preparation: 2008-07-27	Prepared By: AG
Prep Batch: 43587		

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	2	0.0100
Toluene		<0.0200	mg/Kg	2	0.0100
Ethylbenzene		0.0924	mg/Kg	2	0.0100
Xylene		0.406	mg/Kg	2	0.0100
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)		1.70	mg/Kg	2	85
4-Bromofluorobenzene (4-BFB)		1.90	mg/Kg	2	95

Sample: 167908 - SB-2, 34-35'

Laboratory: Midland	Analytical Method: Mod. 8015B	Prep Method: N/A
Analysis: TPH DRO	Date Analyzed: 2008-07-24	Analyzed By: LD
QC Batch: 50725	Sample Preparation: 2008-07-24	Prepared By: LD
Prep Batch: 43528		

Parameter	Flag	Result	Units	Dilution	RL
DRO		2620	mg/Kg	1	50.0

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	8	552	mg/Kg	1	100	552	10 - 250.4

Sample: 167908 - SB-2, 34-35'

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50806  
Prep Batch: 43587

Analytical Method: S 8015B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
GRO		122	mg/Kg	2	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		2.08	mg/Kg	2	2.00	104	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		2.35	mg/Kg	2	2.00	118	63.8 - 141

Sample: 167909 - SB-2, 44-45'

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50804  
Prep Batch: 43587

Analytical Method: S 8021B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0200	mg/Kg	2	0.0100
Toluene		0.0712	mg/Kg	2	0.0100
Ethylbenzene		0.439	mg/Kg	2	0.0100
Xylene		1.60	mg/Kg	2	0.0100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.74	mg/Kg	2	2.00	87	68 - 136.9
4-Bromofluorobenzene (4-BFB)		2.18	mg/Kg	2	2.00	109	48.2 - 155

Sample: 167909 - SB-2, 44-45'

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50725  
Prep Batch: 43528

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-24

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

<sup>8</sup>High surrogate recovery due to peak interference.

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Parameter	Flag	Result	Units	Dilution	RL	
DRO		2370	mg/Kg	1	50.0	
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	
n-Triacontane	9	488	mg/Kg	100	488	10 - 250.4

Sample: 167909 - SB-2, 44-45<sup>9</sup>

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50806  
Prep Batch: 43587

Analytical Method: S 8015B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL	
GRO		271	mg/Kg	2	1.00	
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	
Trifluorotoluene (TFT)		2.15	mg/Kg	2	108	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		2.79	mg/Kg	2	140	63.8 - 141

Sample: 167910 - SB-2, 54-55<sup>9</sup>

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50804  
Prep Batch: 43587

Analytical Method: S 8021B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL	
Benzene		<0.0500	mg/Kg	5	0.0100	
Toluene		0.559	mg/Kg	5	0.0100	
Ethylbenzene		3.08	mg/Kg	5	0.0100	
Xylene		10.8	mg/Kg	5	0.0100	
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery	
Trifluorotoluene (TFT)		4.36	mg/Kg	5	87	68 - 136.9
4-Bromofluorobenzene (4-BFB)		6.79	mg/Kg	5	136	48.2 - 155

<sup>9</sup>High surrogate recovery due to peak interference.

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**Sample: 167910 - SB-2, 54-55'**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50725  
Prep Batch: 43528

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-24

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

Parameter	Flag	Result	Units	Dilution	RL
DRO		3820	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	<sup>10</sup>	694	mg/Kg	1	100	694	10 - 250.4

**Sample: 167910 - SB-2, 54-55'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50806  
Prep Batch: 43587

Analytical Method: S 8015B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
GRO		1400	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.38	mg/Kg	5	5.00	108	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)	<sup>11</sup>	9.12	mg/Kg	5	1.00	912	63.8 - 141

**Sample: 167911 - SB-2, 59-60'**

Laboratory: Midland  
Analysis: BTEX  
QC Batch: 50804  
Prep Batch: 43587

Analytical Method: S 8021B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
Benzene		<0.0500	mg/Kg	5	0.0100
Toluene		<0.0500	mg/Kg	5	0.0100
Ethylbenzene		0.300	mg/Kg	5	0.0100
Xylene		0.902	mg/Kg	5	0.0100

<sup>10</sup>High surrogate recovery due to peak interference.

<sup>11</sup>High surrogate recovery due to peak interference.

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		4.31	mg/Kg	5	5.00	86	68 - 136.9
4-Bromofluorobenzene (4-BFB)		4.71	mg/Kg	5	5.00	94	48.2 - 155

**Sample: 167911 - SB-2, 59-60'**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 50725  
Prep Batch: 43528

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-07-24  
Sample Preparation: 2008-07-24

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

Parameter	Flag	Result	Units	Dilution	RL
DRO		1770	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triaccontane	<sup>12</sup>	349	mg/Kg	1	100	349	10 - 250.4

**Sample: 167911 - SB-2, 59-60'**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 50806  
Prep Batch: 43587

Analytical Method: S 8015B  
Date Analyzed: 2008-07-27  
Sample Preparation: 2008-07-27

Prep Method: S 5035  
Analyzed By: AG  
Prepared By: AG

Parameter	Flag	Result	Units	Dilution	RL
GRO		504	mg/Kg	5	1.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.27	mg/Kg	5	5.00	105	67.5 - 135.2
4-Bromofluorobenzene (4-BFB)		6.00	mg/Kg	5	5.00	120	63.8 - 141

**Method Blank (1) QC Batch: 50662**

QC Batch: 50662  
Prep Batch: 43474

Date Analyzed: 2008-07-23  
QC Preparation: 2008-07-23

Analyzed By: LD  
Prepared By: LD

<sup>12</sup>High surrogate recovery due to peak interference.

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Parameter	Flag	MDL	Result	Units	RL
DRO		<15.8		mg/Kg	50
Surrogate	Flag	Result	Units	Dilution	Spike Amount
n-Triacontane		49.1	mg/Kg	1	100
					Percent Recovery
					Recovery Limits
					30.9 - 146.4

**Method Blank (1)** QC Batch: 50725

QC Batch: 50725 Date Analyzed: 2008-07-24 Analyzed By: LD  
Prep Batch: 43528 QC Preparation: 2008-07-24 Prepared By: LD

Parameter	Flag	MDL	Result	Units	RL
DRO		<15.8		mg/Kg	50
Surrogate	Flag	Result	Units	Dilution	Spike Amount
n-Triacontane		64.5	mg/Kg	1	100
					Percent Recovery
					Recovery Limits
					30.9 - 146.4

**Method Blank (1)** QC Batch: 50734

QC Batch: 50734 Date Analyzed: 2008-07-24 Analyzed By: DC  
Prep Batch: 43480 QC Preparation: 2008-07-23 Prepared By: DC

Parameter	Flag	MDL	Result	Units	RL
GRO		<0.739		mg/Kg	1
Surrogate	Flag	Result	Units	Dilution	Spike Amount
Trifluorotoluene (TFT)		1.09	mg/Kg	1	1.00
4-Bromofluorobenzene (4-BFB)		1.06	mg/Kg	1	1.00
					Percent Recovery
					Recovery Limits
					39.2 - 135.2
					16.8 - 138.1

**Method Blank (1)** QC Batch: 50753

QC Batch: 50753 Date Analyzed: 2008-07-23 Analyzed By: DC  
Prep Batch: 43480 QC Preparation: 2008-07-23 Prepared By: DC

Parameter	Flag	MDL	Result	Units	RL
Benzene		<0.00580		mg/Kg	0.01

*continued ...*

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*method blank continued . . .*

Parameter	Flag	MDL Result	Units	RL
Toluene		<0.00470	mg/Kg	0.01
Ethylbenzene		<0.00530	mg/Kg	0.01
Xylene		<0.0136	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.897	mg/Kg	1	1.00	90	48.3 - 132.5
4-Bromofluorobenzene (4-BFB)		0.881	mg/Kg	1	1.00	88	37.7 - 128.9

Method Blank (1) QC Batch: 50804

QC Batch: 50804  
Prep Batch: 43587

Date Analyzed: 2008-07-27  
QC Preparation: 2008-07-27

Analyzed By: AG  
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
Benzene		<0.00580	mg/Kg	0.01
Toluene		<0.00470	mg/Kg	0.01
Ethylbenzene		<0.00530	mg/Kg	0.01
Xylene		<0.0136	mg/Kg	0.01

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.873	mg/Kg	1	1.00	87	48.3 - 132.5
4-Bromofluorobenzene (4-BFB)		0.874	mg/Kg	1	1.00	87	37.7 - 128.9

**Method Blank (1)** QC Batch: 50806

QC Batch: 50806  
Prep Batch: 43587

Date Analyzed: 2008-07-27  
QC Preparation: 2008-07-27

Analyzed By: AG  
Prepared By: AG

Parameter	Flag	MDL Result	Units	RL
GRO		<0.739	mg/Kg	1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.08	mg/Kg	1	1.00	108	39.2 - 135.2
4-Bromofluorobenzene (4-BFB)		1.07	mg/Kg	1	1.00	107	16.8 - 138.1

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### Laboratory Control Spike (LCS-1)

QC Batch: 50662      Date Analyzed: 2008-07-23      Analyzed By: LD  
Prep Batch: 43474      QC Preparation: 2008-07-23      Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	370	mg/Kg	1	250	<15.8	148	27.8 - 152.1

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	373	mg/Kg	1	250	<15.8	149	27.8 - 152.1	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	107	108	mg/Kg	1	100	107	108	38 - 130.4

### Laboratory Control Spike (LCS-1)

QC Batch: 50725      Date Analyzed: 2008-07-24      Analyzed By: LD  
Prep Batch: 43528      QC Preparation: 2008-07-24      Prepared By: LD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	169	mg/Kg	1	250	<15.8	68	27.8 - 152.1

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	165	mg/Kg	1	250	<15.8	66	27.8 - 152.1	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	107	110	mg/Kg	1	100	107	110	38 - 130.4

### Laboratory Control Spike (LCS-1)

QC Batch: 50734      Date Analyzed: 2008-07-24      Analyzed By: DC  
Prep Batch: 43480      QC Preparation: 2008-07-23      Prepared By: DC

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	10.3	mg/Kg	1	10.0	<0.739	103	57.5 - 106.4

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	9.23	mg/Kg	1	10.0	<0.739	92	57.5 - 106.4	11	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)	1.10	1.09	mg/Kg	1	1.00	110	109	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	1.10	1.10	mg/Kg	1	1.00	110	110	53.3 - 123.6

### Laboratory Control Spike (LCS-1)

QC Batch: 50753  
Prep Batch: 43480

Date Analyzed: 2008-07-23  
QC Preparation: 2008-07-23

Analyzed By: DC  
Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.902	mg/Kg	1	1.00	<0.00580	90	73.3 - 116.6
Toluene	0.918	mg/Kg	1	1.00	<0.00470	92	78.6 - 115.1
Ethylbenzene	0.913	mg/Kg	1	1.00	<0.00530	91	77.4 - 114.9
Xylene	2.75	mg/Kg	1	3.00	<0.0136	92	78.2 - 114.7

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	0.995	mg/Kg	1	1.00	<0.00580	100	73.3 - 116.6	10	20
Toluene	1.01	mg/Kg	1	1.00	<0.00470	101	78.6 - 115.1	10	20
Ethylbenzene	1.01	mg/Kg	1	1.00	<0.00530	101	77.4 - 114.9	10	20
Xylene	3.04	mg/Kg	1	3.00	<0.0136	101	78.2 - 114.7	10	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)	0.885	0.928	mg/Kg	1	1.00	88	93	45 - 124.2
4-Bromofluorobenzene (4-BFB)	0.902	0.931	mg/Kg	1	1.00	90	93	47.2 - 130.4

### Laboratory Control Spike (LCS-1)

QC Batch: 50804  
Prep Batch: 43587

Date Analyzed: 2008-07-27  
QC Preparation: 2008-07-27

Analyzed By: AG  
Prepared By: AG

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.986	mg/Kg	1	1.00	<0.00580	99	73.3 - 116.6
Toluene	1.01	mg/Kg	1	1.00	<0.00470	101	78.6 - 115.1
Ethylbenzene	1.03	mg/Kg	1	1.00	<0.00530	103	77.4 - 114.9
Xylene	3.08	mg/Kg	1	3.00	<0.0136	103	78.2 - 114.7

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	0.990	mg/Kg	1	1.00	<0.00580	99	73.3 - 116.6	0	20
Toluene	1.02	mg/Kg	1	1.00	<0.00470	102	78.6 - 115.1	1	20
Ethylbenzene	1.02	mg/Kg	1	1.00	<0.00530	102	77.4 - 114.9	1	20
Xylene	3.07	mg/Kg	1	3.00	<0.0136	102	78.2 - 114.7	0	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.841	0.847	mg/Kg	1	1.00	84	85	45 - 124.2
4-Bromofluorobenzene (4-BFB)	0.870	0.876	mg/Kg	1	1.00	87	88	47.2 - 130.4

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

QC Batch: 50806  
Prep Batch: 43587

Date Analyzed: 2008-07-27  
QC Preparation: 2008-07-27

Analyzed By: AG  
Prepared By: AG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	8.92	mg/Kg	1	10.0	<0.739	89	57.5 - 106.4

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	9.21	mg/Kg	1	10.0	<0.739	92	57.5 - 106.4	3	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)	1.11	1.12	mg/Kg	1	1.00	111	112	63.8 - 134.3
4-Bromofluorobenzene (4-BFB)	1.12	1.13	mg/Kg	1	1.00	112	113	53.3 - 123.6

#### Matrix Spike (MS-1) Spiked Sample: 167797

QC Batch: 50662  
Prep Batch: 43474

Date Analyzed: 2008-07-23  
QC Preparation: 2008-07-23

Analyzed By: LD  
Prepared By: LD

Report Date: July 28, 2008  
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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	370	mg/Kg	1	250	<15.8	148	18 - 179.5

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	360	mg/Kg	1	250	<15.8	144	18 - 179.5	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
n-Triacontane	115	117	mg/Kg	1	100	115	117	34.1 - 158	

#### Matrix Spike (MS-1) Spiked Sample: 167919

QC Batch: 50725 Date Analyzed: 2008-07-24 Analyzed By: LD  
Prep Batch: 43528 QC Preparation: 2008-07-24 Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	155	mg/Kg	1	250	44.1	44	18 - 179.5

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	143	mg/Kg	1	250	44.1	40	18 - 179.5	8	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
n-Triacontane	144	142	mg/Kg	1	100	144	142	34.1 - 158	

#### Matrix Spike (MS-1) Spiked Sample: 167903

QC Batch: 50734 Date Analyzed: 2008-07-24 Analyzed By: DC  
Prep Batch: 43480 QC Preparation: 2008-07-23 Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	5880	mg/Kg	50	500	5284.21	119	10 - 139.3

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

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*matrix spikes continued ...*

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Toluene	0.988	mg/Kg	1	1.00	<0.00470	99	62.6 - 145.4
Ethylbenzene	1.02	mg/Kg	1	1.00	<0.00530	102	64.6 - 146.4
Xylene	3.07	mg/Kg	1	3.00	<0.0136	102	64.3 - 148.8

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	1.04	mg/Kg	1	1.00	<0.00580	104	62.2 - 134.3	9	20
Toluene	1.08	mg/Kg	1	1.00	<0.00470	108	62.6 - 145.4	9	20
Ethylbenzene	1.11	mg/Kg	1	1.00	<0.00530	111	64.6 - 146.4	8	20
Xylene	3.34	mg/Kg	1	3.00	<0.0136	111	64.3 - 148.8	8	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.825	0.856	mg/Kg	1	1	82	86	38.8 - 127.5	
4-Bromofluorobenzene (4-BFB)	0.895	0.912	mg/Kg	1	1	90	91	49.3 - 142.4	

**Matrix Spike (MS-1) Spiked Sample: 168008**

QC Batch: 50806  
Prep Batch: 43587

Date Analyzed: 2008-07-27  
QC Preparation: 2008-07-27

Analyzed By: AG  
Prepared By: AG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	9.95	mg/Kg	1	10.0	1.08	89	10 - 139.3

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	11.4	mg/Kg	1	10.0	1.08	103	10 - 139.3	14	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.06	1.05	mg/Kg	1	1	106	105	21.3 - 119	
4-Bromofluorobenzene (4-BFB)	1.13	1.14	mg/Kg	1	1	113	114	52.5 - 154	

**Standard (CCV-1)**

QC Batch: 50662

Date Analyzed: 2008-07-23

Analyzed By: LD

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	265	106	85 - 115	2008-07-23

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

QC Batch: 50662 Date Analyzed: 2008-07-23 Analyzed By: LLD

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
DRO		mg/Kg	250	261	104	85 - 115	2008-07-23

### **Standard (CCV-3)**

QC Batch: 50662 Date Analyzed: 2008-07-23 Analyzed By: LDD

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
DRO		mg/Kg	250	275	110	85 - 115	2008-07-23

### Standard (ICV-1)

QC Batch: 50725 Date Analyzed: 2008-07-24 Analyzed By: LD

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True	Found	Percent	Recovery	
DRO		mg/Kg	250	225	90	85 - 115	2008-07-24

## Standard (CCV-1)

QC Batch: 50725 Date Analyzed: 2008-07-24 Analyzed By: LD

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
DRO		mg/Kg	250	287	115	85 - 115	2008-07-24

## Standard (ICV-1)

QC Batch: 50734 Date Analyzed: 2008-07-24 Analyzed By: DC

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Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/Kg	1.00	1.08	108	85 - 115	2008-07-24

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

QC Batch: 50734

Date Analyzed: 2008-07-24

Analyzed By: DC

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
GRO		mg/Kg	1.00	1.13	113	85 - 115	2008-07-24

### Standard (ICV-1)

QC Batch: 50753

Date Analyzed: 2008-07-23

Analyzed By: DC

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Benzene		mg/Kg	0.100	0.0990	99	85 - 115	2008-07-23
Toluene		mg/Kg	0.100	0.101	101	85 - 115	2008-07-23
Ethylbenzene		mg/Kg	0.100	0.102	102	85 - 115	2008-07-23
Xylene		mg/Kg	0.300	0.305	102	85 - 115	2008-07-23

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

QC Batch: 50753

Date Analyzed: 2008-07-23

Analyzed By: DC

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	Analyzed
Benzene		mg/Kg	0.100	0.0981	98	85 - 115	2008-07-23
Toluene		mg/Kg	0.100	0.0991	99	85 - 115	2008-07-23
Ethylbenzene		mg/Kg	0.100	0.0984	98	85 - 115	2008-07-23
Xylene		mg/Kg	0.300	0.294	98	85 - 115	2008-07-23

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

QC Batch: 50804

Date Analyzed: 2008-07-27

Analyzed By: AG

Report Date: July 28, 2008  
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Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True	Found	Percent	Recovery	
Benzene		mg/Kg	0.100	0.100	100	85 - 115	2008-07-27
Toluene		mg/Kg	0.100	0.103	103	85 - 115	2008-07-27
Ethylbenzene		mg/Kg	0.100	0.104	104	85 - 115	2008-07-27
Xylene		mg/Kg	0.300	0.311	104	85 - 115	2008-07-27

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

QC Batch: 50804

Date Analyzed: 2008-07-27

Analyzed By: AG

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Benzene		mg/Kg	0.100	0.0973	97	85 - 115	2008-07-27
Toluene		mg/Kg	0.100	0.0991	99	85 - 115	2008-07-27
Ethylbenzene		mg/Kg	0.100	0.0999	100	85 - 115	2008-07-27
Xylene		mg/Kg	0.300	0.300	100	85 - 115	2008-07-27

### Standard (ICV-1)

QC Batch: 50806

Date Analyzed: 2008-07-27

Analyzed By: AG

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	Analyzed
GRO		mg/Kg	1.00	1.03	103	85 - 115	2008-07-27

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

QC Batch: 50806

Date Analyzed: 2008-07-27

Analyzed By: AG

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
GRO		mg/Kg	1.00	1.11	111	85 - 115	2008-07-27





# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298  
200 East Sunset Road, Suite E El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•595•4944  
5002 Basin Street, Suite A1 Midland, Texas 79703 432•689•6301 FAX 432•689•6313  
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260

E-Mail: lab@traceanalysis.com

## NELAP Certifications

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

El Paso: T104704221-08-TX  
LELAP-02002

Midland: T104704392-08-TX

## Analytical and Quality Control Report

Ron Rounsville  
Nova Safety & Environmental  
2057 Commerce St.  
Midland, TX, 79703

Report Date: August 25, 2008

Work Order: 8081404



Project Location: New Mexico  
Project Name: SJ-34  
Project Number: 2005-00138

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
170556	MW-13	water	2008-08-13	11:00	2008-08-14
170557	MW-14	water	2008-08-13	11:30	2008-08-14
170558	MW-7	water	2008-08-13	12:00	2008-08-14
170559	MW-12	water	2008-08-13	12:30	2008-08-14
170560	MW-1	water	2008-08-13	13:00	2008-08-14
170561	MW-6	water	2008-08-13	13:30	2008-08-14
170562	MW-2	water	2008-08-13	14:00	2008-08-14
170563	MW-11	water	2008-08-13	14:30	2008-08-14
170564	MW-5	water	2008-08-13	15:00	2008-08-14

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

This report consists of a total of 12 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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Dr. Blair Leftwich, Director

**Standard Flags**

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

## Case Narrative

Samples for project SJ-34 were received by TraceAnalysis, Inc. on 2008-08-14 and assigned to work order 8081404. Samples for work order 8081404 were received intact without headspace and at a temperature of 3.0 deg. C.

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

Test	Method
BTEX	S 8021B

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 8081404 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

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2005-00138

Work Order: 8081404  
SJ-34

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New Mexico

## Analytical Report

Sample: 170556 - MW-13

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 51675  
Prep Batch: 44306

Analytical Method: S 8021B  
Date Analyzed: 2008-08-21  
Sample Preparation: 2008-08-21

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.457	mg/L	5	0.500	91	55.6 - 121.3
4-Bromofluorobenzene (4-BFB)		0.414	mg/L	5	0.500	83	58.1 - 118.4

Sample: 170557 - MW-14

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 51675  
Prep Batch: 44306

Analytical Method: S 8021B  
Date Analyzed: 2008-08-21  
Sample Preparation: 2008-08-21

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene	2	<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.431	mg/L	5	0.500	86	55.6 - 121.3
4-Bromofluorobenzene (4-BFB)		0.391	mg/L	5	0.500	78	58.1 - 118.4

Sample: 170558 - MW-7

Laboratory: Lubbock  
Analysis: BTEX  
QC Batch: 51675  
Prep Batch: 44306

Analytical Method: S 8021B  
Date Analyzed: 2008-08-21  
Sample Preparation: 2008-08-21

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

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

<sup>2</sup>Sample ran at a dilution due to soil in voa.

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0891	mg/L	1	0.100	89	55.6 - 121.3
4-Bromofluorobenzene (4-BFB)		0.0809	mg/L	1	0.100	81	58.1 - 118.4

**Sample: 170559 - MW-12**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 51675

Prep Batch: 44306

Analytical Method: S 8021B

Date Analyzed: 2008-08-21

Sample Preparation: 2008-08-21

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0789	mg/L	1	0.100	79	55.6 - 121.3
4-Bromofluorobenzene (4-BFB)		0.0730	mg/L	1	0.100	73	58.1 - 118.4

**Sample: 170560 - MW-1**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 51675

Prep Batch: 44306

Analytical Method: S 8021B

Date Analyzed: 2008-08-21

Sample Preparation: 2008-08-21

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

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

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0794	mg/L	1	0.100	79	55.6 - 121.3
4-Bromofluorobenzene (4-BFB)		0.0688	mg/L	1	0.100	69	58.1 - 118.4

**Sample: 170561 - MW-6**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 51675

Prep Batch: 44306

Analytical Method: S 8021B

Date Analyzed: 2008-08-21

Sample Preparation: 2008-08-21

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0859	mg/L	1	0.100	86	55.6 - 121.3
4-Bromofluorobenzene (4-BFB)		0.0800	mg/L	1	0.100	80	58.1 - 118.4

**Sample: 170562 - MW-2**

Laboratory: Lubbock

Analysis: BTEX

QC Batch: 51675

Prep Batch: 44306

Analytical Method: S 8021B

Date Analyzed: 2008-08-21

Sample Preparation: 2008-08-21

Prep Method: S 5030B

Analyzed By: MT

Prepared By: MT

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0901	mg/L	1	0.100	90	55.6 - 121.3
4-Bromofluorobenzene (4-BFB)		0.0838	mg/L	1	0.100	84	58.1 - 118.4

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**Sample: 170563 - MW-11**

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		0.0985	mg/L	5	0.00100
Toluene		0.203	mg/L	5	0.00100
Ethylbenzene		0.0592	mg/L	5	0.00100
Xylene		0.137	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.460	mg/L	5	0.500	92	55.6 - 121.3
4-Bromofluorobenzene (4-BFB)		0.457	mg/L	5	0.500	91	58.1 - 118.4

**Sample: 170564 - MW-5**

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

Parameter	Flag	Result	Units	Dilution	RL
Benzene		6.60	mg/L	50	0.00100
Toluene		<0.0500	mg/L	50	0.00100
Ethylbenzene		0.220	mg/L	50	0.00100
Xylene		<0.0500	mg/L	50	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		5.47	mg/L	50	5.00	109	55.6 - 121.3
4-Bromofluorobenzene (4-BFB)		4.29	mg/L	50	5.00	86	58.1 - 118.4

**Method Blank (1)      QC Batch: 51675**

QC Batch:	51675	Date Analyzed:	2008-08-21	Analyzed By:	MT
Prep Batch:	44306	QC Preparation:	2008-08-21	Prepared By:	MT

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0859	mg/L	1	0.100	86	69.3 - 105.6
4-Bromofluorobenzene (4-BFB)		0.0795	mg/L	1	0.100	80	66.8 - 110.2

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

QC Batch: 51676  
Prep Batch: 44308

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

Analyzed By: MT  
Prepared By: MT

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

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

## Laboratory Control Spike (LCS-1)

QC Batch: 51675  
Prep Batch: 44306

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

Analyzed By: MT  
Prepared By: MT

Param	LCS			Spike	Matrix	Rec.	
	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	0.0983	mg/L	1	0.100	<0.000119	98	81.5 - 108.2
Toluene	0.0983	mg/L	1	0.100	<0.000146	98	80.8 - 109
Ethylbenzene	0.0947	mg/L	1	0.100	<0.000119	95	80.7 - 109.2
Xylene	0.296	mg/L	1	0.300	<0.0000970	99	80 - 109.3

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

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Param	LCSD		Spike Amount	Matrix		Rec. Limit	RPD	RPD Limit	
	Result	Units		Dil.	Result				
Benzene	0.0943	mg/L	1	0.100	<0.000119	94	81.5 - 108.2	4	20
Toluene	0.0940	mg/L	1	0.100	<0.000146	94	80.8 - 109	4	20
Ethylbenzene	0.0930	mg/L	1	0.100	<0.000119	93	80.7 - 109.2	2	20
Xylene	0.285	mg/L	1	0.300	<0.0000970	95	80 - 109.3	4	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0992	0.101	mg/L	1	0.100	99	101	79.3 - 114.3
4-Bromofluorobenzene (4-BFB)	0.0981	0.0996	mg/L	1	0.100	98	100	76.3 - 119.7

## Laboratory Control Spike (LCS-1)

QC Batch: 51676  
Prep Batch: 44308

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

Analyzed By: MT  
Prepared By: MT

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

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

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

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

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

Matrix Spike (MS-1) Spiked Sample: 171326

QC Batch: 51675  
Prep Batch: 44306

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

Analyzed By: MT  
Prepared By: MT

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Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	0.0801	mg/L	1	0.100	<0.000119	80	33.8 - 135.2
Toluene	0.0793	mg/L	1	0.100	<0.000146	79	46.1 - 126.8
Ethylbenzene	0.0785	mg/L	1	0.100	<0.000119	78	39.6 - 129.9
Xylene	0.240	mg/L	1	0.300	<0.0000970	80	42.5 - 127.4

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	0.0685	mg/L	1	0.100	<0.000119	68	33.8 - 135.2	16	20
Toluene	0.0670	mg/L	1	0.100	<0.000146	67	46.1 - 126.8	17	20
Ethylbenzene	0.0656	mg/L	1	0.100	<0.000119	66	39.6 - 129.9	18	20
Xylene	0.202	mg/L	1	0.300	<0.0000970	67	42.5 - 127.4	17	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0996	0.0967	mg/L	1	0.1	100	97	70.4 - 122.7	
4-Bromofluorobenzene (4-BFB)	0.0910	0.0971	mg/L	1	0.1	91	97	74.5 - 119.8	

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

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

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

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

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

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0988	0.103	mg/L	1	0.1	99	103	70.4 - 122.7	

continued ...

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*matrix spikes continued ...*

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	0.0908	0.104	mg/L	1	0.1	91	104	74.5 - 119.8

#### Standard (ICV-1)

QC Batch: 51675                          Date Analyzed: 2008-08-21                          Analyzed By: MT

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.102	102	/ 85 - 115	2008-08-21
Toluene		mg/L	0.100	0.101	101	85 - 115	2008-08-21
Ethylbenzene		mg/L	0.100	0.0978	98	85 - 115	2008-08-21
Xylene		mg/L	0.300	0.305	102	85 - 115	2008-08-21

#### Standard (CCV-1)

QC Batch: 51675                          Date Analyzed: 2008-08-21                          Analyzed By: MT

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0916	92	85 - 115	2008-08-21
Toluene		mg/L	0.100	0.0936	94	85 - 115	2008-08-21
Ethylbenzene		mg/L	0.100	0.0936	94	85 - 115	2008-08-21
Xylene		mg/L	0.300	0.288	96	85 - 115	2008-08-21

#### Standard (ICV-1)

QC Batch: 51676                          Date Analyzed: 2008-08-21                          Analyzed By: MT

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

#### Standard (CCV-1)

QC Batch: 51676                          Date Analyzed: 2008-08-21                          Analyzed By: MT

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

# TraceAnalysis, Inc.

email: lab@traceanalysis.com

Company Name:

Nova

Address: Street, City, Zip)

20 S Commerce Dr.

Contact Person:

Ron R.

Invoiced to:

(If different from above) Plains

Project #:

Project Name: SJ-34

Project Location (including state): NM

Phone #: 432-520-7720  
Fax #: 432-520-7701  
E-mail:

6701 Aberdeen Avenue, Suite 9  
Lubbock, Texas 79424  
Tel (806) 794-1298  
Fax (806) 794-1298  
1 (800) 378-1286

LAB Order ID # 00000000000000000000000000000000

5002 Basin Street, Suite A1  
Midland, Texas 79303  
Tel (432) 689-6301  
Fax (432) 689-6313

8808 Camp Bowie Blvd. West, Suite 180  
El Paso, Texas 79922

Tel (915) 585-3443

Fax (915) 585-4844

1 (888) 588-3443

Fax (817) 560-4336

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

FIELD CODE	# CONTAINERS	VOLUME / AMOUNT	MATRIX	PRESERVATIVE METHOD	SAMPLING		TIME	DATE	ICP	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	HCl	HNO <sub>3</sub>	H <sub>2</sub> O <sub>2</sub>	SLUDGE	AIR	SOIL	WATER
					TIME	DATE													
MW13	3	100	X	X	X	X	8.13.8	1100											
MW14	3	100	X	X	X	X	8.13.8	1130	X										
MW7	3	100	X	X	X	X	8.13.8	1200	X										
MW12	3	100	X	X	X	X	8.13.8	1230	X										
MW1	3	100	X	X	X	X	8.13.8	1300	X										
MWb	3	100	X	X	X	X	8.13.8	1330	X										
MW2	3	100	X	X	X	X	8.13.8	1400	X										
MW11	3	100	X	X	X	X	8.13.8	1430	X										
MW5	3	100	X	X	X	X	8.13.8	1500	X										

Relinquished by: Company: Date: Time: Received by: Company: Date: Time: Temp°C: REMARKS:  
*Trace* Nova 8/14/8 845 *John Doe* 8/14/8 845 *all tests - medium*

Relinquished by: Company: Date: Time: Received by: Company: Date: Time: Temp°C:  
 Dry Weight Basis Required  
 TRRP Report Required  
 Check If Special Reporting  
Limits Are Needed

Relinquished by: Company: Date: Time: Received by: Company: Date: Time: Temp°C:  
Carrier # *048RY 10*

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

ORIGINAL COPY

# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 806•378•1296 806•794•1296 FAX 806•794•1298  
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  
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260

E-Mail: lab@traceanalysis.com

## NELAP Certifications

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

El Paso: T104704221-08-TX  
LELAP-02002

Midland: T104704392-08-TX

## Analytical and Quality Control Report

Ron Rounsville  
Nova Safety & Environmental  
2057 Commerce St.  
Midland, TX, 79703

Report Date: September 5, 2008

Work Order: 8082529



Project Location: New Mexico  
Project Name: SJ-34  
Project Number: 2005-00138

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
171778	MW-13	water	2008-08-22	14:00	2008-08-25
171779	MW-14	water	2008-08-22	15:00	2008-08-25

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



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Dr. Blair Leftwich, Director

**Standard Flags**

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

## Case Narrative

Samples for project SJ-34 were received by TraceAnalysis, Inc. on 2008-08-25 and assigned to work order 8082529. Samples for work order 8082529 were received intact without headspace and at a temperature of 3.2 deg. C.

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

Test	Method
Ag, Total	S 6010B
Alkalinity	SM 2320B
Al, Total	S 6010B
As, Total	S 6010B
Ba, Total	S 6010B
B, Total	S 6010B
Ca, Dissolved	S 6010B
Cd, Total	S 6010B
Co, Total	S 6010B
Cr, Total	S 6010B
Cu, Total	S 6010B
Fe, Total	S 6010B
Hg, Total	S 7470A
K, Dissolved	S 6010B
Mg, Dissolved	S 6010B
Mn, Total	S 6010B
Mo, Total	S 6010B
Na, Dissolved	S 6010B
Ni, Total	S 6010B
Pb, Total	S 6010B
Semivolatiles	S 8270C
Se, Total	S 6010B
TDS	SM 2540C
TPH DRO	Mod. 8015B
TPH GRO	S 8015B
Volatiles	S 8260B
Zn, Total	S 6010B

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

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 8082529 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

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2005-00138

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## Analytical Report

Sample: 171778 - MW-13

Laboratory: Midland  
Analysis: Alkalinity  
QC Batch: 51776  
Prep Batch: 44400

Analytical Method: SM 2320B  
Date Analyzed: 2008-08-25  
Sample Preparation: 2008-08-25

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

Parameter	Flag	Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCO <sub>3</sub>	1	1.00
Bicarbonate Alkalinity		223	mg/L as CaCO <sub>3</sub>	1	4.00
Total Alkalinity		223	mg/L as CaCO <sub>3</sub>	1	4.00

Sample: 171778 - MW-13

Laboratory: Lubbock  
Analysis: Cations  
QC Batch: 51999  
Prep Batch: 44452

Analytical Method: S 6010B  
Date Analyzed: 2008-09-02  
Sample Preparation: 2008-08-27

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		75.3	mg/L	1	1.00
Dissolved Potassium		3.75	mg/L	1	1.00
Dissolved Magnesium		4.51	mg/L	1	1.00
Dissolved Sodium		36.8	mg/L	1	1.00

Sample: 171778 - MW-13

Laboratory: Lubbock  
Analysis: Semivolatiles  
QC Batch: 51812  
Prep Batch: 44438

Analytical Method: S 8270C  
Date Analyzed: 2008-08-26  
Sample Preparation: 2008-08-25

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

Parameter	Flag	Result	Units	Dilution	RL
Pyridine		<0.00500	mg/L	1	0.00500
N-Nitrosodimethylamine		<0.00500	mg/L	1	0.00500
2-Picoline		<0.00500	mg/L	1	0.00500
Methyl methanesulfonate		<0.00500	mg/L	1	0.00500
Ethyl methanesulfonate		<0.00500	mg/L	1	0.00500
Phenol		<0.00500	mg/L	1	0.00500

continued ...

*sample 171778 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
Aniline		<0.00500	mg/L	1	0.00500
bis(2-chloroethyl)ether		<0.00500	mg/L	1	0.00500
2-Chlorophenol		<0.00500	mg/L	1	0.00500
1,3-Dichlorobenzene (meta)		<0.00500	mg/L	1	0.00500
1,4-Dichlorobenzene (para)		<0.00500	mg/L	1	0.00500
Benzyl alcohol		<0.00500	mg/L	1	0.00500
1,2-Dichlorobenzene (ortho)		<0.00500	mg/L	1	0.00500
2-Methylphenol		<0.00500	mg/L	1	0.00500
bis(2-chloroisopropyl)ether		<0.00500	mg/L	1	0.00500
4-Methylphenol / 3-Methylphenol		<0.00500	mg/L	1	0.00500
N-Nitrosodi-n-propylamine		<0.00500	mg/L	1	0.00500
Hexachloroethane		<0.00500	mg/L	1	0.00500
Acetophenone		<0.00500	mg/L	1	0.00500
Nitrobenzene		<0.00500	mg/L	1	0.00500
N-Nitrosopiperidine		<0.00500	mg/L	1	0.00500
Isophorone		<0.00500	mg/L	1	0.00500
2-Nitrophenol		<0.00500	mg/L	1	0.00500
2,4-Dimethylphenol		<0.00500	mg/L	1	0.00500
bis(2-chloroethoxy)methane		<0.00500	mg/L	1	0.00500
2,4-Dichlorophenol		<0.00500	mg/L	1	0.00500
1,2,4-Trichlorobenzene		<0.00500	mg/L	1	0.00500
Benzoic acid		<0.00500	mg/L	1	0.00500
Naphthalene		<0.00500	mg/L	1	0.00500
a,a-Dimethylphenethylamine		<0.00500	mg/L	1	0.00500
4-Chloroaniline		<0.00500	mg/L	1	0.00500
2,6-Dichlorophenol		<0.0100	mg/L	1	0.0100
Hexachlorobutadiene		<0.00500	mg/L	1	0.00500
N-Nitroso-di-n-butylamine		<0.00500	mg/L	1	0.00500
4-Chloro-3-methylphenol		<0.00500	mg/L	1	0.00500
2-Methylnaphthalene		<0.00500	mg/L	1	0.00500
1-Methylnaphthalene		<0.00500	mg/L	1	0.00500
1,2,4,5-Tetrachlorobenzene		<0.00500	mg/L	1	0.00500
Hexachlorocyclopentadiene		<0.00500	mg/L	1	0.00500
2,4,6-Trichlorophenol		<0.0100	mg/L	1	0.0100
2,4,5-Trichlorophenol		<0.00500	mg/L	1	0.00500
2-Chloronaphthalene		<0.00500	mg/L	1	0.00500
1-Chloronaphthalene		<0.00500	mg/L	1	0.00500
2-Nitroaniline		<0.00500	mg/L	1	0.00500
Dimethylphthalate		<0.00500	mg/L	1	0.00500
Acenaphthylene		<0.00500	mg/L	1	0.00500
2,6-Dinitrotoluene		<0.00500	mg/L	1	0.00500
3-Nitroaniline		<0.00500	mg/L	1	0.00500
Acenaphthene		<0.00500	mg/L	1	0.00500

*continued ...*

*sample 171778 continued ...*

Parameter	Flag	Result	Units	Dilution	RL
2,4-Dinitrophenol		<0.00500	mg/L	1	0.00500
Dibenzofuran		<0.00500	mg/L	1	0.00500
Pentachlorobenzene		<0.00500	mg/L	1	0.00500
4-Nitrophenol		<0.0250	mg/L	1	0.0250
2,4-Dinitrotoluene		<0.00500	mg/L	1	0.00500
1-Naphthylamine		<0.00500	mg/L	1	0.00500
2,3,4,6-Tetrachlorophenol		<0.0100	mg/L	1	0.0100
2-Naphthylamine		<0.00500	mg/L	1	0.00500
Fluorene		<0.00500	mg/L	1	0.00500
4-Chlorophenyl-phenylether		<0.00500	mg/L	1	0.00500
Diethylphthalate		<0.00500	mg/L	1	0.00500
4-Nitroaniline		<0.00500	mg/L	1	0.00500
Diphenylhydrazine		<0.00500	mg/L	1	0.00500
4,6-Dinitro-2-methylphenol		<0.00500	mg/L	1	0.00500
Diphenylamine		<0.00500	mg/L	1	0.00500
4-Bromophenyl-phenylether		<0.00500	mg/L	1	0.00500
Phenacetin		<0.00500	mg/L	1	0.00500
Hexachlorobenzene		<0.00500	mg/L	1	0.00500
4-Aminobiphenyl		<0.00500	mg/L	1	0.00500
Pentachlorophenol		<0.0100	mg/L	1	0.0100
Anthracene		<0.00500	mg/L	1	0.00500
Pentachloronitrobenzene		<0.00500	mg/L	1	0.00500
Pronamide		<0.00500	mg/L	1	0.00500
Phenanthrene		<0.00500	mg/L	1	0.00500
Di-n-butylphthalate		<0.00500	mg/L	1	0.00500
Fluoranthene		<0.00500	mg/L	1	0.00500
Benzidine		<0.0250	mg/L	1	0.0250
Pyrene		<0.00500	mg/L	1	0.00500
p-Dimethylaminoazobenzene		<0.00500	mg/L	1	0.00500
Butylbenzylphthalate		<0.00500	mg/L	1	0.00500
Benzo(a)anthracene		<0.00500	mg/L	1	0.00500
3,3-Dichlorobenzidine		<0.00500	mg/L	1	0.00500
Chrysene		<0.00500	mg/L	1	0.00500
bis(2-ethylhexyl)phthalate		<b>0.00655</b>	mg/L	1	0.00500
Di-n-octylphthalate		<0.00500	mg/L	1	0.00500
Benzo(b)fluoranthene		<0.00500	mg/L	1	0.00500
Benzo(k)fluoranthene		<0.00500	mg/L	1	0.00500
7,12-Dimethylbenz(a)anthracene		<0.00500	mg/L	1	0.00500
Benzo(a)pyrene		<0.00500	mg/L	1	0.00500
3-Methylcholanthrene		<0.00500	mg/L	1	0.00500
Dibenzo(a,j)acridine		<0.00500	mg/L	1	0.00500
Indeno(1,2,3-cd)pyrene		<0.00500	mg/L	1	0.00500
Dibenzo(a,h)anthracene		<0.00500	mg/L	1	0.00500

*continued ...*



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sample 171778 continued ...

Parameter	Flag	Result	Units	Dilution	RL
Total Lead		<0.00500	mg/L	1	0.00500
Total Selenium		<0.0200	mg/L	1	0.0200

Sample: 171778 - MW-13

Laboratory: Lubbock  
Analysis: Total Metals  
QC Batch: 51880  
Prep Batch: 44471

Analytical Method: S 6010B  
Date Analyzed: 2008-08-28  
Sample Preparation: 2008-08-28

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

Parameter	Flag	Result	Units	Dilution	RL
Total Aluminum		8.88	mg/L	1	0.0500
Total Boron		0.131	mg/L	1	0.00500
Total Cobalt		0.00500	mg/L	1	0.00200
Total Copper		0.0120	mg/L	1	0.00500
Total Iron		5.73	mg/L	1	0.0100
Total Manganese		0.0860	mg/L	1	0.00250
Total Molybdenum		<0.0100	mg/L	1	0.0100
Total Nickel		0.00800	mg/L	1	0.00500
Total Zinc		0.0360	mg/L	1	0.00500

Sample: 171778 - MW-13

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 51809  
Prep Batch: 44428

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-08-26  
Sample Preparation: 2008-08-26

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

Parameter	Flag	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		10.3	mg/L	1	10.0	103	70 - 130

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**Sample: 171778 - MW-13**

Laboratory: Midland	Analytical Method: S 8015B	Prep Method: S 5030B
Analysis: TPH GRO	Date Analyzed: 2008-08-29	Analyzed By: DC
QC Batch: 51945	Sample Preparation: 2008-08-29	Prepared By: DC
Prep Batch: 44537		

Parameter	Flag	Result	Units	Dilution	RL
GRO		<0.100	mg/L	1	0.100
Surrogate	Flag	Result	Units	Spike Amount	Percent Recovery
Trifluorotoluene (TFT)		0.0937	mg/L	1	94
4-Bromofluorobenzene (4-BFB)		0.0787	mg/L	1	79

**Sample: 171778 - MW-13**

Laboratory: Lubbock	Analytical Method: S 8260B	Prep Method: S 5030B
Analysis: Volatiles	Date Analyzed: 2008-09-02	Analyzed By: KB
QC Batch: 51997	Sample Preparation: 2008-09-02	Prepared By: KB
Prep Batch: 44591		

Parameter	Flag	Result	Units	Dilution	RL
Bromochloromethane		<1.00	µg/L	1	1.00
Dichlorodifluoromethane		<1.00	µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1	1.00
Vinyl Chloride		<1.00	µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	1	5.00
Chloroethane		<1.00	µg/L	1	1.00
Trichlorofluoromethane		<1.00	µg/L	1	1.00
Acetone		<10.0	µg/L	1	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	1	5.00
Carbon Disulfide		<1.00	µg/L	1	1.00
Acrylonitrile		<1.00	µg/L	1	1.00
2-Butanone (MEK)		<5.00	µg/L	1	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	1	5.00
2-Hexanone		<5.00	µg/L	1	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	1	10.0
1,1-Dichloroethene		<1.00	µg/L	1	1.00
Methylene chloride		<5.00	µg/L	1	5.00
MTBE		<1.00	µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1	1.00
1,1-Dichloroethane		<1.00	µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1	1.00

*continued ...*

*sample 171778 continued ...*

Parameter	Flag	RL Result	Units	Dilution	RL
2,2-Dichloropropane		<1.00	µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1	1.00
Chloroform		<1.00	µg/L	1	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1	1.00
1,1-Dichloropropene		<1.00	µg/L	1	1.00
Benzene		<1.00	µg/L	1	1.00
Carbon Tetrachloride		<1.00	µg/L	1	1.00
1,2-Dichloropropane		<1.00	µg/L	1	1.00
Trichloroethene (TCE)		<1.00	µg/L	1	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1	1.00
Bromodichloromethane		<1.00	µg/L	1	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	1	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1	1.00
Toluene		<1.00	µg/L	1	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1	1.00
1,3-Dichloropropane		<1.00	µg/L	1	1.00
Dibromochloromethane		<1.00	µg/L	1	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1	1.00
Tetrachloroethene (PCE)		<1.00	µg/L	1	1.00
Chlorobenzene		<1.00	µg/L	1	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1	1.00
Ethylbenzene		<1.00	µg/L	1	1.00
m,p-Xylene		<1.00	µg/L	1	1.00
Bromoform		<1.00	µg/L	1	1.00
Styrene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1.00
2-Chlorotoluene		<1.00	µg/L	1	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1	1.00
Isopropylbenzene		<1.00	µg/L	1	1.00
Bromobenzene		<1.00	µg/L	1	1.00
n-Propylbenzene		<1.00	µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1	1.00
tert-Butylbenzene		<1.00	µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1	1.00
sec-Butylbenzene		<1.00	µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1	1.00
p-Isopropyltoluene		<1.00	µg/L	1	1.00
4-Chlorotoluene		<1.00	µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1	1.00
n-Butylbenzene		<1.00	µg/L	1	1.00

*continued ...*

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Parameter	Flag	Result	Units	Dilution	RL
1,2-Dibromo-3-chloropropane		<5.00	µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5.00
Naphthalene		<5.00	µg/L	1	5.00
Hexachlorobutadiene		<5.00	µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.8	µg/L	1	50.0	108	83.6 - 120
Toluene-d8		46.1	µg/L	1	50.0	92	85.1 - 120
4-Bromofluorobenzene (4-BFB)		41.9	µg/L	1	50.0	84	73.7 - 111

Sample: 171779 - MW-14

Laboratory: Midland  
Analysis: Alkalinity  
QC Batch: 51776  
Prep Batch: 44400

Analytical Method: SM 2320B  
Date Analyzed: 2008-08-25  
Sample Preparation: 2008-08-25

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

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

Sample: 171779 - MW-14

Laboratory: Lubbock  
Analysis: Cations  
QC Batch: 51999  
Prep Batch: 44452

Analytical Method: S 6010B  
Date Analyzed: 2008-09-02  
Sample Preparation: 2008-08-27

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

Parameter	Flag	Result	Units	Dilution	RL
Dissolved Calcium		97.7	mg/L	1	1.00
Dissolved Potassium		4.71	mg/L	1	1.00
Dissolved Magnesium		6.09	mg/L	1	1.00
Dissolved Sodium		35.7	mg/L	1	1.00

Sample: 171779 - MW-14

Laboratory: Lubbock  
Analysis: Semivolatiles  
QC Batch: 51812  
Prep Batch: 44438

Analytical Method: S 8270C  
Date Analyzed: 2008-08-26  
Sample Preparation: 2008-08-25

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

Parameter	Flag	Result	Units	Dilution	RL
Pyridine		<0.00500	mg/L	1	0.00500
N-Nitrosodimethylamine		<0.00500	mg/L	1	0.00500
2-Picoline		<0.00500	mg/L	1	0.00500
Methyl methanesulfonate		<0.00500	mg/L	1	0.00500
Ethyl methanesulfonate		<0.00500	mg/L	1	0.00500
Phenol		<0.00500	mg/L	1	0.00500
Aniline		<0.00500	mg/L	1	0.00500
bis(2-chloroethyl)ether		<0.00500	mg/L	1	0.00500
2-Chlorophenol		<0.00500	mg/L	1	0.00500
1,3-Dichlorobenzene (meta)		<0.00500	mg/L	1	0.00500
1,4-Dichlorobenzene (para)		<0.00500	mg/L	1	0.00500
Benzyl alcohol		<0.00500	mg/L	1	0.00500
1,2-Dichlorobenzene (ortho)		<0.00500	mg/L	1	0.00500
2-Methylphenol		<0.00500	mg/L	1	0.00500
bis(2-chloroisopropyl)ether		<0.00500	mg/L	1	0.00500
4-Methylphenol / 3-Methylphenol		<0.00500	mg/L	1	0.00500
N-Nitrosodi-n-propylamine		<0.00500	mg/L	1	0.00500
Hexachloroethane		<0.00500	mg/L	1	0.00500
Acetophenone		<0.00500	mg/L	1	0.00500
Nitrobenzene		<0.00500	mg/L	1	0.00500
N-Nitrosopiperidine		<0.00500	mg/L	1	0.00500
Isophorone		<0.00500	mg/L	1	0.00500
2-Nitrophenol		<0.00500	mg/L	1	0.00500
2,4-Dimethylphenol		<0.00500	mg/L	1	0.00500
bis(2-chloroethoxy)methane		<0.00500	mg/L	1	0.00500
2,4-Dichlorophenol		<0.00500	mg/L	1	0.00500
1,2,4-Trichlorobenzene		<0.00500	mg/L	1	0.00500
Benzoic acid		<0.00500	mg/L	1	0.00500
Naphthalene		<0.00500	mg/L	1	0.00500
a,a-Dimethylphenethylamine		<0.00500	mg/L	1	0.00500
4-Chloroaniline		<0.00500	mg/L	1	0.00500
2,6-Dichlorophenol		<0.0100	mg/L	1	0.0100
Hexachlorobutadiene		<0.00500	mg/L	1	0.00500
N-Nitroso-di-n-butylamine		<0.00500	mg/L	1	0.00500
4-Chloro-3-methylphenol		<0.00500	mg/L	1	0.00500
2-Methylnaphthalene		<0.00500	mg/L	1	0.00500
1-Methylnaphthalene		<0.00500	mg/L	1	0.00500
1,2,4,5-Tetrachlorobenzene		<0.00500	mg/L	1	0.00500
Hexachlorocyclopentadiene		<0.00500	mg/L	1	0.00500

continued ...

sample 171779 continued ...

Parameter	Flag	Result	Units	Dilution	RL
2,4,6-Trichlorophenol		<0.0100	mg/L	1	0.0100
2,4,5-Trichlorophenol		<0.00500	mg/L	1	0.00500
2-Chloronaphthalene		<0.00500	mg/L	1	0.00500
1-Chloronaphthalene		<0.00500	mg/L	1	0.00500
2-Nitroaniline		<0.00500	mg/L	1	0.00500
Dimethylphthalate		<0.00500	mg/L	1	0.00500
Acenaphthylene		<0.00500	mg/L	1	0.00500
2,6-Dinitrotoluene		<0.00500	mg/L	1	0.00500
3-Nitroaniline		<0.00500	mg/L	1	0.00500
Acenaphthene		<0.00500	mg/L	1	0.00500
2,4-Dinitrophenol		<0.00500	mg/L	1	0.00500
Dibenzofuran		<0.00500	mg/L	1	0.00500
Pentachlorobenzene		<0.00500	mg/L	1	0.00500
4-Nitrophenol		<0.0250	mg/L	1	0.0250
2,4-Dinitrotoluene		<0.00500	mg/L	1	0.00500
1-Naphthylamine		<0.00500	mg/L	1	0.00500
2,3,4,6-Tetrachlorophenol		<0.0100	mg/L	1	0.0100
2-Naphthylamine		<0.00500	mg/L	1	0.00500
Fluorene		<0.00500	mg/L	1	0.00500
4-Chlorophenyl-phenylether		<0.00500	mg/L	1	0.00500
Diethylphthalate		<0.00500	mg/L	1	0.00500
4-Nitroaniline		<0.00500	mg/L	1	0.00500
Diphenylhydrazine		<0.00500	mg/L	1	0.00500
4,6-Dinitro-2-methylphenol		<0.00500	mg/L	1	0.00500
Diphenylamine		<0.00500	mg/L	1	0.00500
4-Bromophenyl-phenylether		<0.00500	mg/L	1	0.00500
Phenacetin		<0.00500	mg/L	1	0.00500
Hexachlorobenzene		<0.00500	mg/L	1	0.00500
4-Aminobiphenyl		<0.00500	mg/L	1	0.00500
Pentachlorophenol		<0.0100	mg/L	1	0.0100
Anthracene		<0.00500	mg/L	1	0.00500
Pentachloronitrobenzene		<0.00500	mg/L	1	0.00500
Pronamide		<0.00500	mg/L	1	0.00500
Phenanthrene		<0.00500	mg/L	1	0.00500
Di-n-butylphthalate		<0.00500	mg/L	1	0.00500
Fluoranthene		<0.00500	mg/L	1	0.00500
Benzidine		<0.0250	mg/L	1	0.0250
Pyrene		<0.00500	mg/L	1	0.00500
p-Dimethylaminoazobenzene		<0.00500	mg/L	1	0.00500
Butylbenzylphthalate		<0.00500	mg/L	1	0.00500
Benzo(a)anthracene		<0.00500	mg/L	1	0.00500
3,3-Dichlorobenzidine		<0.00500	mg/L	1	0.00500
Chrysene		<0.00500	mg/L	1	0.00500

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sample 171779 continued ...

Parameter	Flag	Result	Units	Dilution	RL
bis(2-ethylhexyl)phthalate		<0.00500	mg/L	1	0.00500
Di-n-octylphthalate		<0.00500	mg/L	1	0.00500
Benzo(b)fluoranthene		<0.00500	mg/L	1	0.00500
Benzo(k)fluoranthene		<0.00500	mg/L	1	0.00500
7,12-Dimethylbenz(a)anthracene		<0.00500	mg/L	1	0.00500
Benzo(a)pyrene		<0.00500	mg/L	1	0.00500
3-Methylcholanthrene		<0.00500	mg/L	1	0.00500
Dibenzo(a,j)acridine		<0.00500	mg/L	1	0.00500
Indeno(1,2,3-cd)pyrene		<0.00500	mg/L	1	0.00500
Dibenzo(a,h)anthracene		<0.00500	mg/L	1	0.00500
Benzo(g,h,i)perylene		<0.00500	mg/L	1	0.00500

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		0.0260	mg/L	1	0.0800	32	10 - 84.7
Phenol-d5		0.0165	mg/L	1	0.0800	21	10 - 54.9
Nitrobenzene-d5		0.0419	mg/L	1	0.0800	52	10 - 202
2-Fluorobiphenyl		0.0456	mg/L	1	0.0800	57	10 - 199
2,4,6-Tribromophenol		0.0498	mg/L	1	0.0800	62	10 - 141
Terphenyl-d14		0.0652	mg/L	1	0.0800	82	10 - 160

Sample: 171779 - MW-14

Laboratory: Midland

Analysis: TDS

QC Batch: 51931

Prep Batch: 44451

Analytical Method: SM 2540C

Date Analyzed: 2008-08-29

Sample Preparation: 2008-08-27

Prep Method: N/A

Analyzed By: AR

Prepared By: AR

Parameter	Flag	Result	Units	Dilution	RL
Total Dissolved Solids		452	mg/L	1	10.0

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**Sample: 171779 - MW-14**

Laboratory:	Lubbock	Analytical Method:	S 6010B	Prep Method:	S 3010A
Analysis:	Total 8 Metals	Date Analyzed:	2008-08-28	Analyzed By:	RR
QC Batch:	51880	Sample Preparation:	2008-08-28	Prepared By:	KV
Prep Batch:	44471				
Laboratory:	Lubbock	Analytical Method:	S 7470A	Prep Method:	N/A
Analysis:	Total 8 Metals	Date Analyzed:	2008-08-28	Analyzed By:	TP
QC Batch:	51885	Sample Preparation:	2008-08-28	Prepared By:	TP
Prep Batch:	44491				

Parameter	Flag	RL Result	Units	Dilution	RL
Total Silver		<0.00500	mg/L	1	0.00500
Total Arsenic		<0.0100	mg/L	1	0.0100
Total Barium		<b>0.629</b>	mg/L	1	0.00500
Total Cadmium		<0.00200	mg/L	1	0.00200
Total Chromium		<b>0.0440</b>	mg/L	1	0.00500
Total Mercury		<0.000200	mg/L	1	0.000200
Total Lead		<0.00500	mg/L	1	0.00500
Total Selenium		<0.0200	mg/L	1	0.0200

**Sample: 171779 - MW-14**

Laboratory:	Lubbock	Analytical Method:	S 6010B	Prep Method:	S 3010A
Analysis:	Total Metals	Date Analyzed:	2008-08-28	Analyzed By:	RR
QC Batch:	51880	Sample Preparation:	2008-08-28	Prepared By:	KV
Prep Batch:	44471				

Parameter	Flag	RL Result	Units	Dilution	RL
Total Aluminum		<b>19.5</b>	mg/L	1	0.0500
Total Boron		<b>0.134</b>	mg/L	1	0.00500
Total Cobalt		<b>0.0120</b>	mg/L	1	0.00200
Total Copper		<b>0.0170</b>	mg/L	1	0.00500
Total Iron		<b>13.1</b>	mg/L	1	0.0100
Total Manganese		<b>0.209</b>	mg/L	1	0.00250
Total Molybdenum		<0.0100	mg/L	1	0.0100
Total Nickel		<b>0.0160</b>	mg/L	1	0.00500
Total Zinc		<b>0.0580</b>	mg/L	1	0.00500

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**Sample: 171779 - MW-14**

Laboratory: Midland  
Analysis: TPH DRO  
QC Batch: 51809  
Prep Batch: 44428

Analytical Method: Mod. 8015B  
Date Analyzed: 2008-08-26  
Sample Preparation: 2008-08-26

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

Parameter	Flag	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		11.2	mg/L	1	10.0	112	70 - 130

**Sample: 171779 - MW-14**

Laboratory: Midland  
Analysis: TPH GRO  
QC Batch: 51945  
Prep Batch: 44537

Analytical Method: S 8015B  
Date Analyzed: 2008-08-29  
Sample Preparation: 2008-08-29

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

Parameter	Flag	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)		0.0931	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0783	mg/L	1	0.100	78	70 - 130

**Sample: 171779 - MW-14**

Laboratory: Lubbock  
Analysis: Volatiles  
QC Batch: 52049  
Prep Batch: 44618

Analytical Method: S 8260B  
Date Analyzed: 2008-09-03  
Sample Preparation: 2008-09-03

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

Parameter	Flag	Result	Units	Dilution	RL
Bromochloromethane		<1.00	µg/L	1	1.00
Dichlorodifluoromethane		<1.00	µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1	1.00
Vinyl Chloride		<1.00	µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	1	5.00

*continued ...*

sample 171779 continued ...

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

continued ...

sample 171779 continued ...

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane	1	66.1	µg/L	1	50.0	132	83.6 - 120
Toluene-d8		53.6	µg/L	1	50.0	107	85.1 - 120
4-Bromofluorobenzene (4-BFB)		47.6	µg/L	1	50.0	95	73.7 - 111

**Method Blank (1) QC Batch: 51776**

QC Batch: 51776  
Prep Batch: 44400

Date Analyzed: 2008-08-25  
QC Preparation: 2008-08-25

Analyzed By: AR  
Prepared By: AR

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

<sup>1</sup>8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preparation was performed properly.

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Method Blank (1) QC Batch: 51809

QC Batch: 51809  
Prep Batch: 44428

Date Analyzed: 2008-08-26  
QC Preparation: 2008-08-26

Analyzed By: LD  
Prepared By: LD

Parameter	Flag	MDL	Units	RL
DRO		Result	mg/L	
		<2.44		5
Surrogate	Flag	Result	Units	Spike
n-Triacontane		10.7	mg/L	10.0
				Percent Recovery
				Recovery Limits
				70 - 130

Method Blank (1) QC Batch: 51812

QC Batch: 51812  
Prep Batch: 44438

Date Analyzed: 2008-08-26  
QC Preparation: 2008-08-25

Analyzed By: DS  
Prepared By: DS

Parameter	Flag	MDL	Units	RL
		Result		
Pyridine		<0.00128	mg/L	0.005
N-Nitrosodimethylamine		<0.00192	mg/L	0.005
2-Picoline		<0.00132	mg/L	0.005
Methyl methanesulfonate		<0.00175	mg/L	0.005
Ethyl methanesulfonate		<0.00122	mg/L	0.005
Phenol		<0.00165	mg/L	0.005
Aniline		<0.00138	mg/L	0.005
bis(2-chloroethyl)ether		<0.00217	mg/L	0.005
2-Chlorophenol		<0.00150	mg/L	0.005
1,3-Dichlorobenzene (meta)		<0.00166	mg/L	0.005
1,4-Dichlorobenzene (para)		<0.00156	mg/L	0.005
Benzyl alcohol		<0.00100	mg/L	0.005
1,2-Dichlorobenzene (ortho)		<0.00164	mg/L	0.005
2-Methylphenol		<0.00158	mg/L	0.005
bis(2-chloroisopropyl)ether		<0.000828	mg/L	0.005
4-Methylphenol / 3-Methylphenol		<0.00124	mg/L	0.005
N-Nitrosodi-n-propylamine		<0.00127	mg/L	0.005
Hexachloroethane		<0.00198	mg/L	0.005
Acetophenone		<0.00127	mg/L	0.005
Nitrobenzene		<0.00193	mg/L	0.005
N-Nitrosopiperidine		<0.00120	mg/L	0.005
Isophorone		<0.00194	mg/L	0.005
2-Nitrophenol		<0.00140	mg/L	0.005
2,4-Dimethylphenol		<0.00109	mg/L	0.005
bis(2-chloroethoxy)methane		<0.00124	mg/L	0.005
2,4-Dichlorophenol		<0.00134	mg/L	0.005

continued ...

*method blank continued ...*

Parameter	Flag	MDL Result	Units	RL
1,2,4-Trichlorobenzene		<0.00193	mg/L	0.005
Benzoic acid		<0.00304	mg/L	0.005
Naphthalene		<0.00165	mg/L	0.005
a,a-Dimethylphenethylamine		<0.000758	mg/L	0.005
4-Chloroaniline		<0.00115	mg/L	0.005
2,6-Dichlorophenol		<0.00120	mg/L	0.01
Hexachlorobutadiene		<0.00184	mg/L	0.005
N-Nitroso-di-n-butylamine		<0.00169	mg/L	0.005
4-Chloro-3-methylphenol		<0.00120	mg/L	0.005
2-Methylnaphthalene		<0.00145	mg/L	0.005
1-Methylnaphthalene		<0.00155	mg/L	0.005
1,2,4,5-Tetrachlorobenzene		<0.00205	mg/L	0.005
Hexachlorocyclopentadiene		<0.00385	mg/L	0.005
2,4,6-Trichlorophenol		<0.00152	mg/L	0.01
2,4,5-Trichlorophenol		<0.00320	mg/L	0.005
2-Chloronaphthalene		<0.00168	mg/L	0.005
1-Chloronaphthalene		<0.00181	mg/L	0.005
2-Nitroaniline		<0.00169	mg/L	0.005
Dimethylphthalate		<0.00178	mg/L	0.005
Acenaphthylene		<0.00136	mg/L	0.005
2,6-Dinitrotoluene		<0.00139	mg/L	0.005
3-Nitroaniline		<0.00124	mg/L	0.005
Acenaphthene		<0.00132	mg/L	0.005
2,4-Dinitrophenol		<0.00392	mg/L	0.005
Dibenzofuran		<0.00161	mg/L	0.005
Pentachlorobenzene		<0.00242	mg/L	0.005
4-Nitrophenol		<0.00127	mg/L	0.025
2,4-Dinitrotoluene		<0.00139	mg/L	0.005
1-Naphthylamine		<0.00128	mg/L	0.005
2,3,4,6-Tetrachlorophenol		<0.00130	mg/L	0.01
2-Naphthylamine		<0.00154	mg/L	0.005
Fluorene		<0.00130	mg/L	0.005
4-Chlorophenyl-phenylether		<0.00173	mg/L	0.005
Diethylphthalate		<0.00161	mg/L	0.005
4-Nitroaniline		<0.00101	mg/L	0.005
Diphenylhydrazine		<0.00125	mg/L	0.005
4,6-Dinitro-2-methylphenol		<0.00135	mg/L	0.005
Diphenylamine		<0.00159	mg/L	0.005
4-Bromophenyl-phenylether		<0.00187	mg/L	0.005
Phenacetin		<0.00139	mg/L	0.005
Hexachlorobenzene		<0.00238	mg/L	0.005
4-Aminobiphenyl		<0.00134	mg/L	0.005
Pentachlorophenol		<0.000632	mg/L	0.01
Anthracene		<0.00152	mg/L	0.005

*continued ...*

*method blank continued ...*

Parameter	Flag	MDL	Result	Units	RL
Pentachloronitrobenzene		<0.00307		mg/L	0.005
Pronamide		<0.00159		mg/L	0.005
Phenanthrene		<0.00144		mg/L	0.005
Di-n-butylphthalate		<0.00125		mg/L	0.005
Fluoranthene		<0.00159		mg/L	0.005
Benzidine		<0.000845		mg/L	0.025
Pyrene		<0.00135		mg/L	0.005
p-Dimethylaminoazobenzene		<0.000969		mg/L	0.005
Butylbenzylphthalate		<0.00110		mg/L	0.005
Benzo(a)anthracene		<0.00138		mg/L	0.005
3,3-Dichlorobenzidine		<0.00130		mg/L	0.005
Chrysene		<0.00146		mg/L	0.005
bis(2-ethylhexyl)phthalate		<0.00108		mg/L	0.005
Di-n-octylphthalate		<0.000892		mg/L	0.005
Benzo(b)fluoranthene		<0.00126		mg/L	0.005
Benzo(k)fluoranthene		<0.00149		mg/L	0.005
7,12-Dimethylbenz(a)anthracene		<0.00134		mg/L	0.005
Benzo(a)pyrene		<0.00155		mg/L	0.005
3-Methylcholanthrene		<0.00166		mg/L	0.005
Dibenzo(a,j)acridine		<0.00201		mg/L	0.005
Indeno(1,2,3-cd)pyrene		<0.00195		mg/L	0.005
Dibenzo(a,h)anthracene		<0.00210		mg/L	0.005
Benzo(g,h,i)perylene		<0.00207		mg/L	0.005

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		0.0299	mg/L	1	0.0800	37	10 - 66.9
Phenol-d5		0.0210	mg/L	1	0.0800	26	10 - 50.7
Nitrobenzene-d5		0.0466	mg/L	1	0.0800	58	10 - 124
2-Fluorobiphenyl		0.0446	mg/L	1	0.0800	56	10 - 127
2,4,6-Tribromophenol		0.0473	mg/L	1	0.0800	59	10 - 138
Terphenyl-d14		0.0539	mg/L	1	0.0800	67	10 - 143

Method Blank (1) QC Batch: 51880

QC Batch: 51880  
Prep Batch: 44471

Date Analyzed: 2008-08-28  
QC Preparation: 2008-08-28

Analyzed By: RR  
Prepared By: KV

Parameter	Flag	MDL	Result	Units	RL
Total Silver		<0.000700		mg/L	0.005
Total Arsenic		<0.00850		mg/L	0.01
Total Barium		<0.00180		mg/L	0.005

*continued ...*

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Parameter	Flag	MDL Result	Units	RL
Total Cadmium		<0.00110	mg/L	0.002
Total Chromium		<0.00201	mg/L	0.005
Total Lead		<0.00460	mg/L	0.005
Total Selenium		<0.0106	mg/L	0.02

**Method Blank (1)** QC Batch: 51880

QC Batch: 51880  
Prep Batch: 44471

Date Analyzed: 2008-08-28  
QC Preparation: 2008-08-28

Analyzed By: RR  
Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Total Aluminum		<0.00540	mg/L	0.05
Total Boron		<0.00210	mg/L	0.005
Total Cobalt		<0.00170	mg/L	0.002
Total Copper		<0.00129	mg/L	0.005
Total Iron		<0.00146	mg/L	0.01
Total Manganese		<0.000414	mg/L	0.0025
Total Molybdenum		<0.00613	mg/L	0.01
Total Nickel		<0.00271	mg/L	0.005
Total Zinc		<0.000679	mg/L	0.005

**Method Blank (1)**      QC Batch: 51885

QC Batch: 51885  
Prep Batch: 44491

Date Analyzed: 2008-08-28  
QC Preparation: 2008-08-28

Analyzed By: TP  
Prepared By: TP

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

Method Blank (1) QC Batch: 51931

QC Batch: 51931  
Prep Batch: 44451

Date Analyzed: 2008-08-29  
QC Preparation: 2008-08-27

Analyzed By: AR  
Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		<5.00	mg/L	10

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Method Blank (1) QC Batch: 51945

QC Batch: 51945 Date Analyzed: 2008-08-29 Analyzed By: DC  
Prep Batch: 44537 QC Preparation: 2008-08-29 Prepared By: DC

Parameter	Flag	MDL	Result	Units	RL
GRO			0.0870	mg/L	0.1

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)		0.0888	mg/L	1	0.100	89	70 - 130

Method Blank (1) QC Batch: 51997

QC Batch: 51997 Date Analyzed: 2008-09-02 Analyzed By: KB  
Prep Batch: 44591 QC Preparation: 2008-09-02 Prepared By: KB

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

continued ...

*method blank continued . . .*

Parameter	Flag	MDL	Result	Units	RL
1,1-Dichloropropene		<0.286		µg/L	1
Benzene		<0.319		µg/L	1
Carbon Tetrachloride		<0.223		µg/L	1
1,2-Dichloropropane		<0.266		µg/L	1
Trichloroethene (TCE)		<0.235		µg/L	1
Dibromomethane (methylene bromide)		<0.341		µg/L	1
Bromodichloromethane		<0.291		µg/L	1
2-Chloroethyl vinyl ether		<0.293		µg/L	5
cis-1,3-Dichloropropene		<0.207		µg/L	1
trans-1,3-Dichloropropene		<0.293		µg/L	1
Toluene		<0.268		µg/L	1
1,1,2-Trichloroethane		<0.329		µg/L	1
1,3-Dichloropropane		<0.316		µg/L	1
Dibromochloromethane		<0.290		µg/L	1
1,2-Dibromoethane (EDB)		<0.229		µg/L	1
Tetrachloroethene (PCE)		<0.233		µg/L	1
Chlorobenzene		<0.276		µg/L	1
1,1,1,2-Tetrachloroethane		<0.226		µg/L	1
Ethylbenzene		<0.245		µg/L	1
m,p-Xylene		<0.517		µg/L	1
Bromoform		<0.175		µg/L	1
Styrene		<0.239		µg/L	1
o-Xylene		<0.247		µg/L	1
1,1,2,2-Tetrachloroethane		<0.223		µg/L	1
2-Chlorotoluene		<0.235		µg/L	1
1,2,3-Trichloropropane		<0.230		µg/L	1
Isopropylbenzene		<0.226		µg/L	1
Bromobenzene		<0.245		µg/L	1
n-Propylbenzene		<0.234		µg/L	1
1,3,5-Trimethylbenzene		<0.261		µg/L	1
tert-Butylbenzene		<0.281		µg/L	1
1,2,4-Trimethylbenzene		<0.285		µg/L	1
1,4-Dichlorobenzene (para)		<0.307		µg/L	1
sec-Butylbenzene		<0.312		µg/L	1
1,3-Dichlorobenzene (meta)		<0.284		µg/L	1
p-Isopropyltoluene		<0.244		µg/L	1
4-Chlorotoluene		<0.257		µg/L	1
1,2-Dichlorobenzene (ortho)		<0.294		µg/L	1
n-Butylbenzene		<0.339		µg/L	1
1,2-Dibromo-3-chloropropane		<0.780		µg/L	5
1,2,3-Trichlorobenzene		<0.736		µg/L	5
1,2,4-Trichlorobenzene		<0.432		µg/L	5
Naphthalene		<0.475		µg/L	5
Hexachlorobutadiene		<1.02		µg/L	5

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		52.5	µg/L	1	50.0	105	83.6 - 120
Toluene-d8		50.3	µg/L	1	50.0	101	85 - 120
4-Bromofluorobenzene (4-BFB)		49.4	µg/L	1	50.0	99	73.7 - 111

**Method Blank (1)**      QC Batch: 51999

QC Batch: 51999  
Prep Batch: 44452

Date Analyzed: 2008-09-02  
QC Preparation: 2008-08-27

Analyzed By: TP  
Prepared By: KV

Parameter	Flag	MDL	Result	Units	RL
Dissolved Calcium		<0.175		mg/L	1
Dissolved Potassium		<0.327		mg/L	1
Dissolved Magnesium		<0.148		mg/L	1
Dissolved Sodium		<0.244		mg/L	1

**Method Blank (1)**      QC Batch: 52049

QC Batch: 52049  
Prep Batch: 44618

Date Analyzed: 2008-09-03  
QC Preparation: 2008-09-03

Analyzed By: KB  
Prepared By: KB

Parameter	Flag	MDL Result	Units	RL
Bromochloromethane		<0.197	µg/L	1
Dichlorodifluoromethane		<0.672	µg/L	1
Chloromethane (methyl chloride)		<0.542	µg/L	1
Vinyl Chloride		<0.516	µg/L	1
Bromomethane (methyl bromide)		<0.446	µg/L	5
Chloroethane		<0.656	µg/L	1
Trichlorofluoromethane		<0.538	µg/L	1
Acetone		<1.10	µg/L	10
Iodomethane (methyl iodide)		<0.214	µg/L	5
Carbon Disulfide		<0.294	µg/L	1
Acrylonitrile		<0.442	µg/L	1
2-Butanone (MEK)		<0.420	µg/L	5
4-Methyl-2-pentanone (MIBK)		<0.407	µg/L	5
2-Hexanone		<0.486	µg/L	5
trans 1,4-Dichloro-2-butene		<0.463	µg/L	10
1,1-Dichloroethene		<0.237	µg/L	1
Methylene chloride		<0.312	µg/L	5
MTBE		<0.318	µg/L	1
trans-1,2-Dichloroethene		<0.217	µg/L	1

*continued*

*method blank continued ...*

Parameter	Flag	MDL Result	Units	RL
1,1-Dichloroethane		<0.202	µg/L	1
cis-1,2-Dichloroethene		<0.309	µg/L	1
2,2-Dichloropropane		<0.318	µg/L	1
1,2-Dichloroethane (EDC)		<0.292	µg/L	1
Chloroform		<0.234	µg/L	1
1,1,1-Trichloroethane		<0.257	µg/L	1
1,1-Dichloropropene		<0.286	µg/L	1
Benzene		<0.319	µg/L	1
Carbon Tetrachloride		<0.223	µg/L	1
1,2-Dichloropropane		<0.266	µg/L	1
Trichloroethene (TCE)		<0.235	µg/L	1
Dibromomethane (methylene bromide)		<0.341	µg/L	1
Bromodichloromethane		<0.291	µg/L	1
2-Chloroethyl vinyl ether		<0.293	µg/L	5
cis-1,3-Dichloropropene		<0.207	µg/L	1
trans-1,3-Dichloropropene		<0.293	µg/L	1
Toluene		<0.268	µg/L	1
1,1,2-Trichloroethane		<0.329	µg/L	1
1,3-Dichloropropane		<0.316	µg/L	1
Dibromochloromethane		<0.290	µg/L	1
1,2-Dibromoethane (EDB)		<0.229	µg/L	1
Tetrachloroethene (PCE)		<0.233	µg/L	1
Chlorobenzene		<0.276	µg/L	1
1,1,1,2-Tetrachloroethane		<0.226	µg/L	1
Ethylbenzene		<0.245	µg/L	1
m,p-Xylene		<0.517	µg/L	1
Bromoform		<0.175	µg/L	1
Styrene		<0.239	µg/L	1
o-Xylene		<0.247	µg/L	1
1,1,2,2-Tetrachloroethane		<0.223	µg/L	1
2-Chlorotoluene		<0.235	µg/L	1
1,2,3-Trichloropropane		<0.230	µg/L	1
Isopropylbenzene		<0.226	µg/L	1
Bromobenzene		<0.245	µg/L	1
n-Propylbenzene		<0.234	µg/L	1
1,3,5-Trimethylbenzene		<0.261	µg/L	1
tert-Butylbenzene		<0.281	µg/L	1
1,2,4-Trimethylbenzene		<0.285	µg/L	1
1,4-Dichlorobenzene (para)		<0.307	µg/L	1
sec-Butylbenzene		<0.312	µg/L	1
1,3-Dichlorobenzene (meta)		<0.284	µg/L	1
p-Isopropyltoluene		<0.244	µg/L	1
4-Chlorotoluene		<0.257	µg/L	1
1,2-Dichlorobenzene (ortho)		<0.294	µg/L	1

*continued ...*

*method blank continued . . .*

Parameter	Flag	MDL	Result	Units	RL
n-Butylbenzene		<0.339		µg/L	1
1,2-Dibromo-3-chloropropane		<0.780		µg/L	5
1,2,3-Trichlorobenzene		<0.736		µg/L	5
1,2,4-Trichlorobenzene		<0.432		µg/L	5
Naphthalene		<0.475		µg/L	5
Hexachlorobutadiene		<1.02		µg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane	2	66.3	µg/L	1	50.0	133	83.6 - 120
Toluene-d8		54.2	µg/L	1	50.0	108	85 - 120
4-Bromofluorobenzene (4-BFB)		49.4	µg/L	1	50.0	99	73.7 - 111

## Duplicates (1)

QC Batch: 51776 Date Analyzed: 2008-08-25 Analyzed By: AR  
Prep Batch: 44400 QC Preparation: 2008-08-25 Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	5.00	<1.00	mg/L as CaCO <sub>3</sub>	1	200	20
Carbonate Alkalinity	38.0	34.0	mg/L as CaCO <sub>3</sub>	1	11	20
Bicarbonate Alkalinity	<4.00	8.00	mg/L as CaCO <sub>3</sub>	1	200	20
Total Alkalinity	43.0	42.0	mg/L as CaCO <sub>3</sub>	1	2	20

## Duplicates (1)

QC Batch: 51931 Date Analyzed: 2008-08-29 Analyzed By: AR  
Prep Batch: 44451 QC Preparation: 2008-08-27 Prepared By: AR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	470	452	mg/L	1	4	20

## Laboratory Control Spike (LCS-1)

QC Batch: 51809 Date Analyzed: 2008-08-26 Analyzed By: LD  
Prep Batch: 44428 QC Preparation: 2008-08-26 Prepared By: LD

<sup>2</sup>8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preparation was performed properly.

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
DRO	24.6	mg/L	1	25.0	<2.44	98	70 - 130

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

Param	LCSD		Dil.	Spike Amount	Matrix		Rec.		RPD	RPD Limit
	Result	Units			Result	Rec.	Limit	RPD		
DRO	23.3	mg/L	1	25.0	<2.44	93	70 - 130	5	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	12.9	12.2	mg/L	1	10.0	129	122	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 51812  
Prep Batch: 44438

Date Analyzed: 2008-08-26  
QC Preparation: 2008-08-25

Analyzed By: DS  
Prepared By: DS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Phenol	0.0173	mg/L	1	0.0800	<0.00165	22	10 - 46.1
2-Chlorophenol	0.0401	mg/L	1	0.0800	<0.00150	50	10 - 123
1,4-Dichlorobenzene (para)	0.0378	mg/L	1	0.0800	<0.00156	47	10 - 118
N-Nitrosodi-n-propylamine	0.0431	mg/L	1	0.0800	<0.00127	54	10 - 132
1,2,4-Trichlorobenzene	0.0399	mg/L	1	0.0800	<0.00193	50	10 - 130
Naphthalene	0.0421	mg/L	1	0.0800	<0.00165	53	20.3 - 121
4-Chloro-3-methylphenol	0.0574	mg/L	1	0.0800	<0.00120	72	10 - 140
Acenaphthylene	0.0505	mg/L	1	0.0800	<0.00136	63	22.3 - 124
Acenaphthene	0.0488	mg/L	1	0.0800	<0.00132	61	18.8 - 134
4-Nitrophenol	0.0164	mg/L	1	0.0800	<0.00127	20	10 - 135
2,4-Dinitrotoluene	0.0480	mg/L	1	0.0800	<0.00139	60	13.6 - 152
Fluorene	0.0533	mg/L	1	0.0800	<0.00130	67	29.7 - 114
Pentachlorophenol	0.0263	mg/L	1	0.0800	<0.000632	33	10 - 144
Anthracene	0.0512	mg/L	1	0.0800	<0.00152	64	48.2 - 118
Phenanthrene	0.0522	mg/L	1	0.0800	<0.00144	65	45.5 - 121
Fluoranthene	0.0526	mg/L	1	0.0800	<0.00159	66	42.7 - 126
Pyrene	0.0543	mg/L	1	0.0800	<0.00135	68	26.8 - 155
Benzo(a)anthracene	0.0555	mg/L	1	0.0800	<0.00138	69	60.2 - 97.3
Chrysene	0.0556	mg/L	1	0.0800	<0.00146	70	56 - 92.4
Benzo(b)fluoranthene	0.0489	mg/L	1	0.0800	<0.00126	61	73.9 - 102
Benzo(k)fluoranthene	0.0546	mg/L	1	0.0800	<0.00149	68	45.6 - 143
Benzo(a)pyrene	0.0576	mg/L	1	0.0800	<0.00155	72	54.8 - 122
Indeno(1,2,3-cd)pyrene	0.0580	mg/L	1	0.0800	<0.00195	72	61.4 - 118

continued . . .

<sup>3</sup>Benzo(b)fluoranthene out of control limits for LCS/LCSD. Majority of analytes within range show process is within control. •

*control spikes continued ...*

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dibenzo(a,h)anthracene	0.0556	mg/L	1	0.0800	<0.0210	70	64.9 - 118
Benzo(g,h,i)perylene	0.0556	mg/L	1	0.0800	<0.00207	70	46.8 - 129

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD Limit	
Phenol	0.0176	mg/L	1	0.0800	<0.00165	22	10 - 46.1	2	20
2-Chlorophenol	0.0408	mg/L	1	0.0800	<0.00150	51	10 - 123	2	20
1,4-Dichlorobenzene (para)	0.0380	mg/L	1	0.0800	<0.00156	48	10 - 118	0	20
N-Nitrosodi-n-propylamine	0.0436	mg/L	1	0.0800	<0.00127	54	10 - 132	1	20
1,2,4-Trichlorobenzene	0.0406	mg/L	1	0.0800	<0.00193	51	10 - 130	2	20
Naphthalene	0.0430	mg/L	1	0.0800	<0.00165	54	20.3 - 121	2	20
4-Chloro-3-methylphenol	0.0568	mg/L	1	0.0800	<0.00120	71	10 - 140	1	20
Acenaphthylene	0.0510	mg/L	1	0.0800	<0.00136	64	22.3 - 124	1	20
Acenaphthene	0.0494	mg/L	1	0.0800	<0.00132	62	18.8 - 134	1	20
4-Nitrophenol	0.0145	mg/L	1	0.0800	<0.00127	18	10 - 135	12	20
2,4-Dinitrotoluene	0.0484	mg/L	1	0.0800	<0.00139	60	13.6 - 152	1	20
Fluorene	0.0540	mg/L	1	0.0800	<0.00130	68	29.7 - 114	1	20
Pentachlorophenol	0.0270	mg/L	1	0.0800	<0.000632	34	10 - 144	3	20
Anthracene	0.0512	mg/L	1	0.0800	<0.00152	64	48.2 - 118	0	20
Phenanthrene	0.0517	mg/L	1	0.0800	<0.00144	65	45.5 - 121	1	20
Fluoranthene	0.0525	mg/L	1	0.0800	<0.00159	66	42.7 - 126	0	20
Pyrene	0.0545	mg/L	1	0.0800	<0.00135	68	26.8 - 155	0	20
Benzo(a)anthracene	0.0566	mg/L	1	0.0800	<0.00138	71	60.2 - 97.3	2	20
Chrysene	0.0556	mg/L	1	0.0800	<0.00146	70	56 - 92.4	0	20
Benzo(b)fluoranthene	4 0.0498	mg/L	1	0.0800	<0.00126	62	73.9 - 102	2	20
Benzo(k)fluoranthene	0.0551	mg/L	1	0.0800	<0.00149	69	45.6 - 143	1	20
Benzo(a)pyrene	0.0579	mg/L	1	0.0800	<0.00155	72	54.8 - 122	0	20
Indeno(1,2,3-cd)pyrene	0.0583	mg/L	1	0.0800	<0.00195	73	61.4 - 118	0	20
Dibenzo(a,h)anthracene	0.0555	mg/L	1	0.0800	<0.0210	69	64.9 - 118	0	20
Benzo(g,h,i)perylene	0.0558	mg/L	1	0.0800	<0.00207	70	46.8 - 129	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
2-Fluorophenol	0.0292	0.0295	mg/L	1	0.0800	36	37	10 - 109
Phenol-d5	0.0206	0.0209	mg/L	1	0.0800	26	26	10 - 61.5
Nitrobenzene-d5	0.0464	0.0468	mg/L	1	0.0800	58	58	10 - 139
2-Fluorobiphenyl	0.0469	0.0482	mg/L	1	0.0800	59	60	10 - 139
2,4,6-Tribromophenol	0.0549	0.0549	mg/L	1	0.0800	69	69	10 - 161
Terphenyl-d14	0.0582	0.0590	mg/L	1	0.0800	73	74	10 - 144

<sup>4</sup>Benzo(b)fluoranthene out of control limits for LCS/LCSD. Majority of analytes within range show process is within control. •

### Laboratory Control Spike (LCS-1)

QC Batch: 51880  
Prep Batch: 44471

Date Analyzed: 2008-08-28  
QC Preparation: 2008-08-28

Analyzed By: RR  
Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Silver	0.120	mg/L	1	0.125	<0.000700	96	85 - 115
Total Arsenic	0.483	mg/L	1	0.500	<0.00850	97	85 - 115
Total Barium	0.987	mg/L	1	1.00	<0.00180	99	85 - 115
Total Cadmium	0.261	mg/L	1	0.250	<0.00110	104	85 - 115
Total Chromium	0.102	mg/L	1	0.100	<0.00201	102	85 - 115
Total Lead	0.480	mg/L	1	0.500	<0.00460	96	85 - 115
Total Selenium	0.449	mg/L	1	0.500	<0.0106	90	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Silver	0.120	mg/L	1	0.125	<0.000700	96	85 - 115	0	20
Total Arsenic	0.478	mg/L	1	0.500	<0.00850	96	85 - 115	1	20
Total Barium	0.995	mg/L	1	1.00	<0.00180	100	85 - 115	1	20
Total Cadmium	0.262	mg/L	1	0.250	<0.00110	105	85 - 115	0	20
Total Chromium	0.103	mg/L	1	0.100	<0.00201	103	85 - 115	1	20
Total Lead	0.477	mg/L	1	0.500	<0.00460	95	85 - 115	1	20
Total Selenium	0.432	mg/L	1	0.500	<0.0106	86	85 - 115	4	20

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

### Laboratory Control Spike (LCS-1)

QC Batch: 51880  
Prep Batch: 44471

Date Analyzed: 2008-08-28  
QC Preparation: 2008-08-28

Analyzed By: RR  
Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Aluminum	0.855	mg/L	1	1.00	<0.00540	86	85 - 115
Total Boron	0.0450	mg/L	1	0.0500	<0.00210	90	85 - 115
Total Cobalt	0.258	mg/L	1	0.250	<0.00170	103	85 - 115
Total Copper	0.119	mg/L	1	0.125	<0.00129	95	85 - 115
Total Iron	0.513	mg/L	1	0.500	<0.00146	103	85 - 115
Total Manganese	0.245	mg/L	1	0.250	<0.000414	98	85 - 115
Total Molybdenum	0.512	mg/L	1	0.500	<0.00613	102	85 - 115
Total Nickel	0.251	mg/L	1	0.250	<0.00271	100	85 - 115
Total Zinc	0.246	mg/L	1	0.250	<0.000679	98	85 - 115

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

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Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	RPD Limit	RPD Limit	
Total Aluminum	0.861	mg/L	1	1.00	<0.00540	86	85 - 115	1	20
Total Boron	0.0450	mg/L	1	0.0500	<0.00210	90	85 - 115	0	20
Total Cobalt	0.258	mg/L	1	0.250	<0.00170	103	85 - 115	0	20
Total Copper	0.120	mg/L	1	0.125	<0.00129	96	85 - 115	1	20
Total Iron	0.516	mg/L	1	0.500	<0.00146	103	85 - 115	1	20
Total Manganese	0.247	mg/L	1	0.250	<0.000414	99	85 - 115	1	20
Total Molybdenum	0.511	mg/L	1	0.500	<0.00613	102	85 - 115	0	20
Total Nickel	0.254	mg/L	1	0.250	<0.00271	102	85 - 115	1	20
Total Zinc	0.249	mg/L	1	0.250	<0.000679	100	85 - 115	1	20

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

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

QC Batch: 51885  
Prep Batch: 44491

Date Analyzed: 2008-08-28  
QC Preparation: 2008-08-28

Analyzed By: TP  
Prepared By: TP

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Total Mercury	0.000989	mg/L	1	0.00100	<0.0000251	99	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	RPD Limit
Total Mercury	0.00100	mg/L	1	0.00100	<0.0000251	100	85 - 115

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

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

QC Batch: 51945  
Prep Batch: 44537

Date Analyzed: 2008-08-29  
QC Preparation: 2008-08-29

Analyzed By: DC  
Prepared By: DC

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
GRO	0.920	mg/L	1	1.00	0.087	83	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.	RPD Limit
GRO	0.969	mg/L	1	1.00	0.087	88	70 - 130

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
Trifluorotoluene (TFT)	0.101	0.0964	mg/L	1	0.100	101	96	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0918	0.0920	mg/L	1	0.100	92	92	70 - 130

### Laboratory Control Spike (LCS-1)

QC Batch: 51997      Date Analyzed: 2008-09-02      Analyzed By: KB  
Prep Batch: 44591      QC Preparation: 2008-09-02      Prepared By: KB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromochloromethane	51.7	µg/L	1	50.0	<0.197	103	88.2 - 114.5
Dichlorodifluoromethane	50.4	µg/L	1	50.0	<0.672	101	60.6 - 132.1
Chloromethane (methyl chloride)	49.0	µg/L	1	50.0	<0.542	98	55.7 - 127.9
Vinyl Chloride	46.9	µg/L	1	50.0	<0.516	94	47.6 - 142.9
Bromomethane (methyl bromide)	35.6	µg/L	1	50.0	<0.446	71	40.2 - 153.4
Chloroethane	40.2	µg/L	1	50.0	<0.656	80	44.5 - 145.8
Trichlorofluoromethane	46.4	µg/L	1	50.0	<0.538	93	55.9 - 152
Acetone	32.9	µg/L	1	50.0	<1.10	66	10 - 177.1
Iodomethane (methyl iodide)	41.5	µg/L	1	50.0	<0.214	83	76.6 - 128.8
Carbon Disulfide	54.3	µg/L	1	50.0	<0.294	109	66.1 - 137.3
Acrylonitrile	51.8	µg/L	1	50.0	<0.442	104	72.6 - 136.6
2-Butanone (MEK)	39.8	µg/L	1	50.0	<0.420	80	19.8 - 180.1
4-Methyl-2-pentanone (MIBK)	47.1	µg/L	1	50.0	<0.407	94	79.8 - 129.5
2-Hexanone	40.2	µg/L	1	50.0	<0.486	80	26.2 - 189.3
trans 1,4-Dichloro-2-butene	49.9	µg/L	1	50.0	<0.463	100	68 - 140.3
1,1-Dichloroethene	50.5	µg/L	1	50.0	<0.237	101	79 - 122.1
Methylene chloride	48.6	µg/L	1	50.0	<0.312	97	59.5 - 134.6
MTBE	63.9	µg/L	1	50.0	<0.318	128	69.8 - 137.1
trans-1,2-Dichloroethene	52.0	µg/L	1	50.0	<0.217	104	81.4 - 118.7
1,1-Dichloroethane	51.4	µg/L	1	50.0	<0.202	103	79.7 - 119.2
cis-1,2-Dichloroethene	53.1	µg/L	1	50.0	<0.309	106	86 - 120.2
2,2-Dichloropropane	51.2	µg/L	1	50.0	<0.318	102	48 - 145.8
1,2-Dichloroethane (EDC)	51.3	µg/L	1	50.0	<0.292	103	76.2 - 126.4
Chloroform	51.2	µg/L	1	50.0	<0.234	102	80.2 - 120.9
1,1,1-Trichloroethane	47.8	µg/L	1	50.0	<0.257	96	66 - 139.6
1,1-Dichloropropene	53.1	µg/L	1	50.0	<0.286	106	89.3 - 116.5
Benzene	51.2	µg/L	1	50.0	<0.319	102	89.5 - 113.9
Carbon Tetrachloride	48.2	µg/L	1	50.0	<0.223	96	78 - 128.2
1,2-Dichloropropane	52.2	µg/L	1	50.0	<0.266	104	88.5 - 115.5
Trichloroethene (TCE)	53.9	µg/L	1	50.0	<0.235	108	87.1 - 118.1
Dibromomethane (methylene bromide)	51.6	µg/L	1	50.0	<0.341	103	89.8 - 117.7
Bromodichloromethane	52.2	µg/L	1	50.0	<0.291	104	90.4 - 120.5
2-Chloroethyl vinyl ether	42.0	µg/L	1	50.0	<0.293	84	74.2 - 129.9
cis-1,3-Dichloropropene	47.4	µg/L	1	50.0	<0.207	95	88.8 - 124.1

continued ...

*control spikes continued ...*

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
trans-1,3-Dichloropropene	54.2	µg/L	1	50.0	<0.293	108	82 - 131.4
Toluene	50.9	µg/L	1	50.0	<0.268	102	91.1 - 113.8
1,1,2-Trichloroethane	51.2	µg/L	1	50.0	<0.329	102	91.5 - 113.9
1,3-Dichloropropane	51.7	µg/L	1	50.0	<0.316	103	89.6 - 115.8
Dibromochloromethane	52.7	µg/L	1	50.0	<0.290	105	95.1 - 119.8
1,2-Dibromoethane (EDB)	52.7	µg/L	1	50.0	<0.229	105	93.8 - 117.4
Tetrachloroethene (PCE)	55.5	µg/L	1	50.0	<0.233	111	60.6 - 131.5
Chlorobenzene	50.1	µg/L	1	50.0	<0.276	100	91.3 - 108.8
1,1,1,2-Tetrachloroethane	50.7	µg/L	1	50.0	<0.226	101	92 - 114.9
Ethylbenzene	53.0	µg/L	1	50.0	<0.245	106	91.8 - 117.4
m,p-Xylene	107	µg/L	1	100	<0.517	107	91.4 - 120
Bromoform	53.4	µg/L	1	50.0	<0.175	107	84 - 133.8
Styrene	47.6	µg/L	1	50.0	<0.239	95	87 - 128.3
o-Xylene	55.5	µg/L	1	50.0	<0.247	111	89.3 - 122.4
1,1,2,2-Tetrachloroethane	47.1	µg/L	1	50.0	<0.223	94	79.7 - 129.4
2-Chlorotoluene	53.2	µg/L	1	50.0	<0.235	106	90.5 - 114.9
1,2,3-Trichloropropane	49.8	µg/L	1	50.0	<0.230	100	88.3 - 121
Isopropylbenzene	47.7	µg/L	1	50.0	<0.226	95	93.5 - 114.9
Bromobenzene	50.7	µg/L	1	50.0	<0.245	101	89.7 - 114
n-Propylbenzene	54.2	µg/L	1	50.0	<0.234	108	83.8 - 119
1,3,5-Trimethylbenzene	54.6	µg/L	1	50.0	<0.261	109	88.9 - 116.7
tert-Butylbenzene	49.5	µg/L	1	50.0	<0.281	99	89.6 - 115.9
1,2,4-Trimethylbenzene	56.1	µg/L	1	50.0	<0.285	112	92.2 - 114.6
1,4-Dichlorobenzene (para)	51.7	µg/L	1	50.0	<0.307	103	90.4 - 107
sec-Butylbenzene	57.6	µg/L	1	50.0	<0.312	115	87.7 - 116.6
1,3-Dichlorobenzene (meta)	53.4	µg/L	1	50.0	<0.284	107	91.3 - 110.9
p-Isopropyltoluene	50.3	µg/L	1	50.0	<0.244	101	89.9 - 116.6
4-Chlorotoluene	53.7	µg/L	1	50.0	<0.257	107	91 - 116
1,2-Dichlorobenzene (ortho)	53.1	µg/L	1	50.0	<0.294	106	92.9 - 113.3
n-Butylbenzene	58.7	µg/L	1	50.0	<0.339	117	87.1 - 120
1,2-Dibromo-3-chloropropane	46.6	µg/L	1	50.0	<0.780	93	72.5 - 129.8
1,2,3-Trichlorobenzene	57.9	µg/L	1	50.0	<0.736	116	10 - 218.8
1,2,4-Trichlorobenzene	62.8	µg/L	1	50.0	<0.432	126	53.2 - 146.6
Naphthalene	56.4	µg/L	1	50.0	<0.475	113	26.6 - 177.2
Hexachlorobutadiene	56.0	µg/L	1	50.0	<1.02	112	73.6 - 134.8

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD RPD	Limit
Bromochloromethane	52.1	µg/L	1	50.0	<0.197	104	88.2 - 114.5	1	20
Dichlorodifluoromethane	52.9	µg/L	1	50.0	<0.672	106	60.6 - 132.1	5	20
Chloromethane (methyl chloride)	49.0	µg/L	1	50.0	<0.542	98	55.7 - 127.9	0	20
Vinyl Chloride	45.9	µg/L	1	50.0	<0.516	92	47.6 - 142.9	2	20
Bromomethane (methyl bromide)	34.9	µg/L	1	50.0	<0.446	70	40.2 - 153.4	2	20

*continued ...*

*control spikes continued ...*

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD RPD	RPD Limit
Chloroethane	40.5	µg/L	1	50.0	<0.656	81	44.5 - 145.8	1	20
Trichlorofluoromethane	55.5	µg/L	1	50.0	<0.538	111	55.9 - 152	18	20
Acetone	34.6	µg/L	1	50.0	<1.10	69	10 - 177.1	5	20
Iodomethane (methyl iodide)	42.7	µg/L	1	50.0	<0.214	85	76.6 - 128.8	3	20
Carbon Disulfide	55.1	µg/L	1	50.0	<0.294	110	66.1 - 137.3	2	20
Acrylonitrile	54.5	µg/L	1	50.0	<0.442	109	72.6 - 136.6	5	20
2-Butanone (MEK)	40.6	µg/L	1	50.0	<0.420	81	19.8 - 180.1	2	20
4-Methyl-2-pentanone (MIBK)	49.4	µg/L	1	50.0	<0.407	99	79.8 - 129.5	5	20
2-Hexanone	41.6	µg/L	1	50.0	<0.486	83	26.2 - 189.3	3	20
trans-1,4-Dichloro-2-butene	50.6	µg/L	1	50.0	<0.463	101	68 - 140.3	1	20
1,1-Dichloroethene	51.2	µg/L	1	50.0	<0.237	102	79 - 122.1	1	20
Methylene chloride	48.9	µg/L	1	50.0	<0.312	98	59.5 - 134.6	1	20
MTBE	64.3	µg/L	1	50.0	<0.318	129	69.8 - 137.1	1	20
trans-1,2-Dichloroethene	52.2	µg/L	1	50.0	<0.217	104	81.4 - 118.7	0	20
1,1-Dichloroethane	51.5	µg/L	1	50.0	<0.202	103	79.7 - 119.2	0	20
cis-1,2-Dichloroethene	53.5	µg/L	1	50.0	<0.309	107	86 - 120.2	1	20
2,2-Dichloropropane	49.8	µg/L	1	50.0	<0.318	100	48 - 145.8	3	20
1,2-Dichloroethane (EDC)	51.8	µg/L	1	50.0	<0.292	104	76.2 - 126.4	1	20
Chloroform	51.5	µg/L	1	50.0	<0.234	103	80.2 - 120.9	1	20
1,1,1-Trichloroethane	47.8	µg/L	1	50.0	<0.257	96	66 - 139.6	0	20
1,1-Dichloropropene	53.2	µg/L	1	50.0	<0.286	106	89.3 - 116.5	0	20
Benzene	51.3	µg/L	1	50.0	<0.319	103	89.5 - 113.9	0	20
Carbon Tetrachloride	48.0	µg/L	1	50.0	<0.223	96	78 - 128.2	0	20
1,2-Dichloropropane	52.5	µg/L	1	50.0	<0.266	105	88.5 - 115.5	1	20
Trichloroethene (TCE)	54.5	µg/L	1	50.0	<0.235	109	87.1 - 118.1	1	20
Dibromomethane (methylene bromide)	51.9	µg/L	1	50.0	<0.341	104	89.8 - 117.7	1	20
Bromodichloromethane	52.1	µg/L	1	50.0	<0.291	104	90.4 - 120.5	0	20
2-Chloroethyl vinyl ether	41.4	µg/L	1	50.0	<0.293	83	74.2 - 129.9	1	20
cis-1,3-Dichloropropene	47.8	µg/L	1	50.0	<0.207	96	88.8 - 124.1	1	20
trans-1,3-Dichloropropene	54.0	µg/L	1	50.0	<0.293	108	82 - 131.4	0	20
Toluene	51.5	µg/L	1	50.0	<0.268	103	91.1 - 113.8	1	20
1,1,2-Trichloroethane	51.6	µg/L	1	50.0	<0.329	103	91.5 - 113.9	1	20
1,3-Dichloropropane	51.9	µg/L	1	50.0	<0.316	104	89.6 - 115.8	0	20
Dibromochloromethane	53.0	µg/L	1	50.0	<0.290	106	95.1 - 119.8	1	20
1,2-Dibromoethane (EDB)	53.8	µg/L	1	50.0	<0.229	108	93.8 - 117.4	2	20
Tetrachloroethene (PCE)	56.4	µg/L	1	50.0	<0.233	113	60.6 - 131.5	2	20
Chlorobenzene	50.5	µg/L	1	50.0	<0.276	101	91.3 - 108.8	1	20
1,1,1,2-Tetrachloroethane	51.0	µg/L	1	50.0	<0.226	102	92 - 114.9	1	20
Ethylbenzene	53.4	µg/L	1	50.0	<0.245	107	91.8 - 117.4	1	20
m,p-Xylene	108	µg/L	1	100	<0.517	108	91.4 - 120	1	20
Bromoform	54.2	µg/L	1	50.0	<0.175	108	84 - 133.8	2	20
Styrene	48.3	µg/L	1	50.0	<0.239	97	87 - 128.3	1	20
o-Xylene	56.3	µg/L	1	50.0	<0.247	113	89.3 - 122.4	1	20
1,1,2,2-Tetrachloroethane	47.1	µg/L	1	50.0	<0.223	94	79.7 - 129.4	0	20

*continued ...*

*control spikes continued ...*

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	RPD Limit	RPD Limit	
2-Chlorotoluene	52.8	µg/L	1	50.0	<0.235	106	90.5 - 114.9	1	20
1,2,3-Trichloropropane	49.4	µg/L	1	50.0	<0.230	99	88.3 - 121	1	20
Isopropylbenzene	47.5	µg/L	1	50.0	<0.226	95	93.5 - 114.9	0	20
Bromobenzene	50.6	µg/L	1	50.0	<0.245	101	89.7 - 114	0	20
n-Propylbenzene	53.7	µg/L	1	50.0	<0.234	107	83.8 - 119	1	20
1,3,5-Trimethylbenzene	54.6	µg/L	1	50.0	<0.261	109	88.9 - 116.7	0	20
tert-Butylbenzene	49.5	µg/L	1	50.0	<0.281	99	89.6 - 115.9	0	20
1,2,4-Trimethylbenzene	56.3	µg/L	1	50.0	<0.285	113	92.2 - 114.6	0	20
1,4-Dichlorobenzene (para)	51.4	µg/L	1	50.0	<0.307	103	90.4 - 107	1	20
sec-Butylbenzene	57.3	µg/L	1	50.0	<0.312	115	87.7 - 116.6	0	20
1,3-Dichlorobenzene (meta)	53.2	µg/L	1	50.0	<0.284	106	91.3 - 110.9	0	20
p-Isopropyltoluene	50.2	µg/L	1	50.0	<0.244	100	89.9 - 116.6	0	20
4-Chlorotoluene	53.7	µg/L	1	50.0	<0.257	107	91 - 116	0	20
1,2-Dichlorobenzene (ortho)	54.3	µg/L	1	50.0	<0.294	109	92.9 - 113.3	2	20
n-Butylbenzene	58.7	µg/L	1	50.0	<0.339	117	87.1 - 120	0	20
1,2-Dibromo-3-chloropropane	49.6	µg/L	1	50.0	<0.780	99	72.5 - 129.8	6	20
1,2,3-Trichlorobenzene	5 <sup>5</sup>	µg/L	1	50.0	<0.736	147	10 - 218.8	24	20
1,2,4-Trichlorobenzene	72.7	µg/L	1	50.0	<0.432	145	53.2 - 146.6	15	20
Naphthalene	6 <sup>6</sup>	µg/L	1	50.0	<0.475	140	26.6 - 177.2	21	20
Hexachlorobutadiene	59.1	µg/L	1	50.0	<1.02	118	73.6 - 134.8	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	49.8	49.6	µg/L	1	50.0	100	99	85.4 - 110.5
Toluene-d8	49.6	49.6	µg/L	1	50.0	99	99	87 - 108.6
4-Bromofluorobenzene (4-BFB)	50.2	50.7	µg/L	1	50.0	100	101	83.3 - 113

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

QC Batch: 51999  
Prep Batch: 44452

Date Analyzed: 2008-09-02  
QC Preparation: 2008-08-27

Analyzed By: TP  
Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Dissolved Calcium	50.0	mg/L	1	50.0	<0.175	100	85 - 115
Dissolved Potassium	50.3	mg/L	1	50.0	<0.327	101	85 - 115
Dissolved Magnesium	49.4	mg/L	1	50.0	<0.148	99	85 - 115
Dissolved Sodium	50.3	mg/L	1	50.0	<0.244	101	85 - 115

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

<sup>5</sup>LCS/LCSD RPD outside RPD limits. •

<sup>6</sup>LCS/LCSD RPD outside RPD limits. •

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Limit	RPD	RPD Limit
Dissolved Calcium	49.6	mg/L	1	50.0	<0.175	99	85 - 115	1	20
Dissolved Potassium	49.3	mg/L	1	50.0	<0.327	99	85 - 115	2	20
Dissolved Magnesium	49.2	mg/L	1	50.0	<0.148	98	85 - 115	0	20
Dissolved Sodium	49.5	mg/L	1	50.0	<0.244	99	85 - 115	2	20

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

### Laboratory Control Spike (LCS-1)

QC Batch: 52049  
Prep Batch: 44618

Date Analyzed: 2008-09-03  
QC Preparation: 2008-09-03

Analyzed By: KB  
Prepared By: KB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromochloromethane	7 59.1	µg/L	1	50.0	<0.197	118	88.2 - 114.5
Dichlorodifluoromethane	54.3	µg/L	1	50.0	<0.672	109	60.6 - 132.1
Chloromethane (methyl chloride)	8 65.7	µg/L	1	50.0	<0.542	131	55.7 - 127.9
Vinyl Chloride	63.8	µg/L	1	50.0	<0.516	128	47.6 - 142.9
Bromomethane (methyl bromide)	53.8	µg/L	1	50.0	<0.446	108	40.2 - 153.4
Chloroethane	63.6	µg/L	1	50.0	<0.656	127	44.5 - 145.8
Trichlorofluoromethane	52.5	µg/L	1	50.0	<0.538	105	55.9 - 152
Acetone	37.9	µg/L	1	50.0	<1.10	76	10 - 177.1
Iodomethane (methyl iodide)	41.4	µg/L	1	50.0	<0.214	83	76.6 - 128.8
Carbon Disulfide	9 70.0	µg/L	1	50.0	<0.294	140	66.1 - 137.3
Acrylonitrile	66.4	µg/L	1	50.0	<0.442	133	72.6 - 136.6
2-Butanone (MEK)	40.4	µg/L	1	50.0	<0.420	81	19.8 - 180.1
4-Methyl-2-pentanone (MIBK)	48.4	µg/L	1	50.0	<0.407	97	79.8 - 129.5
2-Hexanone	49.8	µg/L	1	50.0	<0.486	100	26.2 - 189.3
trans 1,4-Dichloro-2-butene	59.3	µg/L	1	50.0	<0.463	119	68 - 140.3
1,1-Dichloroethene	59.1	µg/L	1	50.0	<0.237	118	79 - 122.1
Methylene chloride	60.5	µg/L	1	50.0	<0.312	121	59.5 - 134.6
MTBE	10 70.4	µg/L	1	50.0	<0.318	141	69.8 - 137.1
trans-1,2-Dichloroethene	62.5	µg/L	1	50.0	<0.217	125	81.4 - 118.7
1,1-Dichloroethane	12 63.4	µg/L	1	50.0	<0.202	127	79.7 - 119.2
cis-1,2-Dichloroethene	13 62.4	µg/L	1	50.0	<0.309	125	86 - 120.2
2,2-Dichloropropane	61.2	µg/L	1	50.0	<0.318	122	48 - 145.8
1,2-Dichloroethane (EDC)	14 65.2	µg/L	1	50.0	<0.292	130	76.2 - 126.4

*continued ...*

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

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

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

<sup>10</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>11</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. SPECIAL •

<sup>12</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>13</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>14</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

*control spikes continued . . .*

Param	LCS	Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloroform	<sup>15</sup>	63.8	µg/L	1	50.0	<0.234	128	80.2 - 120.9
1,1,1-Trichloroethane		54.0	µg/L	1	50.0	<0.257	108	66 - 139.6
1,1-Dichloropropene	<sup>16</sup>	58.5	µg/L	1	50.0	<0.286	117	89.3 - 116.5
Benzene	<sup>17</sup>	57.6	µg/L	1	50.0	<0.319	115	89.5 - 113.9
Carbon Tetrachloride		49.3	µg/L	1	50.0	<0.223	99	78 - 128.2
1,2-Dichloropropane	<sup>18</sup>	62.0	µg/L	1	50.0	<0.266	124	88.5 - 115.5
Trichloroethene (TCE)		49.6	µg/L	1	50.0	<0.235	99	87.1 - 118.1
Dibromomethane (methylene bromide)		56.6	µg/L	1	50.0	<0.341	113	89.8 - 117.7
Bromodichloromethane		56.7	µg/L	1	50.0	<0.291	113	90.4 - 120.5
2-Chloroethyl vinyl ether		38.0	µg/L	1	50.0	<0.293	76	74.2 - 129.9
cis-1,3-Dichloropropene		50.6	µg/L	1	50.0	<0.207	101	88.8 - 124.1
trans-1,3-Dichloropropene		59.9	µg/L	1	50.0	<0.293	120	82 - 131.4
Toluene		57.1	µg/L	1	50.0	<0.268	114	91.1 - 113.8
1,1,2-Trichloroethane		55.9	µg/L	1	50.0	<0.329	112	91.5 - 113.9
1,3-Dichloropropane		58.2	µg/L	1	50.0	<0.316	116	89.6 - 115.8
Dibromochloromethane		50.4	µg/L	1	50.0	<0.290	101	95.1 - 119.8
1,2-Dibromoethane (EDB)		51.4	µg/L	1	50.0	<0.229	103	93.8 - 117.4
Tetrachloroethene (PCE)		47.7	µg/L	1	50.0	<0.233	95	60.6 - 131.5
Chlorobenzene		52.6	µg/L	1	50.0	<0.276	105	91.3 - 108.8
1,1,1,2-Tetrachloroethane		51.6	µg/L	1	50.0	<0.226	103	92 - 114.9
Ethylbenzene		58.0	µg/L	1	50.0	<0.245	116	91.8 - 117.4
m,p-Xylene		119	µg/L	1	100	<0.517	119	91.4 - 120
Bromoform		47.7	µg/L	1	50.0	<0.175	95	84 - 133.8
Styrene		51.9	µg/L	1	50.0	<0.239	104	87 - 128.3
o-Xylene		60.8	µg/L	1	50.0	<0.247	122	89.3 - 122.4
1,1,2,2-Tetrachloroethane		55.3	µg/L	1	50.0	<0.223	111	79.7 - 129.4
2-Chlorotoluene	<sup>19</sup>	58.5	µg/L	1	50.0	<0.235	117	90.5 - 114.9
1,2,3-Trichloropropane		53.8	µg/L	1	50.0	<0.230	108	88.3 - 121
Isopropylbenzene		49.4	µg/L	1	50.0	<0.226	99	93.5 - 114.9
Bromobenzene		56.3	µg/L	1	50.0	<0.245	113	89.7 - 114
n-Propylbenzene	<sup>20</sup>	60.9	µg/L	1	50.0	<0.234	122	83.8 - 119
1,3,5-Trimethylbenzene	<sup>21</sup>	59.6	µg/L	1	50.0	<0.261	119	88.9 - 116.7
tert-Butylbenzene		49.7	µg/L	1	50.0	<0.281	99	89.6 - 115.9
1,2,4-Trimethylbenzene	<sup>22</sup>	60.8	µg/L	1	50.0	<0.285	122	92.2 - 114.6

*continued . . .*

<sup>15</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>16</sup>Spike recovery outside control limits but within CCV limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>17</sup>Spike recovery outside control limits but within CCV limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>18</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>19</sup>Spike recovery outside control limits but within CCV limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>20</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>21</sup>Spike recovery outside control limits but within CCV limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>22</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

*control spikes continued ...*

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,4-Dichlorobenzene (para)	51.8	µg/L	1	50.0	<0.307	104	90.4 - 107
sec-Butylbenzene	23 61.3	µg/L	1	50.0	<0.312	123	87.7 - 116.6
1,3-Dichlorobenzene (meta)	54.1	µg/L	1	50.0	<0.284	108	91.3 - 110.9
p-Isopropyltoluene	52.0	µg/L	1	50.0	<0.244	104	89.9 - 116.6
4-Chlorotoluene	24 58.9	µg/L	1	50.0	<0.257	118	91 - 116
1,2-Dichlorobenzene (ortho)	53.1	µg/L	1	50.0	<0.294	106	92.9 - 113.3
n-Butylbenzene	25 65.3	µg/L	1	50.0	<0.339	131	87.1 - 120
1,2-Dibromo-3-chloropropane	46.8	µg/L	1	50.0	<0.780	94	72.5 - 129.8
1,2,3-Trichlorobenzene	45.5	µg/L	1	50.0	<0.736	91	10 - 218.8
1,2,4-Trichlorobenzene	48.8	µg/L	1	50.0	<0.432	98	53.2 - 146.6
Naphthalene	46.7	µg/L	1	50.0	<0.475	93	26.6 - 177.2
Hexachlorobutadiene	46.2	µg/L	1	50.0	<1.02	92	73.6 - 134.8

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromochloromethane	26 57.3	µg/L	1	50.0	<0.197	115	88.2 - 114.5	3	20
Dichlorodifluoromethane	54.0	µg/L	1	50.0	<0.672	108	60.6 - 132.1	1	20
Chloromethane (methyl chloride)	27 65.4	µg/L	1	50.0	<0.542	131	55.7 - 127.9	0	20
Vinyl Chloride	63.3	µg/L	1	50.0	<0.516	127	47.6 - 142.9	1	20
Bromomethane (methyl bromide)	52.2	µg/L	1	50.0	<0.446	104	40.2 - 153.4	3	20
Chloroethane	63.7	µg/L	1	50.0	<0.656	127	44.5 - 145.8	0	20
Trichlorofluoromethane	52.8	µg/L	1	50.0	<0.538	106	55.9 - 152	1	20
Acetone	34.4	µg/L	1	50.0	<1.10	69	10 - 177.1	10	20
Iodomethane (methyl iodide)	42.6	µg/L	1	50.0	<0.214	85	76.6 - 128.8	3	20
Carbon Disulfide	67.5	µg/L	1	50.0	<0.294	135	66.1 - 137.3	4	20
Acrylonitrile	63.4	µg/L	1	50.0	<0.442	127	72.6 - 136.6	5	20
2-Butanone (MEK)	39.1	µg/L	1	50.0	<0.420	78	19.8 - 180.1	3	20
4-Methyl-2-pentanone (MIBK)	45.6	µg/L	1	50.0	<0.407	91	79.8 - 129.5	6	20
2-Hexanone	47.8	µg/L	1	50.0	<0.486	96	26.2 - 189.3	4	20
trans 1,4-Dichloro-2-butene	57.4	µg/L	1	50.0	<0.463	115	68 - 140.3	3	20
1,1-Dichloroethene	58.0	µg/L	1	50.0	<0.237	116	79 - 122.1	2	20
Methylene chloride	58.2	µg/L	1	50.0	<0.312	116	59.5 - 134.6	4	20
MTBE	28 68.4	µg/L	1	50.0	<0.318	137	69.8 - 137.1	3	20
trans-1,2-Dichloroethene	60.1	µg/L	1	50.0	<0.217	120	81.4 - 118.7	4	20

*continued ...*

<sup>23</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>24</sup>Spike recovery outside control limits but within CCV limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>25</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. •

<sup>26</sup>Spike recovery outside control limits but within CCV limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

<sup>27</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

<sup>28</sup>Spike recovery outside control limits but within CCV limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

*control spikes continued ...*

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD RPD	RPD Limit
1,1-Dichloroethane	<sup>29</sup> 61.4	µg/L	1	50.0	<0.202	123	79.7 - 119.2	3	20
cis-1,2-Dichloroethene	<sup>30</sup> 60.3	µg/L	1	50.0	<0.309	121	86 - 120.2	3	20
2,2-Dichloropropane	57.6	µg/L	1	50.0	<0.318	115	48 - 145.8	6	20
1,2-Dichloroethane (EDC)	62.1	µg/L	1	50.0	<0.292	124	76.2 - 126.4	5	20
Chloroform	<sup>31</sup> 61.1	µg/L	1	50.0	<0.234	122	80.2 - 120.9	4	20
1,1,1-Trichloroethane	51.6	µg/L	1	50.0	<0.257	103	66 - 139.6	4	20
1,1-Dichloropropene	56.9	µg/L	1	50.0	<0.286	114	89.3 - 116.5	3	20
Benzene	55.5	µg/L	1	50.0	<0.319	111	89.5 - 113.9	4	20
Carbon Tetrachloride	47.9	µg/L	1	50.0	<0.223	96	78 - 128.2	3	20
1,2-Dichloropropane	<sup>32</sup> 58.4	µg/L	1	50.0	<0.266	117	88.5 - 115.5	6	20
Trichloroethene (TCE)	49.2	µg/L	1	50.0	<0.235	98	87.1 - 118.1	1	20
Dibromomethane (methylene bromide)	54.7	µg/L	1	50.0	<0.341	109	89.8 - 117.7	3	20
Bromodichloromethane	54.5	µg/L	1	50.0	<0.291	109	90.4 - 120.5	4	20
2-Chloroethyl vinyl ether	38.2	µg/L	1	50.0	<0.293	76	74.2 - 129.9	0	20
cis-1,3-Dichloropropene	49.2	µg/L	1	50.0	<0.207	98	88.8 - 124.1	3	20
trans-1,3-Dichloropropene	58.3	µg/L	1	50.0	<0.293	117	82 - 131.4	3	20
Toluene	55.0	µg/L	1	50.0	<0.268	110	91.1 - 113.8	4	20
1,1,2-Trichloroethane	54.4	µg/L	1	50.0	<0.329	109	91.5 - 113.9	3	20
1,3-Dichloropropane	55.9	µg/L	1	50.0	<0.316	112	89.6 - 115.8	4	20
Dibromochloromethane	50.5	µg/L	1	50.0	<0.290	101	95.1 - 119.8	0	20
1,2-Dibromoethane (EDB)	51.3	µg/L	1	50.0	<0.229	103	93.8 - 117.4	0	20
Tetrachloroethene (PCE)	47.7	µg/L	1	50.0	<0.233	95	60.6 - 131.5	0	20
Chlorobenzene	51.1	µg/L	1	50.0	<0.276	102	91.3 - 108.8	3	20
1,1,1,2-Tetrachloroethane	50.5	µg/L	1	50.0	<0.226	101	92 - 114.9	2	20
Ethylbenzene	56.2	µg/L	1	50.0	<0.245	112	91.8 - 117.4	3	20
m,p-Xylene	115	µg/L	1	100	<0.517	115	91.4 - 120	3	20
Bromoform	47.1	µg/L	1	50.0	<0.175	94	84 - 133.8	1	20
Styrene	50.2	µg/L	1	50.0	<0.239	100	87 - 128.3	3	20
o-Xylene	59.3	µg/L	1	50.0	<0.247	119	89.3 - 122.4	2	20
1,1,2,2-Tetrachloroethane	53.9	µg/L	1	50.0	<0.223	108	79.7 - 129.4	3	20
2-Chlorotoluene	55.4	µg/L	1	50.0	<0.235	111	90.5 - 114.9	5	20
1,2,3-Trichloropropane	51.6	µg/L	1	50.0	<0.230	103	88.3 - 121	4	20
Isopropylbenzene	47.6	µg/L	1	50.0	<0.226	95	93.5 - 114.9	4	20
Bromobenzene	53.8	µg/L	1	50.0	<0.245	108	89.7 - 114	4	20
n-Propylbenzene	58.0	µg/L	1	50.0	<0.234	116	83.8 - 119	5	20
1,3,5-Trimethylbenzene	56.4	µg/L	1	50.0	<0.261	113	88.9 - 116.7	6	20
tert-Butylbenzene	49.1	µg/L	1	50.0	<0.281	98	89.6 - 115.9	1	20

*continued ...*

<sup>29</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

<sup>30</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

<sup>31</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

<sup>32</sup>Spike recovery outside control limits but within CCV limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

*control spikes continued . . .*

Param	LCSD			Spike	Matrix		Rec.		RPD	
	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit	
1,2,4-Trimethylbenzene	33	58.4	µg/L	1	50.0	<0.285	117	92.2 - 114.6	4	20
1,4-Dichlorobenzene (para)		51.0	µg/L	1	50.0	<0.307	102	90.4 - 107	2	20
sec-Butylbenzene	34	59.8	µg/L	1	50.0	<0.312	120	87.7 - 116.6	2	20
1,3-Dichlorobenzene (meta)		52.3	µg/L	1	50.0	<0.284	105	91.3 - 110.9	3	20
p-Isopropyltoluene		50.6	µg/L	1	50.0	<0.244	101	89.9 - 116.6	3	20
4-Chlorotoluene		56.4	µg/L	1	50.0	<0.257	113	91 - 116	4	20
1,2-Dichlorobenzene (ortho)		52.1	µg/L	1	50.0	<0.294	104	92.9 - 113.3	2	20
n-Butylbenzene	35	63.1	µg/L	1	50.0	<0.339	126	87.1 - 120	3	20
1,2-Dibromo-3-chloropropane		47.6	µg/L	1	50.0	<0.780	95	72.5 - 129.8	2	20
1,2,3-Trichlorobenzene		50.2	µg/L	1	50.0	<0.736	100	10 - 218.8	10	20
1,2,4-Trichlorobenzene		50.0	µg/L	1	50.0	<0.432	100	53.2 - 146.6	2	20
Naphthalene		49.2	µg/L	1	50.0	<0.475	98	26.6 - 177.2	5	20
Hexachlorobutadiene		45.8	µg/L	1	50.0	<1.02	92	73.6 - 134.8	1	20

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	3637	58.4	57.9	µg/L	1	50.0	117	116	85.4 - 110.5
Toluene-d8		52.4	52.4	µg/L	1	50.0	105	105	87 - 108.6
4-Bromofluorobenzene (4-BFB)		51.2	52.5	µg/L	1	50.0	102	105	83.3 - 113

**Matrix Spike (MS-1) Spiked Sample: 171776**

QC Batch: 51809  
Prep Batch: 44428

Date Analyzed: 2008-08-26  
QC Preparation: 2008-08-26

Analyzed By: LD  
Prepared By: LD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	38	16.0 mg/L	1	25.0	<2.44	64	70 - 130

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

<sup>33</sup>Spike recovery outside control limits but within CCV limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

<sup>34</sup>Spike recovery outside control limits but within CCV limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

<sup>35</sup>Spike recovery outside control limits. Majority of analytes have recoveries within limits showing the analysis to be in control. RPD within RPD limits.

<sup>36</sup>8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preparation was performed properly.

378260 Only - One surrogate is out of control limits. The other two surrogates show the sample preparation was performed properly.

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

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

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	8.37	8.56	mg/L	1	10	84	86	70 - 130

**Matrix Spike (MS-1) Spiked Sample: 171733**

QC Batch: 51812	Date Analyzed: 2008-08-26	Analyzed By: DS
Prep Batch: 44438	QC Preparation: 2008-08-25	Prepared By: DS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Phenol	0.0240	mg/L	1	0.0800	<0.00165	30	10 - 53.2
2-Chlorophenol	0.0510	mg/L	1	0.0800	<0.00150	64	10 - 127
1,4-Dichlorobenzene (para)	0.0542	mg/L	1	0.0800	<0.00156	68	10 - 109
N-Nitrosodi-n-propylamine	0.0539	mg/L	1	0.0800	<0.00127	67	10 - 122
1,2,4-Trichlorobenzene	0.0577	mg/L	1	0.0800	<0.00193	72	10 - 121
Naphthalene	0.0561	mg/L	1	0.0800	<0.00165	70	16 - 95
4-Chloro-3-methylphenol	0.0719	mg/L	1	0.0800	<0.00120	90	10 - 193
Acenaphthylene	0.0642	mg/L	1	0.0800	<0.00136	80	16 - 95
Acenaphthene	0.0623	mg/L	1	0.0800	<0.00132	78	10 - 133
4-Nitrophenol	0.0193	mg/L	1	0.0800	<0.00127	24	10 - 131
2,4-Dinitrotoluene	0.0605	mg/L	1	0.0800	<0.00139	76	10 - 163
Fluorene	0.0680	mg/L	1	0.0800	<0.00130	85	16 - 95
Pentachlorophenol	0.0359	mg/L	1	0.0800	<0.000632	45	10 - 163
Anthracene	0.0629	mg/L	1	0.0800	<0.00152	79	16 - 95
Phenanthrene	0.0654	mg/L	1	0.0800	<0.00144	82	16 - 95
Fluoranthene	0.0666	mg/L	1	0.0800	<0.00159	83	16 - 95
Pyrene	0.0686	mg/L	1	0.0800	<0.00135	86	17.6 - 146
Benzo(a)anthracene	0.0685	mg/L	1	0.0800	<0.00138	86	16 - 95
Chrysene	0.0696	mg/L	1	0.0800	<0.00146	87	16 - 95
Benzo(b)fluoranthene	0.0621	mg/L	1	0.0800	<0.00126	78	16 - 95
Benzo(k)fluoranthene	0.0737	mg/L	1	0.0800	<0.00149	92	16 - 95
Benzo(a)pyrene	0.0724	mg/L	1	0.0800	<0.00155	90	16 - 95
Indeno(1,2,3-cd)pyrene	0.0707	mg/L	1	0.0800	<0.00195	88	16 - 95
Dibenzo(a,h)anthracene	0.0696	mg/L	1	0.0800	<0.0210	87	16 - 95
Benzo(g,h,i)perylene	0.0692	mg/L	1	0.0800	<0.00207	86	16 - 95

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
Phenol	0.0242	mg/L	1	0.0800	<0.00165	30	10 - 53.2	1	20
2-Chlorophenol	0.0511	mg/L	1	0.0800	<0.00150	64	10 - 127	0	20
1,4-Dichlorobenzene (para)	0.0541	mg/L	1	0.0800	<0.00156	68	10 - 109	0	20
N-Nitrosodi-n-propylamine	0.0552	mg/L	1	0.0800	<0.00127	69	10 - 122	2	20

*continued ...*

*matrix spikes continued ...*

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Limit	RPD	RPD Limit
1,2,4-Trichlorobenzene	0.0572	mg/L	1	0.0800	<0.00193	72	10 - 121	1	20
Naphthalene	0.0557	mg/L	1	0.0800	<0.00165	70	16 - 95	1	20
4-Chloro-3-methylphenol	0.0733	mg/L	1	0.0800	<0.00120	92	10 - 193	2	20
Acenaphthylene	0.0632	mg/L	1	0.0800	<0.00136	79	16 - 95	2	20
Acenaphthene	0.0614	mg/L	1	0.0800	<0.00132	77	10 - 133	1	20
4-Nitrophenol	0.0191	mg/L	1	0.0800	<0.00127	24	10 - 131	1	20
2,4-Dinitrotoluene	0.0599	mg/L	1	0.0800	<0.00139	75	10 - 163	1	20
Fluorene	0.0677	mg/L	1	0.0800	<0.00130	85	16 - 95	0	20
Pentachlorophenol	0.0368	mg/L	1	0.0800	<0.000632	46	10 - 163	2	20
Anthracene	0.0620	mg/L	1	0.0800	<0.00152	78	16 - 95	1	20
Phenanthrene	0.0644	mg/L	1	0.0800	<0.00144	80	16 - 95	2	20
Fluoranthene	0.0643	mg/L	1	0.0800	<0.00159	80	16 - 95	4	20
Pyrene	0.0671	mg/L	1	0.0800	<0.00135	84	17.6 - 146	2	20
Benzo(a)anthracene	0.0679	mg/L	1	0.0800	<0.00138	85	16 - 95	1	20
Chrysene	0.0684	mg/L	1	0.0800	<0.00146	86	16 - 95	2	20
Benzo(b)fluoranthene	0.0607	mg/L	1	0.0800	<0.00126	76	16 - 95	2	20
Benzo(k)fluoranthene	0.0690	mg/L	1	0.0800	<0.00149	86	16 - 95	7	20
Benzo(a)pyrene	0.0723	mg/L	1	0.0800	<0.00155	90	16 - 95	0	20
Indeno(1,2,3-cd)pyrene	0.0692	mg/L	1	0.0800	<0.00195	86	16 - 95	2	20
Dibenzo(a,h)anthracene	0.0692	mg/L	1	0.0800	<0.0210	86	16 - 95	1	20
Benzo(g,h,i)perylene	0.0693	mg/L	1	0.0800	<0.00207	87	16 - 95	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
2-Fluorophenol	0.0369	0.0369	mg/L	1	0.08	46	46	10 - 72.2
Phenol-d5	0.0252	0.0257	mg/L	1	0.08	32	32	10 - 50.2
Nitrobenzene-d5	0.0588	0.0575	mg/L	1	0.08	74	72	10 - 131
2-Fluorobiphenyl	0.0601	0.0593	mg/L	1	0.08	75	74	10 - 118
2,4,6-Tribromophenol	0.0651	0.0661	mg/L	1	0.08	81	83	10 - 181
Terphenyl-d14	0.0692	0.0688	mg/L	1	0.08	86	86	10 - 155

**Matrix Spike (MS-1)** Spiked Sample: 171776

QC Batch: 51880  
Prep Batch: 44471

Date Analyzed: 2008-08-28  
QC Preparation: 2008-08-28

Analyzed By: RR  
Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Limit
Total Silver	0.118	mg/L	1	0.125	<0.000700	94	75 - 125
Total Arsenic	0.476	mg/L	1	0.500	<0.00850	95	75 - 125
Total Barium	1.06	mg/L	1	1.00	0.095	96	75 - 125
Total Cadmium	0.245	mg/L	1	0.250	<0.00110	98	75 - 125

*continued ...*

*matrix spikes continued ...*

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Chromium	0.105	mg/L	1	0.100	0.007	98	75 - 125
Total Lead	0.443	mg/L	1	0.500	<0.00460	89	75 - 125
Total Selenium	0.442	mg/L	1	0.500	0.02	84	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Silver	0.118	mg/L	1	0.125	<0.000700	94	75 - 125	0	20
Total Arsenic	0.480	mg/L	1	0.500	<0.00850	96	75 - 125	1	20
Total Barium	1.06	mg/L	1	1.00	0.095	96	75 - 125	0	20
Total Cadmium	0.245	mg/L	1	0.250	<0.00110	98	75 - 125	0	20
Total Chromium	0.105	mg/L	1	0.100	0.007	98	75 - 125	0	20
Total Lead	0.443	mg/L	1	0.500	<0.00460	89	75 - 125	0	20
Total Selenium	0.440	mg/L	1	0.500	0.02	84	75 - 125	0	20

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

#### Matrix Spike (MS-1) Spiked Sample: 171776

QC Batch: 51880  
Prep Batch: 44471

Date Analyzed: 2008-08-28  
QC Preparation: 2008-08-28

Analyzed By: RR  
Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Aluminum	4.21	mg/L	1	1.00	3.29	92	75 - 125
Total Boron	0.190	mg/L	1	0.0500	0.144	92	75 - 125
Total Cobalt	0.243	mg/L	1	0.250	<0.00170	97	75 - 125
Total Copper	0.130	mg/L	1	0.125	0.01	96	75 - 125
Total Iron	3.40	mg/L	1	0.500	2.9	100	75 - 125
Total Manganese	0.268	mg/L	1	0.250	0.039	92	75 - 125
Total Molybdenum	0.478	mg/L	1	0.500	<0.00613	96	75 - 125
Total Nickel	0.241	mg/L	1	0.250	0.005	94	75 - 125
Total Zinc	0.259	mg/L	1	0.250	0.032	91	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Aluminum	4.31	mg/L	1	1.00	3.29	102	75 - 125	2	20
Total Boron	0.192	mg/L	1	0.0500	0.144	96	75 - 125	1	20
Total Cobalt	0.243	mg/L	1	0.250	<0.00170	97	75 - 125	0	20
Total Copper	0.131	mg/L	1	0.125	0.01	97	75 - 125	1	20
Total Iron	3.30	mg/L	1	0.500	2.9	80	75 - 125	3	20
Total Manganese	0.267	mg/L	1	0.250	0.039	91	75 - 125	0	20

*continued ...*

*matrix spikes continued ...*

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD RPD	RPD Limit
Total Molybdenum	0.479	mg/L	1	0.500	<0.00613	96	75 - 125	0	20
Total Nickel	0.240	mg/L	1	0.250	0.005	94	75 - 125	0	20
Total Zinc	0.262	mg/L	1	0.250	0.032	92	75 - 125	1	20

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

**Matrix Spike (MS-1)** Spiked Sample: 171898

QC Batch: 51885	Date Analyzed: 2008-08-28	Analyzed By: TP
Prep Batch: 44491	QC Preparation: 2008-08-28	Prepared By: TP

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
Total Mercury	0.00108	mg/L	1	0.00100	<0.0000251	108	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit	RPD RPD	RPD Limit
Total Mercury	0.00102	mg/L	1	0.00100	<0.0000251	102	75 - 125	6	20

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

**Matrix Spike (MS-1)** Spiked Sample: 171614

QC Batch: 51945	Date Analyzed: 2008-08-29	Analyzed By: DC
Prep Batch: 44537	QC Preparation: 2008-08-29	Prepared By: DC

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Rec. Limit
GRO	<sup>40</sup> 66.3	mg/L	50	50.0	60.8702	11	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.	Rec. Limit	RPD RPD	RPD Limit
GRO	<sup>41</sup> 67.8	mg/L	50	50.0	60.8702	14	70 - 130	2	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)	5.07	4.89	mg/L	50	5	101	98	70 - 130
4-Bromofluorobenzene (4-BFB)	4.83	4.87	mg/L	50	5	97	97	70 - 130

<sup>40</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>41</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

**Matrix Spike (MS-1) Spiked Sample: 172137**

QC Batch: 51997  
Prep Batch: 44591

Date Analyzed: 2008-09-02  
QC Preparation: 2008-09-02

Analyzed By: KB  
Prepared By: KB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	
Bromochloromethane	61.4	µg/L	1	50.0	<0.197	123	83.9 - 123	
Dichlorodifluoromethane	48.8	µg/L	1	50.0	<0.672	98	38.4 - 157.1	
Chloromethane (methyl chloride)	66.7	µg/L	1	50.0	<0.542	133	54.1 - 145.8	
Vinyl Chloride	61.4	µg/L	1	50.0	<0.516	123	48 - 153.9	
Bromomethane (methyl bromide)	53.1	µg/L	1	50.0	<0.446	106	29.9 - 175.7	
Chloroethane	63.1	µg/L	1	50.0	<0.656	126	10 - 240.3	
Trichlorofluoromethane	55.7	µg/L	1	50.0	<0.538	111	49.5 - 169.4	
Acetone	27.4	µg/L	1	50.0	<1.10	55	10 - 186	
Iodomethane (methyl iodide)	38.4	µg/L	1	50.0	<0.214	77	71.9 - 127.7	
Carbon Disulfide	42	µg/L	1	50.0	<0.294	140	75.1 - 130.9	
Acrylonitrile	43	µg/L	1	50.0	<0.442	154	62.6 - 149.5	
2-Butanone (MEK)	39.1	µg/L	1	50.0	<0.420	78	19.8 - 138.2	
4-Methyl-2-pentanone (MIBK)	62.0	µg/L	1	50.0	<0.407	124	50.4 - 160.5	
2-Hexanone	65.2	µg/L	1	50.0	<0.486	130	20.8 - 171.5	
trans 1,4-Dichloro-2-butene	67.1	µg/L	1	50.0	<0.463	134	45.7 - 136.4	
1,1-Dichloroethene	68.1	µg/L	1	50.0	13.3	110	75.2 - 127.4	
Methylene chloride	60.9	µg/L	1	50.0	<0.312	122	61.5 - 137.2	
MTBE	70.7	µg/L	1	50.0	<0.318	141	60 - 149.2	
trans-1,2-Dichloroethene	44	µg/L	1	50.0	<0.217	129	78.2 - 125.1	
1,1-Dichloroethane	45	µg/L	1	50.0	0.39	128	79 - 126.5	
cis-1,2-Dichloroethene	60.9	µg/L	1	50.0	<0.309	122	82.5 - 127.1	
2,2-Dichloropropane	50.5	µg/L	1	50.0	<0.318	101	13.7 - 121.7	
1,2-Dichloroethane (EDC)	69.0	µg/L	1	50.0	<0.292	138	73.7 - 141	
Chloroform	46	µg/L	1	50.0	2.14	132	78.1 - 129.7	
1,1,1-Trichloroethane	56.8	µg/L	1	50.0	<0.257	114	70 - 140.3	
1,1-Dichloropropene	58.6	µg/L	1	50.0	<0.286	117	83 - 122	
Benzene	58.5	µg/L	1	50.0	<0.319	117	63.3 - 136.4	
Carbon Tetrachloride	51.5	µg/L	1	50.0	<0.223	103	75.8 - 128.8	
1,2-Dichloropropane	47	µg/L	1	50.0	<0.266	128	84 - 124.5	
Trichloroethene (TCE)	48	µg/L	1	50.0	169	124	83.7 - 109.8	
Dibromomethane (methylene bromide)	58.8	µg/L	1	50.0	<0.341	118	84.6 - 124.7	
Bromodichloromethane	57.7	µg/L	1	50.0	0.49	114	87.2 - 125.3	
2-Chloroethyl vinyl ether	49	<0.293	µg/L	1	50.0	<0.293	0	10 - 174.1

*continued ...*

<sup>42</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>43</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>44</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>45</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>46</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>47</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>48</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

<sup>49</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

*matrix spikes continued ...*

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
cis-1,3-Dichloropropene	48.0	µg/L	1	50.0	<0.207	96	82.3 - 118.5
trans-1,3-Dichloropropene	62.2	µg/L	1	50.0	<0.293	124	75.9 - 126
Toluene	57.9	µg/L	1	50.0	<0.268	116	10 - 205.6
1,1,2-Trichloroethane	59.8	µg/L	1	50.0	<0.329	120	84 - 125.8
1,3-Dichloropropane	62.0	µg/L	1	50.0	<0.316	124	83 - 126.6
Dibromochloromethane	51.5	µg/L	1	50.0	<0.290	103	91.4 - 119.1
1,2-Dibromoethane (EDB)	52.8	µg/L	1	50.0	<0.229	106	88.8 - 118.8
Tetrachloroethylene (PCE)	27.0	µg/L	1	50.0	0.61	53	46.8 - 74.2
Chlorobenzene	53.1	µg/L	1	50.0	<0.276	106	86.6 - 111.7
1,1,1,2-Tetrachloroethane	52.9	µg/L	1	50.0	<0.226	106	87.2 - 118.6
Ethylbenzene	57.9	µg/L	1	50.0	<0.245	116	81.8 - 123.6
m,p-Xylene	120	µg/L	1	100	<0.517	120	36 - 162.4
Bromoform	49.4	µg/L	1	50.0	<0.175	99	74.1 - 133
Styrene	51.7	µg/L	1	50.0	<0.239	103	10 - 187.2
o-Xylene	60.8	µg/L	1	50.0	<0.247	122	40.7 - 160.6
1,1,2,2-Tetrachloroethane	64.4	µg/L	1	50.0	<0.223	129	74.8 - 154.8
2-Chlorotoluene	55.9	µg/L	1	50.0	<0.235	112	86.3 - 117
1,2,3-Trichloropropane	58.4	µg/L	1	50.0	<0.230	117	73.2 - 125.2
Isopropylbenzene	46.2	µg/L	1	50.0	<0.226	92	87.8 - 114.2
Bromobenzene	57.4	µg/L	1	50.0	<0.245	115	84.8 - 116
n-Propylbenzene	57.5	µg/L	1	50.0	<0.234	115	79.4 - 117.1
1,3,5-Trimethylbenzene	55.7	µg/L	1	50.0	<0.261	111	82.6 - 115.9
tert-Butylbenzene	46.1	µg/L	1	50.0	<0.281	92	83 - 115.2
1,2,4-Trimethylbenzene	57.9	µg/L	1	50.0	<0.285	116	86.2 - 116.1
1,4-Dichlorobenzene (para)	49.8	µg/L	1	50.0	<0.307	100	86 - 106.4
sec-Butylbenzene	55.0	µg/L	1	50.0	<0.312	110	79.7 - 116.6
1,3-Dichlorobenzene (meta)	51.8	µg/L	1	50.0	<0.284	104	86.7 - 109.5
p-Isopropyltoluene	46.0	µg/L	1	50.0	<0.244	92	81.6 - 114.7
4-Chlorotoluene	56.9	µg/L	1	50.0	<0.257	114	87.1 - 115.4
1,2-Dichlorobenzene (ortho)	49.3	µg/L	1	50.0	<0.294	99	88.4 - 112.8
n-Butylbenzene	55.1	µg/L	1	50.0	<0.339	110	79.7 - 117.1
1,2-Dibromo-3-chloropropane	51.6	µg/L	1	50.0	<0.780	103	61.6 - 136.2
1,2,3-Trichlorobenzene	36.2	µg/L	1	50.0	<0.736	72	22.9 - 143.5
1,2,4-Trichlorobenzene	38.0	µg/L	1	50.0	<0.432	76	55.2 - 123.7
Naphthalene	40.5	µg/L	1	50.0	<0.475	81	37.2 - 147
Hexachlorobutadiene	50	µg/L	1	50.0	<1.02	71	74.3 - 107.4

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromochloromethane	61.4	µg/L	1	50.0	<0.197	123	83.9 - 123	0	20
Dichlorodifluoromethane	55.3	µg/L	1	50.0	<0.672	111	38.4 - 157.1	12	20
Chloromethane (methyl chloride)	68.4	µg/L	1	50.0	<0.542	137	54.1 - 145.8	2	20

*continued ...*

<sup>50</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

*matrix spikes continued ...*

Param	MSD		Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit		
	Result	Units								
Vinyl Chloride	65.6	µg/L	1	50.0	<0.516	131	48 - 153.9	7	20	
Bromomethane (methyl bromide)	51.2	µg/L	1	50.0	<0.446	102	29.9 - 175.7	4	20	
Chloroethane	62.7	µg/L	1	50.0	<0.656	125	10 - 240.3	1	20	
Trichlorofluoromethane	54.3	µg/L	1	50.0	<0.538	109	49.5 - 169.4	2	20	
Acetone	28.5	µg/L	1	50.0	<1.10	57	10 - 186	4	20	
Iodomethane (methyl iodide)	42.2	µg/L	1	50.0	<0.214	84	71.9 - 127.7	9	20	
Carbon Disulfide	51	70.8	µg/L	1	50.0	<0.294	142	75.1 - 130.9	1	20
Acrylonitrile	52	75.8	µg/L	1	50.0	<0.442	152	62.6 - 149.5	1	20
2-Butanone (MEK)		42.9	µg/L	1	50.0	<0.420	86	19.8 - 138.2	9	20
4-Methyl-2-pentanone (MIBK)		64.2	µg/L	1	50.0	<0.407	128	50.4 - 160.5	4	20
2-Hexanone		66.5	µg/L	1	50.0	<0.486	133	20.8 - 171.5	2	20
trans 1,4-Dichloro-2-butene		65.6	µg/L	1	50.0	<0.463	131	45.7 - 136.4	2	20
1,1-Dichloroethene		72.9	µg/L	1	50.0	13.3	119	75.2 - 127.4	7	20
Methylene chloride		61.4	µg/L	1	50.0	<0.312	123	61.5 - 137.2	1	20
MTBE	53	76.3	µg/L	1	50.0	<0.318	153	60 - 149.2	8	20
trans-1,2-Dichloroethene	54	65.2	µg/L	1	50.0	<0.217	130	78.2 - 125.1	1	20
1,1-Dichloroethane	55	65.3	µg/L	1	50.0	0.39	130	79 - 126.5	2	20
cis-1,2-Dichloroethene	56	63.9	µg/L	1	50.0	<0.309	128	82.5 - 127.1	5	20
2,2-Dichloropropane		51.9	µg/L	1	50.0	<0.318	104	13.7 - 121.7	3	20
1,2-Dichloroethane (EDC)		68.9	µg/L	1	50.0	<0.292	138	73.7 - 141	0	20
Chloroform	57	68.2	µg/L	1	50.0	2.14	132	78.1 - 129.7	0	20
1,1,1-Trichloroethane		55.7	µg/L	1	50.0	<0.257	111	70 - 140.3	2	20
1,1-Dichloropropene		59.4	µg/L	1	50.0	<0.286	119	83 - 122	1	20
Benzene		59.3	µg/L	1	50.0	<0.319	119	63.3 - 136.4	1	20
Carbon Tetrachloride		50.5	µg/L	1	50.0	<0.223	101	75.8 - 128.8	2	20
1,2-Dichloropropane		62.2	µg/L	1	50.0	<0.266	124	84 - 124.5	2	20
Trichloroethene (TCE)	58	231	µg/L	1	50.0	169	124	83.7 - 109.8	0	20
Dibromomethane (methylene bromide)		58.6	µg/L	1	50.0	<0.341	117	84.6 - 124.7	0	20
Bromodichloromethane		58.7	µg/L	1	50.0	0.49	116	87.2 - 125.3	2	20
2-Chloroethyl vinyl ether	59	<0.293	µg/L	1	50.0	<0.293	0	10 - 174.1	0	20
cis-1,3-Dichloropropene		49.3	µg/L	1	50.0	<0.207	99	82.3 - 118.5	3	20

*continued ...*

<sup>51</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits.

<sup>52</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

<sup>53</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occurred properly.

<sup>54</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

<sup>55</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

<sup>56</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occurred properly.

<sup>57</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

<sup>58</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

<sup>59</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

*matrix spikes continued ...*

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec. Rec.	Limit	RPD	RPD Limit	
trans-1,3-Dichloropropene	61.6	µg/L	1	50.0	<0.293	123	75.9 - 126	1	20	
Toluene	58.0	µg/L	1	50.0	<0.268	116	10 - 205.6	0	20	
1,1,2-Trichloroethane	59.8	µg/L	1	50.0	<0.329	120	84 - 125.8	0	20	
1,3-Dichloropropane	61.6	µg/L	1	50.0	<0.316	123	83 - 126.6	1	20	
Dibromochloromethane	53.5	µg/L	1	50.0	<0.290	107	91.4 - 119.1	4	20	
1,2-Dibromoethane (EDB)	55.1	µg/L	1	50.0	<0.229	110	88.8 - 118.8	4	20	
Tetrachloroethene (PCE)	27.6	µg/L	1	50.0	0.61	54	46.8 - 74.2	2	20	
Chlorobenzene	53.4	µg/L	1	50.0	<0.276	107	86.6 - 111.7	1	20	
1,1,1,2-Tetrachloroethane	52.9	µg/L	1	50.0	<0.226	106	87.2 - 118.6	0	20	
Ethylbenzene	58.0	µg/L	1	50.0	<0.245	116	81.8 - 123.6	0	20	
m,p-Xylene	118	µg/L	1	100	<0.517	118	36 - 162.4	2	20	
Bromoform	51.4	µg/L	1	50.0	<0.175	103	74.1 - 133	4	20	
Styrene	51.3	µg/L	1	50.0	<0.239	103	10 - 187.2	1	20	
o-Xylene	61.5	µg/L	1	50.0	<0.247	123	40.7 - 160.6	1	20	
1,1,2,2-Tetrachloroethane	63.0	µg/L	1	50.0	<0.223	126	74.8 - 154.8	2	20	
2-Chlorotoluene	58.4	µg/L	1	50.0	<0.235	117	86.3 - 117	4	20	
1,2,3-Trichloropropane	60.4	µg/L	1	50.0	<0.230	121	73.2 - 125.2	3	20	
Isopropylbenzene	49.3	µg/L	1	50.0	<0.226	99	87.8 - 114.2	6	20	
Bromobenzene	60	59.9	µg/L	1	50.0	<0.245	120	84.8 - 116	4	20
n-Propylbenzene	61	60.1	µg/L	1	50.0	<0.234	120	79.4 - 117.1	4	20
1,3,5-Trimethylbenzene	62	58.2	µg/L	1	50.0	<0.261	116	82.6 - 115.9	4	20
tert-Butylbenzene	63	48.6	µg/L	1	50.0	<0.281	97	83 - 115.2	5	20
1,2,4-Trimethylbenzene	63	60.2	µg/L	1	50.0	<0.285	120	86.2 - 116.1	4	20
1,4-Dichlorobenzene (para)		51.7	µg/L	1	50.0	<0.307	103	86 - 106.4	4	20
sec-Butylbenzene		58.0	µg/L	1	50.0	<0.312	116	79.7 - 116.6	5	20
1,3-Dichlorobenzene (meta)		53.4	µg/L	1	50.0	<0.284	107	86.7 - 109.5	3	20
p-Isopropyltoluene		48.8	µg/L	1	50.0	<0.244	98	81.6 - 114.7	6	20
4-Chlorotoluene	64	59.0	µg/L	1	50.0	<0.257	118	87.1 - 115.4	4	20
1,2-Dichlorobenzene (ortho)		51.8	µg/L	1	50.0	<0.294	104	88.4 - 112.8	5	20
n-Butylbenzene	65	59.0	µg/L	1	50.0	<0.339	118	79.7 - 117.1	7	20
1,2-Dibromo-3-chloropropane		55.9	µg/L	1	50.0	<0.780	112	61.6 - 136.2	8	20
1,2,3-Trichlorobenzene	66	46.4	µg/L	1	50.0	<0.736	93	22.9 - 143.5	25	20
1,2,4-Trichlorobenzene	67	46.6	µg/L	1	50.0	<0.432	93	55.2 - 123.7	20	20
Naphthalene	68	52.4	µg/L	1	50.0	<0.475	105	37.2 - 147	26	20
Hexachlorobutadiene		41.6	µg/L	1	50.0	<1.02	83	74.3 - 107.4	16	20

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

<sup>60</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

<sup>61</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

<sup>62</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

<sup>63</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

<sup>64</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

<sup>65</sup>MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

<sup>66</sup>MS/MSD RPD out of RPD Limits.

<sup>67</sup>MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.

<sup>68</sup>MS/MSD RPD out of RPD Limits.

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Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit	
Dibromofluoromethane	<sup>69</sup> 70	63.1	59.6	µg/L	1	50	126	119	89 - 112.8
Toluene-d8		53.7	51.8	µg/L	1	50	107	104	86.2 - 109.5
4-Bromofluorobenzene (4-BFB)		52.2	49.7	µg/L	1	50	104	99	81.3 - 115.4

Matrix Spike (MS-1) Spiked Sample: 171589

QC Batch: 51999  
Prep Batch: 44452

Date Analyzed: 2008-09-02  
QC Preparation: 2008-08-27

Analyzed By: TP  
Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Calcium	60.1	mg/L	1	50.0	10.7	99	75 - 125
Dissolved Potassium	51.2	mg/L	1	50.0	3.11	96	75 - 125
Dissolved Magnesium	58.5	mg/L	1	50.0	8.85	99	75 - 125
Dissolved Sodium	179	mg/L	10	50.0	131	96	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	RPD Limit	
Dissolved Calcium	63.6	mg/L	1	50.0	10.7	106	75 - 125	6	20
Dissolved Potassium	54.5	mg/L	1	50.0	3.11	103	75 - 125	6	20
Dissolved Magnesium	62.2	mg/L	1	50.0	8.85	107	75 - 125	6	20
Dissolved Sodium	180	mg/L	10	50.0	131	98	75 - 125	1	20

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

### Standard (ICV-1)

QC Batch: 51776

Date Analyzed: 2008-08-25

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	<1.00		0 - 200	2008-08-25
Carbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	244		0 - 200	2008-08-25
Bicarbonate Alkalinity		mg/L as CaCO <sub>3</sub>	0.00	9.00		0 - 200	2008-08-25
Total Alkalinity		mg/L as CaCO <sub>3</sub>	250	253	101	90 - 110	2008-08-25

### Standard (CCV-1)

QC Batch: 51776

Date Analyzed: 2008-08-25

Analyzed By: AR

<sup>69</sup>8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preparation was performed properly.

<sup>70</sup>8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preparation was performed properly.

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo <sub>3</sub>	0.00	<1.00		0 - 200	2008-08-25
Carbonate Alkalinity		mg/L as CaCo <sub>3</sub>	0.00	234		0 - 200	2008-08-25
Bicarbonate Alkalinity		mg/L as CaCo <sub>3</sub>	0.00	20.0		0 - 200	2008-08-25
Total Alkalinity		mg/L as CaCo <sub>3</sub>	250	254	102	90 - 110	2008-08-25

#### Standard (ICV-1)

QC Batch: 51809			Date Analyzed: 2008-08-26			Analyzed By: LD	
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	242	97	85 - 115	2008-08-26

#### Standard (CCV-1)

QC Batch: 51809			Date Analyzed: 2008-08-26			Analyzed By: LD	
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	252	101	85 - 115	2008-08-26

#### Standard (CCV-1)

QC Batch: 51812			Date Analyzed: 2008-08-26			Analyzed By: DS	
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenol		mg/L	60.0	55.5	92	80 - 120	2008-08-26
1,4-Dichlorobenzene (para)		mg/L	60.0	58.8	98	80 - 120	2008-08-26
2-Nitrophenol		mg/L	60.0	65.0	108	80 - 120	2008-08-26
2,4-Dichlorophenol		mg/L	60.0	61.0	102	80 - 120	2008-08-26
Hexachlorobutadiene		mg/L	60.0	61.7	103	80 - 120	2008-08-26
4-Chloro-3-methylphenol		mg/L	60.0	69.7	116	80 - 120	2008-08-26
2,4,6-Trichlorophenol		mg/L	60.0	62.5	104	80 - 120	2008-08-26
Acenaphthene		mg/L	60.0	58.8	98	80 - 120	2008-08-26
Diphenylamine		mg/L	60.0	58.9	98	80 - 120	2008-08-26
Pentachlorophenol		mg/L	60.0	49.2	82	80 - 120	2008-08-26
Fluoranthene		mg/L	60.0	56.0	93	80 - 120	2008-08-26
Di-n-octylphthalate		mg/L	60.0	67.2	112	80 - 120	2008-08-26

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*standard continued . . .*

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Conc.	Conc.	Recovery	Recovery	Limits	Analyzed		
Benzo(a)pyrene		mg/L	60.0	60.4	101	80 - 120	2008-08-26

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
2-Fluorophenol		59.6	mg/L	1	60.0	99	80 - 120
Phenol-d5		54.3	mg/L	1	60.0	90	80 - 120
Nitrobenzene-d5		58.1	mg/L	1	60.0	97	80 - 120
2-Fluorobiphenyl		55.9	mg/L	1	60.0	93	80 - 120
2,4,6-Tribromophenol		61.3	mg/L	1	60.0	102	80 - 120
Terphenyl-d14		58.2	mg/L	1	60.0	97	80 - 120

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

QC Batch: 51880

Date Analyzed: 2008-08-28

Analyzed By: RR

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Total Silver		mg/L	0.125	0.125	100	90 - 110	2008-08-28
Total Arsenic		mg/L	1.00	1.01	101	90 - 110	2008-08-28
Total Barium		mg/L	1.00	0.974	97	90 - 110	2008-08-28
Total Cadmium		mg/L	1.00	1.01	101	90 - 110	2008-08-28
Total Chromium		mg/L	1.00	0.992	99	90 - 110	2008-08-28
Total Lead		mg/L	1.00	0.997	100	90 - 110	2008-08-28
Total Selenium		mg/L	1.00	1.01	101	90 - 110	2008-08-28

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

QC Batch: 51880

Date Analyzed: 2008-08-28

Analyzed By: R.R.

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Total Aluminum		mg/L	1.00	1.00	100	90 - 110	2008-08-28
Total Boron		mg/L	1.00	1.01	101	90 - 110	2008-08-28
Total Cobalt		mg/L	1.00	1.03	103	90 - 110	2008-08-28
Total Copper		mg/L	1.00	0.977	98	90 - 110	2008-08-28
Total Iron		mg/L	1.00	0.991	99	90 - 110	2008-08-28
Total Manganese		mg/L	1.00	1.03	103	90 - 110	2008-08-28
Total Molybdenum		mg/L	1.00	0.997	100	90 - 110	2008-08-28
Total Nickel		mg/L	1.00	1.05	105	90 - 110	2008-08-28
Total Zinc		mg/L	1.00	0.979	98	90 - 110	2008-08-28

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### Standard (CCV-1)

QC Batch: 51880

Date Analyzed: 2008-08-28

Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/L	0.125	0.125	100	90 - 110	2008-08-28
Total Arsenic		mg/L	1.00	1.03	103	90 - 110	2008-08-28
Total Barium		mg/L	1.00	0.994	99	90 - 110	2008-08-28
Total Cadmium		mg/L	1.00	1.03	103	90 - 110	2008-08-28
Total Chromium		mg/L	1.00	1.00	100	90 - 110	2008-08-28
Total Lead		mg/L	1.00	1.02	102	90 - 110	2008-08-28
Total Selenium		mg/L	1.00	1.02	102	90 - 110	2008-08-28

### Standard (CCV-1)

QC Batch: 51880

Date Analyzed: 2008-08-28

Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	1.00	1.01	101	90 - 110	2008-08-28
Total Boron		mg/L	1.00	1.01	101	90 - 110	2008-08-28
Total Cobalt		mg/L	1.00	1.04	104	90 - 110	2008-08-28
Total Copper		mg/L	1.00	0.978	98	90 - 110	2008-08-28
Total Iron		mg/L	1.00	1.00	100	90 - 110	2008-08-28
Total Manganese		mg/L	1.00	1.04	104	90 - 110	2008-08-28
Total Molybdenum		mg/L	1.00	1.00	100	90 - 110	2008-08-28
Total Nickel		mg/L	1.00	1.07	107	90 - 110	2008-08-28
Total Zinc		mg/L	1.00	0.984	98	90 - 110	2008-08-28

### Standard (ICV-1)

QC Batch: 51885

Date Analyzed: 2008-08-28

Analyzed By: TP

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.00100	0.00103	103	90 - 110	2008-08-28

### Standard (CCV-1)

QC Batch: 51885

Date Analyzed: 2008-08-28

Analyzed By: TP

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Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Total Mercury		mg/L	0.00100	0.000968	97	90 - 110	2008-08-28

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

QC Batch: 51931 Date Analyzed: 2008-08-29 Analyzed By: AR

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True	Found	Percent	Recovery	Limits
Total Dissolved Solids		mg/L	1000	965	96	90 - 110	2008-08-29

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

QC Batch: 51931 Date Analyzed: 2008-08-29 Analyzed By: AR

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Total Dissolved Solids		mg/L	1000	984	98	90 - 110	2008-08-29

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

QC Batch: 51945 Date Analyzed: 2008-08-29 Analyzed By: DC

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True	Found	Percent	Recovery	
GRO		mg/L	1.00	1.08	108	85 - 115	2008-08-29

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

QC Batch: 51945 Date Analyzed: 2008-08-29 Analyzed By: DC

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
GRO		mg/L	1.00	1.09	109	85 - 115	2008-08-29

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

QC Batch: 51997 Date Analyzed: 2008-09-02 Analyzed By: KBB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromochloromethane		µg/L	50.0	46.1	92	70 - 130	2008-09-02
Dichlorodifluoromethane		µg/L	50.0	51.8	104	70 - 130	2008-09-02
Chloromethane (methyl chloride)		µg/L	50.0	47.4	95	70 - 130	2008-09-02
Vinyl Chloride		µg/L	50.0	43.9	88	80 - 120	2008-09-02
Bromomethane (methyl bromide)	71	µg/L	50.0	34.0	68	70 - 130	2008-09-02
Chloroethane		µg/L	50.0	39.7	79	70 - 130	2008-09-02
Trichlorofluoromethane		µg/L	50.0	45.5	91	70 - 130	2008-09-02
Acetone		µg/L	50.0	35.0	70	70 - 130	2008-09-02
Iodomethane (methyl iodide)		µg/L	50.0	35.9	72	70 - 130	2008-09-02
Carbon Disulfide		µg/L	50.0	48.6	97	70 - 130	2008-09-02
Acrylonitrile		µg/L	50.0	47.1	94	70 - 130	2008-09-02
2-Butanone (MEK)	72	µg/L	50.0	33.8	68	70 - 130	2008-09-02
4-Methyl-2-pentanone (MIBK)		µg/L	50.0	41.6	83	70 - 130	2008-09-02
2-Hexanone	73	µg/L	50.0	34.6	69	70 - 130	2008-09-02
trans 1,4-Dichloro-2-butene		µg/L	50.0	45.2	90	70 - 130	2008-09-02
1,1-Dichloroethene		µg/L	50.0	45.6	91	80 - 120	2008-09-02
Methylene chloride		µg/L	50.0	43.8	88	70 - 130	2008-09-02
MTBE		µg/L	50.0	56.7	113	70 - 130	2008-09-02
trans-1,2-Dichloroethene		µg/L	50.0	46.5	93	70 - 130	2008-09-02
1,1-Dichloroethane		µg/L	50.0	46.4	93	70 - 130	2008-09-02
cis-1,2-Dichloroethene		µg/L	50.0	47.6	95	70 - 130	2008-09-02
2,2-Dichloropropane		µg/L	50.0	48.8	98	70 - 130	2008-09-02
1,2-Dichloroethane (EDC)		µg/L	50.0	46.0	92	70 - 130	2008-09-02
Chloroform		µg/L	50.0	45.5	91	80 - 120	2008-09-02
1,1,1-Trichloroethane		µg/L	50.0	42.6	85	70 - 130	2008-09-02
1,1-Dichloropropene		µg/L	50.0	48.0	96	70 - 130	2008-09-02
Benzene		µg/L	50.0	46.3	93	70 - 130	2008-09-02
Carbon Tetrachloride		µg/L	50.0	42.9	86	70 - 130	2008-09-02
1,2-Dichloropropane		µg/L	50.0	47.2	94	80 - 120	2008-09-02
Trichloroethene (TCE)		µg/L	50.0	45.8	92	70 - 130	2008-09-02
Dibromomethane (methylene bromide)		µg/L	50.0	46.4	93	70 - 130	2008-09-02
Bromodichloromethane		µg/L	50.0	46.7	93	70 - 130	2008-09-02
2-Chloroethyl vinyl ether	74	µg/L	50.0	33.1	66	70 - 130	2008-09-02
cis-1,3-Dichloropropene		µg/L	50.0	43.0	86	70 - 130	2008-09-02
trans-1,3-Dichloropropene		µg/L	50.0	48.9	98	70 - 130	2008-09-02
Toluene		µg/L	50.0	46.0	92	80 - 120	2008-09-02
1,1,2-Trichloroethane		µg/L	50.0	46.4	93	70 - 130	2008-09-02

continued ...

<sup>71</sup>Bromomethane outside of control limits on CCV(ICV). CCV(ICV) component average is 92 which is within acceptable range. This is acceptable by Method 8000.

<sup>72</sup>2-Butanone outside of control limits on CCV(ICV). CCV(ICV) component average is 92 which is within acceptable range. This is acceptable by Method 8000.

<sup>73</sup>2-Hexanone outside of control limits on CCV(ICV). CCV(ICV) component average is 92 which is within acceptable range. This is acceptable by Method 8000.

<sup>74</sup>2-Chloroethyl vinyl ether outside of control limits on CCV(ICV). CCV(ICV) component average is 92 which is within acceptable range. This is acceptable by Method 8000.

*standard continued ...*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
1,3-Dichloropropane		µg/L	50.0	46.5	93	70 - 130	2008-09-02
Dibromochloromethane		µg/L	50.0	47.1	94	70 - 130	2008-09-02
1,2-Dibromoethane (EDB)		µg/L	50.0	47.6	95	70 - 130	2008-09-02
Tetrachloroethene (PCE)	75	µg/L	50.0	31.3	63	70 - 130	2008-09-02
Chlorobenzene		µg/L	50.0	45.5	91	80 - 120	2008-09-02
1,1,1,2-Tetrachloroethane		µg/L	50.0	45.9	92	70 - 130	2008-09-02
Ethylbenzene		µg/L	50.0	47.9	96	80 - 120	2008-09-02
m,p-Xylene		µg/L	100	97.2	97	70 - 130	2008-09-02
Bromoform		µg/L	50.0	47.2	94	70 - 130	2008-09-02
Styrene		µg/L	50.0	43.0	86	70 - 130	2008-09-02
o-Xylene		µg/L	50.0	50.5	101	70 - 130	2008-09-02
1,1,2,2-Tetrachloroethane		µg/L	50.0	47.1	94	70 - 130	2008-09-02
2-Chlorotoluene		µg/L	50.0	47.5	95	70 - 130	2008-09-02
1,2,3-Trichloropropane		µg/L	50.0	44.7	89	70 - 130	2008-09-02
Isopropylbenzene		µg/L	50.0	43.0	86	70 - 130	2008-09-02
Bromobenzene		µg/L	50.0	45.3	91	70 - 130	2008-09-02
n-Propylbenzene		µg/L	50.0	48.8	98	70 - 130	2008-09-02
1,3,5-Trimethylbenzene		µg/L	50.0	49.0	98	70 - 130	2008-09-02
tert-Butylbenzene		µg/L	50.0	45.0	90	70 - 130	2008-09-02
1,2,4-Trimethylbenzene		µg/L	50.0	51.1	102	70 - 130	2008-09-02
1,4-Dichlorobenzene (para)		µg/L	50.0	45.5	91	70 - 130	2008-09-02
sec-Butylbenzene		µg/L	50.0	52.0	104	70 - 130	2008-09-02
1,3-Dichlorobenzene (meta)		µg/L	50.0	48.0	96	70 - 130	2008-09-02
p-Isopropyltoluene		µg/L	50.0	45.5	91	70 - 130	2008-09-02
4-Chlorotoluene		µg/L	50.0	48.2	96	70 - 130	2008-09-02
1,2-Dichlorobenzene (ortho)		µg/L	50.0	48.4	97	70 - 130	2008-09-02
n-Butylbenzene		µg/L	50.0	53.8	108	70 - 130	2008-09-02
1,2-Dibromo-3-chloropropane		µg/L	50.0	39.0	78	70 - 130	2008-09-02
1,2,3-Trichlorobenzene		µg/L	50.0	42.5	85	70 - 130	2008-09-02
1,2,4-Trichlorobenzene		µg/L	50.0	49.7	99	70 - 130	2008-09-02
Naphthalene		µg/L	50.0	41.4	83	70 - 130	2008-09-02
Hexachlorobutadiene		µg/L	50.0	50.0	100	70 - 130	2008-09-02

**Standard (ICV-1)**

QC Batch: 51999

Date Analyzed: 2008-09-02

Analyzed By: TP

<sup>75</sup>Tetrachloroethene outside of control limits on CCV(ICV). CCV(ICV) component average is 92 which is within acceptable range. This is acceptable by Method 8000.

Report Date: September 5, 2008  
2005-00138

Work Order: 8082529  
SJ-34

Page Number: 56 of 60  
New Mexico

Param	Flag	Units	ICVs	ICVs	ICVs	Percent	Date
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	Analyzed
Dissolved Calcium		mg/L	50.0	51.3	103	90 - 110	2008-09-02
Dissolved Potassium		mg/L	50.0	50.8	102	90 - 110	2008-09-02
Dissolved Magnesium		mg/L	50.0	52.1	104	90 - 110	2008-09-02
Dissolved Sodium		mg/L	50.0	51.7	103	90 - 110	2008-09-02

### Standard (CCV-1)

QC Batch: 51999

Date Analyzed: 2008-09-02

Analyzed By: TP

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date
			True	Found	Percent	Recovery	
Dissolved Calcium		mg/L	50.0	49.1	98	90 - 110	2008-09-02
Dissolved Potassium		mg/L	50.0	49.6	99	90 - 110	2008-09-02
Dissolved Magnesium		mg/L	50.0	50.2	100	90 - 110	2008-09-02
Dissolved Sodium		mg/L	50.0	49.2	98	90 - 110	2008-09-02

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

QC Batch: 52049

Date Analyzed: 2008-09-03

Analyzed By: KB

Param	Flag	Units	CCVs	CCVs	CCVs	Percent	Date Analyzed
			True Conc.	Found Conc.	Percent Recovery	Recovery Limits	
Bromochloromethane		µg/L	50.0	60.2	120	70 - 130	2008-09-03
Dichlorodifluoromethane		µg/L	50.0	50.1	100	70 - 130	2008-09-03
Chloromethane (methyl chloride)		µg/L	50.0	63.0	126	70 - 130	2008-09-03
Vinyl Chloride		µg/L	50.0	59.0	118	80 - 120	2008-09-03
Bromomethane (methyl bromide)		µg/L	50.0	52.4	105	70 - 130	2008-09-03
Chloroethane		µg/L	50.0	62.5	125	70 - 130	2008-09-03
Trichlorofluoromethane		µg/L	50.0	54.4	109	70 - 130	2008-09-03
Acetone		µg/L	50.0	35.0	70	70 - 130	2008-09-03
Iodomethane (methyl iodide)		µg/L	50.0	36.4	73	70 - 130	2008-09-03
Carbon Disulfide	76	µg/L	50.0	70.4	141	70 - 130	2008-09-03
Acrylonitrile	77	µg/L	50.0	68.8	138	70 - 130	2008-09-03
2-Butanone (MEK)		µg/L	50.0	35.4	71	70 - 130	2008-09-03
4-Methyl-2-pentanone (MIBK)		µg/L	50.0	44.0	88	70 - 130	2008-09-03
2-Hexanone		µg/L	50.0	48.4	97	70 - 130	2008-09-03
trans 1,4-Dichloro-2-butene		µg/L	50.0	60.7	121	70 - 130	2008-09-03

*continued . . .*

<sup>76</sup>Carbon Disulfide outside of control limits on CCV(ICV). CCV(ICV) component average is 110 which is within acceptable range. This is acceptable by Method 8000.

<sup>77</sup>Acrylonitrile outside of control limits on CCV(ICV). CCV(ICV) component average is 110 which is within acceptable range. This is acceptable by Method 8000.

*standard continued ...*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
1,1-Dichloroethene		µg/L	50.0	53.7	107	80 - 120	2008-09-03
Methylene chloride		µg/L	50.0	60.7	121	70 - 130	2008-09-03
MTBE		µg/L	50.0	62.4	125	70 - 130	2008-09-03
trans-1,2-Dichloroethene		µg/L	50.0	62.4	125	70 - 130	2008-09-03
1,1-Dichloroethane		µg/L	50.0	62.4	125	70 - 130	2008-09-03
cis-1,2-Dichloroethene		µg/L	50.0	60.8	122	70 - 130	2008-09-03
2,2-Dichloropropane		µg/L	50.0	62.3	125	70 - 130	2008-09-03
1,2-Dichloroethane (EDC)	78	µg/L	50.0	67.4	135	70 - 130	2008-09-03
Chloroform	79	µg/L	50.0	65.3	131	80 - 120	2008-09-03
1,1,1-Trichloroethane		µg/L	50.0	55.2	110	70 - 130	2008-09-03
1,1-Dichloropropene		µg/L	50.0	59.2	118	70 - 130	2008-09-03
Benzene		µg/L	50.0	58.3	117	70 - 130	2008-09-03
Carbon Tetrachloride		µg/L	50.0	50.6	101	70 - 130	2008-09-03
1,2-Dichloropropane	80	µg/L	50.0	62.4	125	80 - 120	2008-09-03
Trichloroethene (TCE)		µg/L	50.0	47.0	94	70 - 130	2008-09-03
Dibromomethane (methylene bromide)		µg/L	50.0	57.0	114	70 - 130	2008-09-03
Bromodichloromethane		µg/L	50.0	56.3	113	70 - 130	2008-09-03
2-Chloroethyl vinyl ether		µg/L	50.0	36.8	74	70 - 130	2008-09-03
cis-1,3-Dichloropropene		µg/L	50.0	49.8	100	70 - 130	2008-09-03
trans-1,3-Dichloropropene		µg/L	50.0	61.8	124	70 - 130	2008-09-03
Toluene		µg/L	50.0	58.5	117	80 - 120	2008-09-03
1,1,2-Trichloroethane		µg/L	50.0	57.2	114	70 - 130	2008-09-03
1,3-Dichloropropane		µg/L	50.0	60.1	120	70 - 130	2008-09-03
Dibromochloromethane		µg/L	50.0	50.0	100	70 - 130	2008-09-03
1,2-Dibromoethane (EDB)		µg/L	50.0	49.9	100	70 - 130	2008-09-03
Tetrachloroethene (PCE)		µg/L	50.0	38.9	78	70 - 130	2008-09-03
Chlorobenzene		µg/L	50.0	53.6	107	80 - 120	2008-09-03
1,1,1,2-Tetrachloroethane		µg/L	50.0	53.1	106	70 - 130	2008-09-03
Ethylbenzene		µg/L	50.0	59.9	120	80 - 120	2008-09-03
m,p-Xylene		µg/L	100	124	124	70 - 130	2008-09-03
Bromoform		µg/L	50.0	46.9	94	70 - 130	2008-09-03
Styrene		µg/L	50.0	54.0	108	70 - 130	2008-09-03
o-Xylene		µg/L	50.0	63.1	126	70 - 130	2008-09-03
1,1,2,2-Tetrachloroethane		µg/L	50.0	58.3	117	70 - 130	2008-09-03
2-Chlorotoluene		µg/L	50.0	55.2	110	70 - 130	2008-09-03
1,2,3-Trichloropropane		µg/L	50.0	50.5	101	70 - 130	2008-09-03
Isopropylbenzene		µg/L	50.0	45.8	92	70 - 130	2008-09-03
Bromobenzene		µg/L	50.0	54.2	108	70 - 130	2008-09-03

*continued ...*

<sup>78</sup>1,2-Dichloroethane outside of control limits on CCV(ICV). CCV(ICV) component average is 110 which is within acceptable range. This is acceptable by Method 8000.

<sup>79</sup>Chloroform outside of control limits on CCV(ICV). CCV(ICV) component average is 110 which is within acceptable range. This is acceptable by Method 8000.

<sup>80</sup>1,2-Dichloropropane outside of control limits on CCV(ICV). CCV(ICV) component average is 110 which is within acceptable range. This is acceptable by Method 8000.

*standard continued ...*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
n-Propylbenzene		µg/L	50.0	58.2	116	70 - 130	2008-09-03
1,3,5-Trimethylbenzene		µg/L	50.0	56.5	113	70 - 130	2008-09-03
tert-Butylbenzene		µg/L	50.0	46.8	94	70 - 130	2008-09-03
1,2,4-Trimethylbenzene		µg/L	50.0	58.6	117	70 - 130	2008-09-03
1,4-Dichlorobenzene (para)		µg/L	50.0	49.9	100	70 - 130	2008-09-03
sec-Butylbenzene		µg/L	50.0	57.3	115	70 - 130	2008-09-03
1,3-Dichlorobenzene (meta)		µg/L	50.0	52.1	104	70 - 130	2008-09-03
p-Isopropyltoluene		µg/L	50.0	48.4	97	70 - 130	2008-09-03
4-Chlorotoluene		µg/L	50.0	56.4	113	70 - 130	2008-09-03
1,2-Dichlorobenzene (ortho)		µg/L	50.0	48.9	98	70 - 130	2008-09-03
n-Butylbenzene		µg/L	50.0	59.3	119	70 - 130	2008-09-03
1,2-Dibromo-3-chloropropane		µg/L	50.0	44.1	88	70 - 130	2008-09-03
1,2,3-Trichlorobenzene		µg/L	50.0	36.3	73	70 - 130	2008-09-03
1,2,4-Trichlorobenzene		µg/L	50.0	40.0	80	70 - 130	2008-09-03
Naphthalene	81	µg/L	50.0	34.2	68	70 - 130	2008-09-03
Hexachlorobutadiene		µg/L	50.0	41.3	83	70 - 130	2008-09-03

### Standard (CCV-2)

QC Batch: 52049

Date Analyzed: 2008-09-03

Analyzed By: KB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromochloromethane		µg/L	50.0	59.6	119	70 - 130	2008-09-03
Dichlorodifluoromethane		µg/L	50.0	41.5	83	70 - 130	2008-09-03
Chloromethane (methyl chloride)		µg/L	50.0	57.9	116	70 - 130	2008-09-03
Vinyl Chloride		µg/L	50.0	51.5	103	80 - 120	2008-09-03
Bromomethane (methyl bromide)		µg/L	50.0	43.5	87	70 - 130	2008-09-03
Chloroethane		µg/L	50.0	53.8	108	70 - 130	2008-09-03
Trichlorofluoromethane		µg/L	50.0	44.4	89	70 - 130	2008-09-03
Acetone		µg/L	50.0	37.3	75	70 - 130	2008-09-03
Iodomethane (methyl iodide)	82	µg/L	50.0	33.6	67	70 - 130	2008-09-03
Carbon Disulfide	83	µg/L	50.0	72.1	144	70 - 130	2008-09-03
Acrylonitrile	84	µg/L	50.0	71.1	142	70 - 130	2008-09-03
2-Butanone (MEK)		µg/L	50.0	37.5	75	70 - 130	2008-09-03

*continued ...*

<sup>81</sup>Naphthalene outside of control limits on CCV(ICV). CCV(ICV) component average is 110 which is within acceptable range. This is acceptable by Method 8000.

<sup>82</sup>Iodomethane outside of control limits on CCV(ICV). CCV(ICV) component average is 106 which is within acceptable range. This is acceptable by Method 8000.

<sup>83</sup>Carbon Disulfide outside of control limits on CCV(ICV). CCV(ICV) component average is 106 which is within acceptable range. This is acceptable by Method 8000.

<sup>84</sup>Acrylonitrile outside of control limits on CCV(ICV). CCV(ICV) component average is 106 which is within acceptable range. This is acceptable by Method 8000.

*standard continued ...*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
4-Methyl-2-pentanone (MIBK)		µg/L	50.0	44.0	88	70 - 130	2008-09-03
2-Hexanone		µg/L	50.0	48.7	97	70 - 130	2008-09-03
trans 1,4-Dichloro-2-butene		µg/L	50.0	59.4	119	70 - 130	2008-09-03
1,1-Dichloroethene		µg/L	50.0	54.5	109	80 - 120	2008-09-03
Methylene chloride		µg/L	50.0	62.1	124	70 - 130	2008-09-03
MTBE		µg/L	50.0	61.4	123	70 - 130	2008-09-03
trans-1,2-Dichloroethene		µg/L	50.0	63.0	126	70 - 130	2008-09-03
1,1-Dichloroethane		µg/L	50.0	62.3	125	70 - 130	2008-09-03
cis-1,2-Dichloroethene		µg/L	50.0	60.6	121	70 - 130	2008-09-03
2,2-Dichloropropane		µg/L	50.0	49.0	98	70 - 130	2008-09-03
1,2-Dichloroethane (EDC)	85	µg/L	50.0	69.4	139	70 - 130	2008-09-03
Chloroform	86	µg/L	50.0	66.8	134	80 - 120	2008-09-03
1,1,1-Trichloroethane		µg/L	50.0	54.0	108	70 - 130	2008-09-03
1,1-Dichloropropene		µg/L	50.0	57.8	116	70 - 130	2008-09-03
Benzene		µg/L	50.0	58.1	116	70 - 130	2008-09-03
Carbon Tetrachloride		µg/L	50.0	48.2	96	70 - 130	2008-09-03
1,2-Dichloropropane	87	µg/L	50.0	63.0	126	80 - 120	2008-09-03
Trichloroethene (TCE)		µg/L	50.0	50.4	101	70 - 130	2008-09-03
Dibromomethane (methylene bromide)		µg/L	50.0	56.6	113	70 - 130	2008-09-03
Bromodichloromethane		µg/L	50.0	56.6	113	70 - 130	2008-09-03
2-Chloroethyl vinyl ether	88	µg/L	50.0	32.4	65	70 - 130	2008-09-03
cis-1,3-Dichloropropene		µg/L	50.0	47.7	95	70 - 130	2008-09-03
trans-1,3-Dichloropropene		µg/L	50.0	60.4	121	70 - 130	2008-09-03
Toluene		µg/L	50.0	58.0	116	80 - 120	2008-09-03
1,1,2-Trichloroethane		µg/L	50.0	56.7	113	70 - 130	2008-09-03
1,3-Dichloropropane		µg/L	50.0	59.3	119	70 - 130	2008-09-03
Dibromochloromethane		µg/L	50.0	47.8	96	70 - 130	2008-09-03
1,2-Dibromoethane (EDB)		µg/L	50.0	48.9	98	70 - 130	2008-09-03
Tetrachloroethene (PCE)		µg/L	50.0	50.2	100	70 - 130	2008-09-03
Chlorobenzene		µg/L	50.0	52.1	104	80 - 120	2008-09-03
1,1,1,2-Tetrachloroethane		µg/L	50.0	51.1	102	70 - 130	2008-09-03
Ethylbenzene		µg/L	50.0	57.2	114	80 - 120	2008-09-03
m,p-Xylene		µg/L	100	120	120	70 - 130	2008-09-03
Bromoform		µg/L	50.0	45.2	90	70 - 130	2008-09-03
Styrene		µg/L	50.0	51.7	103	70 - 130	2008-09-03
o-Xylene		µg/L	50.0	60.2	120	70 - 130	2008-09-03

*continued ...*

<sup>85</sup>1,2-Dichloroethane outside of control limits on CCV(ICV). CCV(ICV) component average is 106 which is within acceptable range. This is acceptable by Method 8000.

<sup>86</sup>Chloroform outside of control limits on CCV(ICV). CCV(ICV) component average is 106 which is within acceptable range. This is acceptable by Method 8000.

<sup>87</sup>1,2-Dichloropropane outside of control limits on CCV(ICV). CCV(ICV) component average is 106 which is within acceptable range. This is acceptable by Method 8000.

<sup>88</sup>2-Chloroethyl vinyl ether outside of control limits on CCV(ICV). CCV(ICV) component average is 106 which is within acceptable range. This is acceptable by Method 8000.

*standard continued ...*

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
1,1,2,2-Tetrachloroethane		µg/L	50.0	50.5	101	70 - 130	2008-09-03
2-Chlorotoluene		µg/L	50.0	52.5	105	70 - 130	2008-09-03
1,2,3-Trichloropropane		µg/L	50.0	49.5	99	70 - 130	2008-09-03
Isopropylbenzene		µg/L	50.0	43.4	87	70 - 130	2008-09-03
Bromobenzene		µg/L	50.0	52.2	104	70 - 130	2008-09-03
n-Propylbenzene		µg/L	50.0	54.8	110	70 - 130	2008-09-03
1,3,5-Trimethylbenzene		µg/L	50.0	53.8	108	70 - 130	2008-09-03
tert-Butylbenzene		µg/L	50.0	44.6	89	70 - 130	2008-09-03
1,2,4-Trimethylbenzene		µg/L	50.0	55.1	110	70 - 130	2008-09-03
1,4-Dichlorobenzene (para)		µg/L	50.0	47.7	95	70 - 130	2008-09-03
sec-Butylbenzene		µg/L	50.0	54.2	108	70 - 130	2008-09-03
1,3-Dichlorobenzene (meta)		µg/L	50.0	49.7	99	70 - 130	2008-09-03
p-Isopropyltoluene		µg/L	50.0	45.7	91	70 - 130	2008-09-03
4-Chlorotoluene		µg/L	50.0	53.0	106	70 - 130	2008-09-03
1,2-Dichlorobenzene (ortho)		µg/L	50.0	47.1	94	70 - 130	2008-09-03
n-Butylbenzene		µg/L	50.0	54.8	110	70 - 130	2008-09-03
1,2-Dibromo-3-chloropropane		µg/L	50.0	44.1	88	70 - 130	2008-09-03
1,2,3-Trichlorobenzene		µg/L	50.0	36.4	73	70 - 130	2008-09-03
1,2,4-Trichlorobenzene		µg/L	50.0	37.7	75	70 - 130	2008-09-03
Naphthalene		µg/L	50.0	35.8	72	70 - 130	2008-09-03
Hexachlorobutadiene		µg/L	50.0	38.4	77	70 - 130	2008-09-03

**TraceAnalysis, Inc.**

email: lab@traceanalysis.com

NOVA

(Street, City, Zip)

Fax #:

E-mail:

Phone #:

520 7720Contact Person:  
RonInvoice to:  
(If different from above)Project #:  
2005-00138Project Location (including state):  
NM

FIELD CODE	# CONTAINERS	MATRIX	PRESERVATIVE	SAMPLING	
				METHOD	TIME
MW	13	2	vac	X	8213 00:41
MW	13	1	plst	X	
MW	13	1	amb	X	
MW	13	1	genl	X	
MW	14	2	vac	X	
MW	14	1	plst	X	
MW	14	1	amb	X	
MW	14	1	spnt	X	
MW	13	1	amb	X	
MW	14	3	vac		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:	REMARKS:
<u>CDH</u>	<u>02/25/08</u>	<u>1441</u>	<u>02/25/08</u>	<u>THUR</u>	<u>14:41</u>	<u>32°C</u>			<input checked="" type="checkbox"/> AB USE ONLY
<u>CDH</u>	<u>02/25/08</u>	<u>1700</u>							<input type="checkbox"/> Dry Weight Basis Required <input type="checkbox"/> TRRP Report Required <input type="checkbox"/> Check If Special Reporting Limits Are Needed
<u>CDH</u>	<u>02/25/08</u>	<u>1700</u>							<input type="checkbox"/> Vol. Metals <input type="checkbox"/> Cations - <input type="checkbox"/> Laddock

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

ORIGINAL COPY

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

<u>PCMS Vols. 8260B / 624</u>	<u>PCBs 8082 / 608</u>	<u>PAH 8270C / 625</u>	<u>Total Metals Ag As Ba Cd Cr Pb Se Hg</u>	<u>TCLP Volatiles</u>	<u>TCLP Pesticides</u>	<u>RCI</u>	<u>PCMS Semi. Vol. 8270C / 625</u>	<u>GCMS Semi. Vol. 8270C / 625</u>	<u>BOD, TSS, PH</u>	<u>Moisture Content</u>	<u>Turn Around Time if different from standard</u>	<u>Hold</u>
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# TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298  
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  
6015 Harris Parkway, Suite 110 Ft. Worth, Texas 76132 817•201•5260

E-Mail: lab@traceanalysis.com

## NELAP Certifications

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

El Paso: T104704221-08-TX  
LELAP-02002

Midland: T104704392-08-TX

## Analytical and Quality Control Report

Ron Rounsville  
Nova Safety & Environmental  
2057 Commerce St.  
Midland, TX, 79703

Report Date: September 4, 2008

Work Order: 8082623



Project Location: New Mexico  
Project Name: 34 Junction South  
Project Number: 2005-00138

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
171859	MW-13	water	2008-08-26	13:30	2008-08-26
171860	MW-14	water	2008-08-26	14:30	2008-08-26

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



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Dr. Blair Leftwich, Director

### **Standard Flags**

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

## Case Narrative

Samples for project 34 Junction South were received by TraceAnalysis, Inc. on 2008-08-26 and assigned to work order 8082623. Samples for work order 8082623 were received intact at a temperature of 3.9 deg. C.

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

Test	Method
Chloride (IC)	E 300.0
Fluoride (IC)	E 300.0
NO <sub>3</sub> (IC)	E 300.0
PO <sub>4</sub> (IC)	E 300.0
SO <sub>4</sub> (IC)	E 300.0

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 8082623 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

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

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2005-00138

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## Analytical Report

### Sample: 171859 - MW-13

Laboratory:	Midland	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Ion Chromatography	Date Analyzed:	2008-08-27	Analyzed By:	AR
QC Batch:	51818	Sample Preparation:	2008-08-26	Prepared By:	AR
Prep Batch:	44443	Date Analyzed:	2008-09-03	Analyzed By:	AR
QC Batch:	51991	Sample Preparation:	2008-09-02	Prepared By:	AR
Prep Batch:	44588				

Parameter	Flag	Result	Units	Dilution	RL
Chloride		6.18	mg/L	5	0.500
Fluoride		2.01	mg/L	5	0.200
Nitrate-N		5.04	mg/L	5	0.200
PO4-P		<2.50	mg/L	5	0.500
Sulfate		44.2	mg/L	5	0.500

### Sample: 171860 - MW-14

Laboratory:	Midland	Analytical Method:	E 300.0	Prep Method:	N/A
Analysis:	Ion Chromatography	Date Analyzed:	2008-08-27	Analyzed By:	AR
QC Batch:	51818	Sample Preparation:	2008-08-26	Prepared By:	AR
Prep Batch:	44443	Date Analyzed:	2008-09-03	Analyzed By:	AR
QC Batch:	51991	Sample Preparation:	2008-09-02	Prepared By:	AR
Prep Batch:	44588				

Parameter	Flag	Result	Units	Dilution	RL
Chloride		31.7	mg/L	5	0.500
Fluoride		1.94	mg/L	5	0.200
Nitrate-N		4.76	mg/L	5	0.200
PO4-P		<2.50	mg/L	5	0.500
Sulfate		56.1	mg/L	5	0.500

### Method Blank (1) QC Batch: 51818

QC Batch:	51818	Date Analyzed:	2008-08-27	Analyzed By:	AR
Prep Batch:	44443	QC Preparation:	2008-08-26	Prepared By:	AR

Parameter	Flag	Result	MDL	Units	RL
Fluoride		<0.199		mg/L	0.2

continued ...

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*method blank continued ...*

Parameter	Flag	MDL Result	Units	RL
Nitrate-N		<0.0120	mg/L	0.2
Sulfate		<0.0320	mg/L	0.5

**Method Blank (1)** QC Batch: 51991

QC Batch: 51991 Date Analyzed: 2008-09-03 Analyzed By: AR  
Prep Batch: 44588 QC Preparation: 2008-09-02 Prepared By: AR

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.172	mg/L	0.5

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

QC Batch: 51818 Date Analyzed: 2008-08-27 Analyzed By: AR  
Prep Batch: 44443 QC Preparation: 2008-08-26 Prepared By: AR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Fluoride	2.53	mg/L	1	2.50	<0.199	101	90 - 110
Nitrate-N	2.31	mg/L	1	2.50	<0.0120	92	90 - 110
PO4-P	11.8	mg/L	1	12.5	<0.0270	94	90 - 110
Sulfate	11.6	mg/L	1	12.5	<0.0320	93	90 - 110

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Fluoride	2.31	mg/L	1	2.50	<0.199	92	90 - 110	9	
Nitrate-N	2.36	mg/L	1	2.50	<0.0120	94	90 - 110	2	
PO4-P	12.1	mg/L	1	12.5	<0.0270	97	90 - 110	2	
Sulfate	11.8	mg/L	1	12.5	<0.0320	94	90 - 110	2	

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

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

QC Batch: 51991 Date Analyzed: 2008-09-03 Analyzed By: AR  
Prep Batch: 44588 QC Preparation: 2008-09-02 Prepared By: AR

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Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11.3	mg/L	1	12.5	<0.172	90	90 - 110

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD Limit
Chloride	10.8	mg/L	1	12.5	<0.172	86	90 - 110	4

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

#### Matrix Spike (MS-1) Spiked Sample: 171860

QC Batch: 51818 Date Analyzed: 2008-08-27 Analyzed By: AR  
Prep Batch: 44443 QC Preparation: 2008-08-26 Prepared By: AR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	
Fluoride	1	11.5	mg/L	5	12.5	1.9	77	90 - 110
Nitrate-N	2	15.9	mg/L	5	12.5	4.76	89	90 - 110
PO4-P		61.2	mg/L	5	62.5	<0.135	98	90 - 110
Sulfate	3	112	mg/L	5	62.5	56	90	90 - 110

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD Limit
Fluoride	4	14.7	mg/L	5	12.5	1.9	102	90 - 110
Nitrate-N	5	15.9	mg/L	5	12.5	4.76	89	90 - 110
PO4-P		61.1	mg/L	5	62.5	<0.135	98	90 - 110
Sulfate	6	111	mg/L	5	62.5	56	88	90 - 110

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

#### Matrix Spike (MS-1) Spiked Sample: 171860

QC Batch: 51991 Date Analyzed: 2008-09-03 Analyzed By: AR  
Prep Batch: 44588 QC Preparation: 2008-09-02 Prepared By: AR

*continued ...*

<sup>1</sup>Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.

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

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

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

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

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

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*matrix spikes continued ...*

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	<sup>7</sup> 84.6	mg/L	5	62.5	31.7	85	90 - 110

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Limit
Chloride	<sup>8</sup> 85.2	mg/L	5	62.5	31.7	86	90 - 110	1

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

### Standard (ICV-1)

QC Batch: 51818

Date Analyzed: 2008-08-27

Analyzed By: AR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Fluoride		mg/L	2.50	2.33	93	90 - 110	2008-08-27
Nitrate-N		mg/L	2.50	2.27	91	90 - 110	2008-08-27
PO4-P		mg/L	12.5	11.2	90	90 - 110	2008-08-27
Sulfate		mg/L	12.5	11.4	91	90 - 110	2008-08-27

### Standard (CCV-1)

QC Batch: 51818

Date Analyzed: 2008-08-27

Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Fluoride		mg/L	2.50	2.41	96	90 - 110	2008-08-27
Nitrate-N		mg/L	2.50	2.36	94	90 - 110	2008-08-27
PO4-P		mg/L	12.5	12.0	96	90 - 110	2008-08-27
Sulfate		mg/L	12.5	11.9	95	90 - 110	2008-08-27

### Standard (ICV-1)

QC Batch: 51991

Date Analyzed: 2008-09-03

Analyzed By: AR

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

<sup>8</sup>Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

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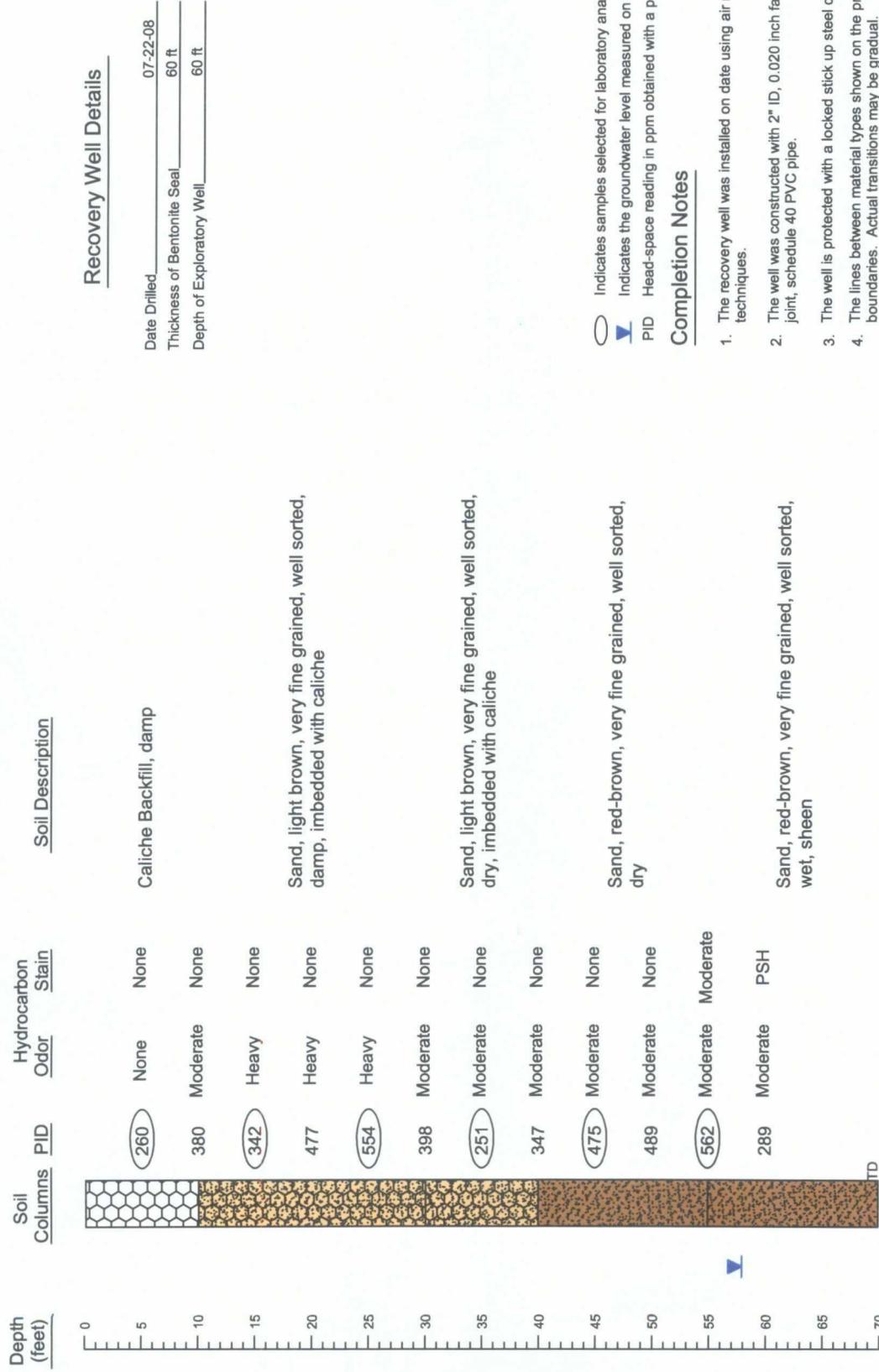
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.2	90	90 - 110	2008-09-03

### Standard (CCV-1)

QC Batch:	51991	Date Analyzed:	2008-09-03	Analyzed By:	AR		
Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.3	90	90 - 110	2008-09-03



## Soil Boring SB - 1



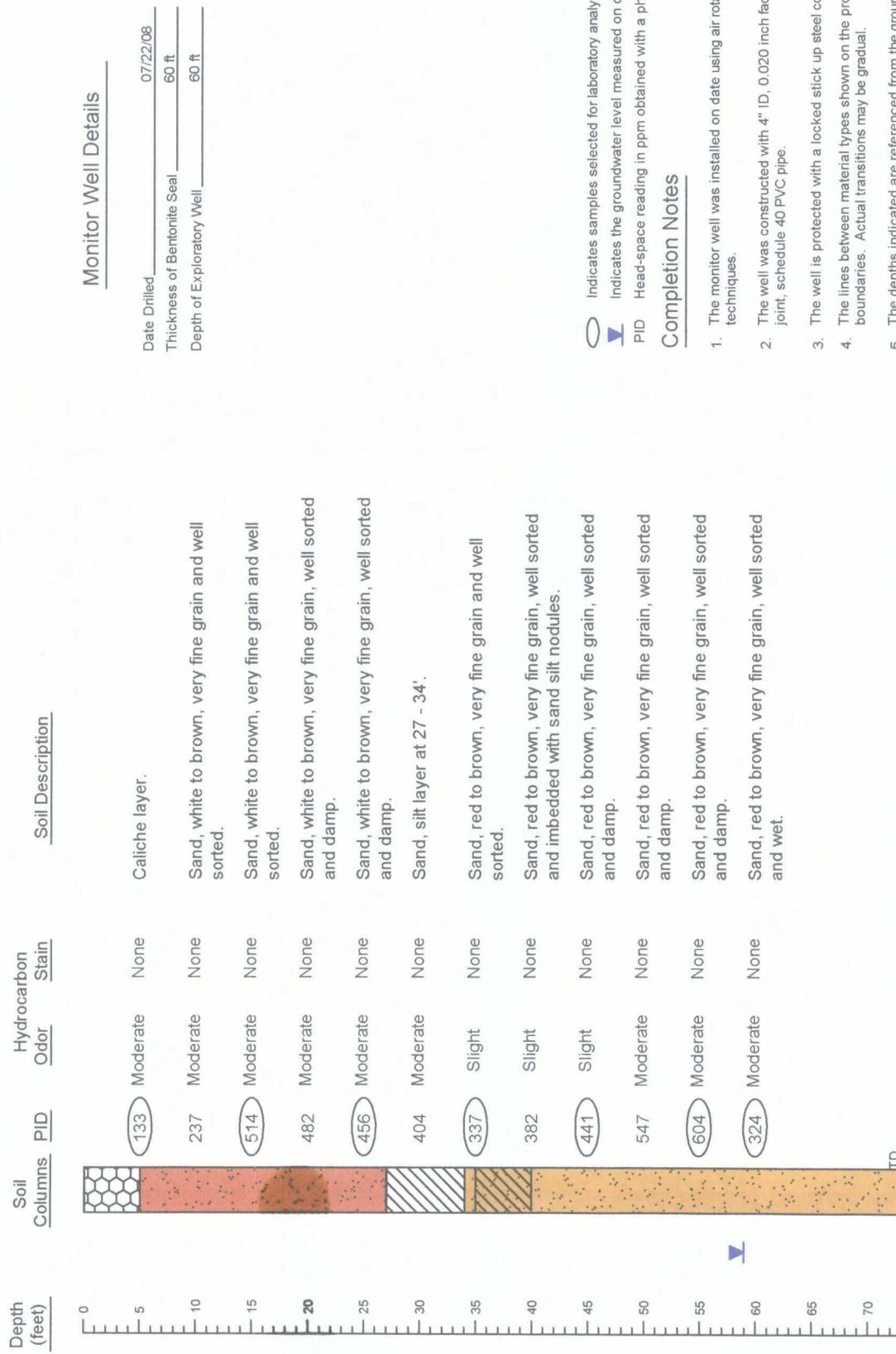
NOVA Safety and Environmental		
Scale: NTS	CAD By: DGC	Checked By: RKR

October 20, 2006



NOVA  
safety and environmental  
Lea County, NM

## Soil Boring SB-2



## Boring Log And Monitor Well Details

### Soil Boring SB-2

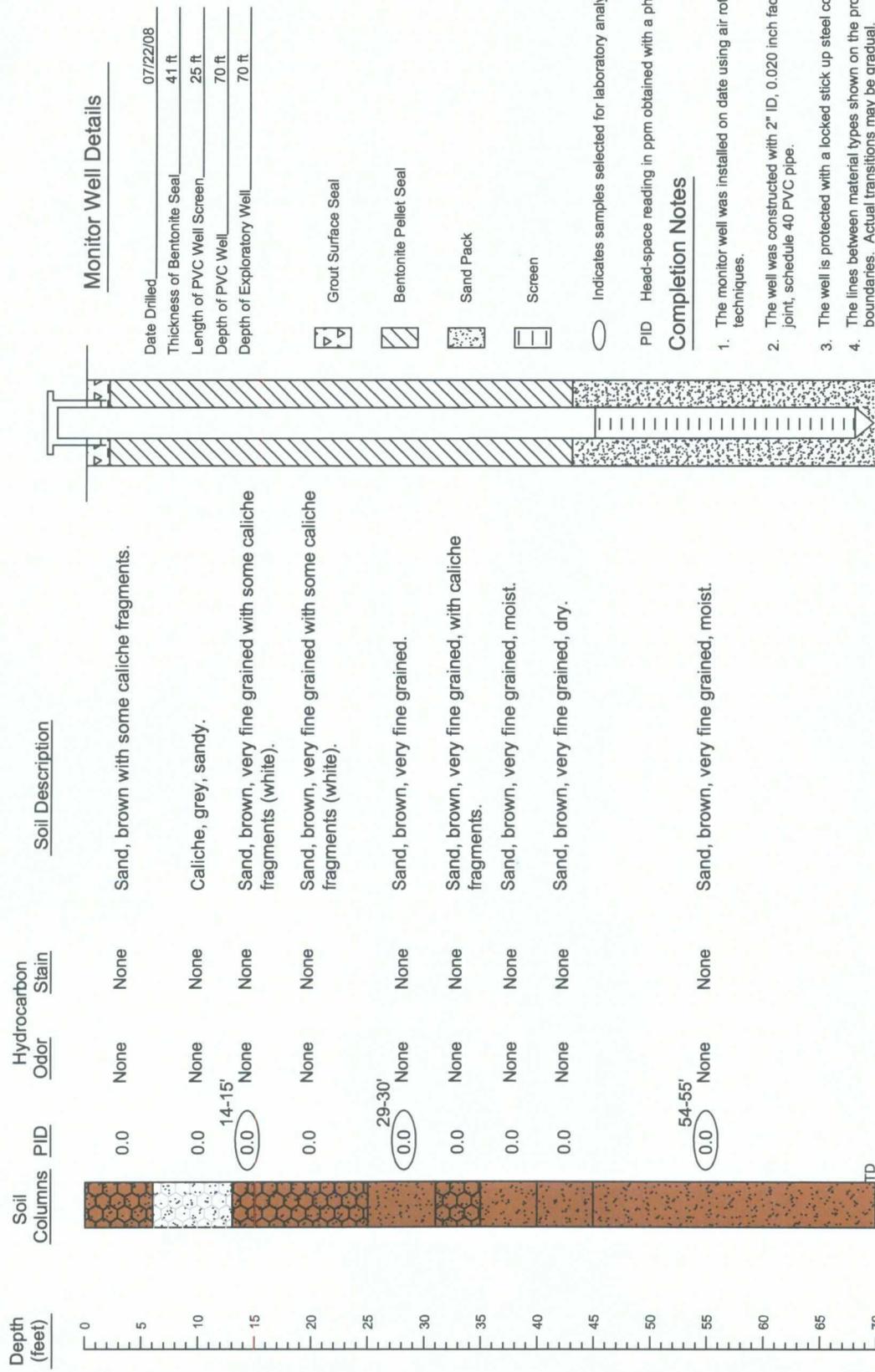
Plains Marketing, L.P. 34 Junction South Station Lea County, NM



## NOVA Safety and Environmental

Scale: NTS	CAD By: DGC	Checked By: RKR
August 26, 2008		

## Monitor Well MW-13



### Boring Log And Monitor Well Details

#### Monitor Well - 13

Plains Marketing, L.P. 34 Junction South Station Lea County, NM



NOVA Safety and Environmental

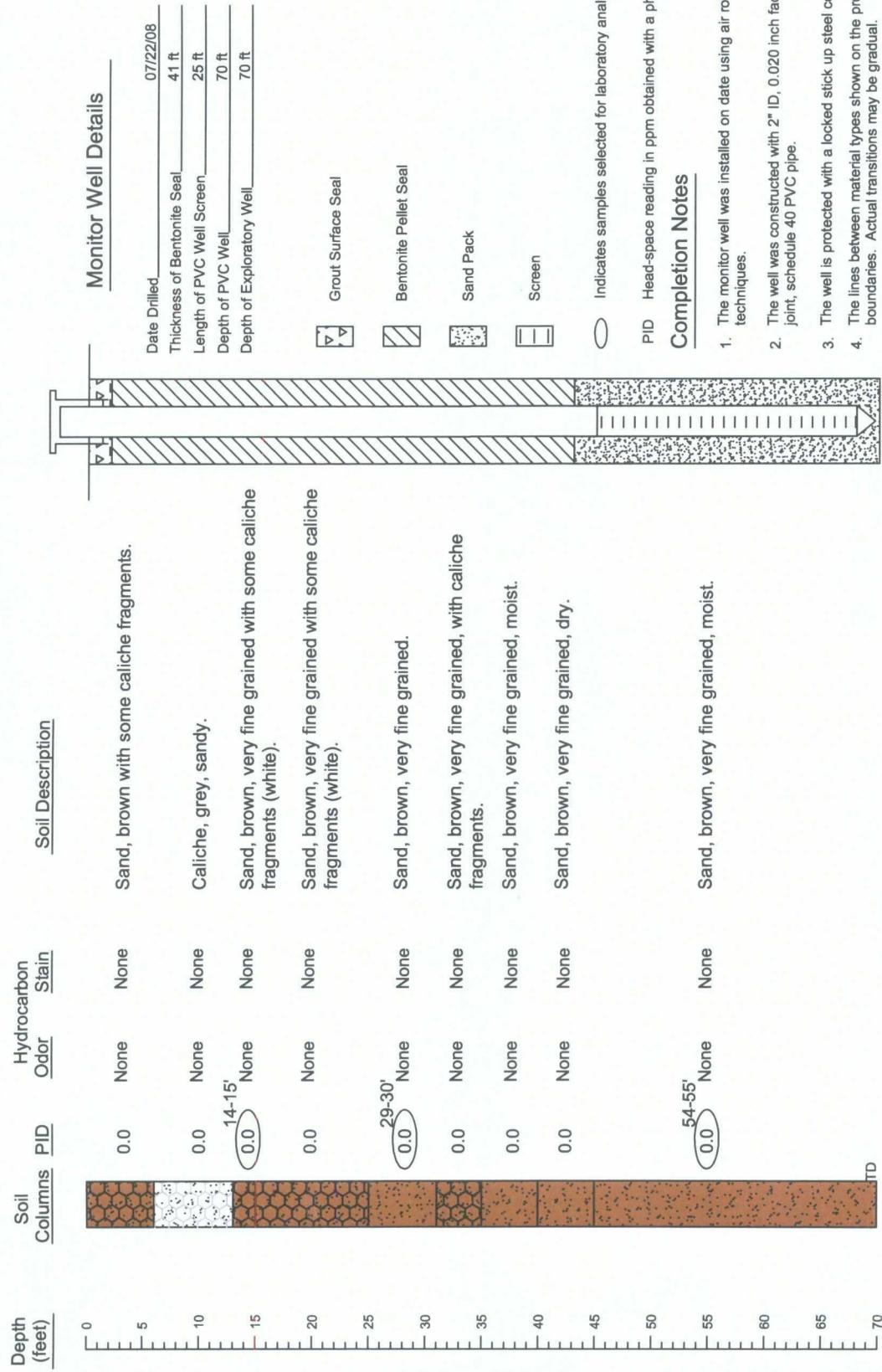
Safety and environmental  
August 26, 2008

Completion Notes

NOVA Safety and Environmental

Scale: NTS CAD By: DGC Checked By: RKR

## Monitor Well MW-14



### Boring Log And Monitor Well Details

#### Monitor Well - 14

Plains Marketing, L.P. 34 Junction South Station Lea County, NM



### NOVA Safety and Environmental

Scales: NTS CAD By: cds Checked By: CS  
October 20, 2006



# WELL RECORD & LOG

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GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) <b>JUNCTION 34 SOUTH SB-1</b>				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) <b>PLAINS MARKETING LP</b>				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS <b>333 CLAY STREET, SUITE 1600</b>				CITY <b>HOUSTON</b>	STATE <b>TX</b>	ZIP <b>77078</b>	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	MINUTES 32 51	SECONDS 43.00 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE	103 19	58.00 W	* DATUM REQUIRED: WGS 84			
	DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>FROM HOBBS GO N ON HWY 18 TO STILES RD GO W TO GATE BY CALICHE PIT TURN IN GO TO END OF RD</b>							
	2. OPTIONAL	(2.5 ACRE) ¼	(10 ACRE) ¼	(40 ACRE) ¼	(160 ACRE) ¼	SECTION	TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST
		SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT
		HYDROGRAPHIC SURVEY				MAP NUMBER	TRACT NUMBER	
	3. DRILLING INFORMATION	LICENSE NUMBER <b>WD1478</b>	NAME OF LICENSED DRILLER <b>EDWARD BRYAN</b>				NAME OF WELL DRILLING COMPANY <b>STRAUB CORPORATION</b>	
DRILLING STARTED <b>7-22-08</b>		DRILLING ENDED <b>7-22-08</b>	DEPTH OF COMPLETED WELL (FT) <b>0</b>	BORE HOLE DEPTH (FT) <b>60</b>	DEPTH WATER FIRST ENCOUNTERED (FT) <b>52</b>			
COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) <b>N/A</b>			
DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY:								
DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:								
DEPTH (FT)		BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)	
FROM <b>0</b>		TO <b>60</b>	<b>5</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
DEPTH (FT)		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)				YIELD (GPM)	
FROM		TO						
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA					TOTAL ESTIMATED WELL YIELD (GPM)			

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1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) <b>JUNCTION 34 SOUTH SB-2</b>				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) <b>PLAINS MARKETING LP</b>				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS <b>333 CLAY STREET, SUITE 1600</b>				CITY <b>HOUSTON</b>	STATE <b>TX</b>	ZIP <b>77078</b>	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	MINUTES 32 51	SECONDS 43.00 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>FROM HOBBS GO N ON HWY 18 TO STILES RD GO W TO GATE BY CALICHE PIT TURN IN GO TO END OF RD</b>								
2. OPTIONAL	(2.5 ACRE) 1/4	(10 ACRE) 1/4	(40 ACRE) 1/4	(160 ACRE) 1/4	SECTION	TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST	
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT	
	HYDROGRAPHIC SURVEY				MAP NUMBER	TRACT NUMBER		
3. DRILLING INFORMATION	LICENSE NUMBER <b>WD1478</b>	NAME OF LICENSED DRILLER <b>EDWARD BRYAN</b>				NAME OF WELL DRILLING COMPANY <b>STRAUB CORPORATION</b>		
	DRILLING STARTED <b>7-22-08</b>	DRILLING ENDED <b>7-22-08</b>	DEPTH OF COMPLETED WELL (FT) <b>0</b>	BORE HOLE DEPTH (FT) <b>60</b>	DEPTH WATER FIRST ENCOUNTERED (FT) <b>52</b>			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT) <b>N/A</b>		
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (FT) FROM <b>0</b>	BORE HOLE DIA. (IN) TO <b>60</b>	CASING MATERIAL <b>5</b>	CONNECTION TYPE (CASING) <b>N/A</b>	INSIDE DIA. CASING (IN) <b>N/A</b>	CASING WALL THICKNESS (IN) <b>N/A</b>	SLOT SIZE (IN) <b>N/A</b>	
4. WATER BEARING STRATA	DEPTH (FT) FROM	THICKNESS (FT) TO	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)					
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA				TOTAL ESTIMATED WELL YIELD (GPM)				

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1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) <b>JUNCTION 34 SOUTH MW-13</b>				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) <b>PLAINS MARKETING LP</b>				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS <b>333 CLAY STREET, SUITE 1600</b>				CITY <b>HOUSTON</b>	STATE <b>TX</b>	ZIP <b>77078</b>	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	32	MINUTES 51	SECONDS 43.00 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND * DATUM REQUIRED: WGS 84		
		LONGITUDE	103	19	57.00 W			
	DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>FROM HOBBS GO N ON HWY 18 TO STILES RD GO W TO GATE BY CALICHE PIT TURN IN GO TO END OF RD</b>							
2. OPTIONAL	(2.5 ACRE) 1/4	(10 ACRE) 1/4	(40 ACRE) 1/4	(160 ACRE) 1/4	SECTION	TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST	
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT	
	HYDROGRAPHIC SURVEY				MAP NUMBER		TRACT NUMBER	
3. DRILLING INFORMATION	LICENSE NUMBER <b>WD1478</b>	NAME OF LICENSED DRILLER <b>EDWARD BRYAN</b>				NAME OF WELL DRILLING COMPANY <b>STRAUB CORPORATION</b>		
	DRILLING STARTED <b>7-22-08</b>	DRILLING ENDED <b>7-22-08</b>	DEPTH OF COMPLETED WELL (FT) <b>70</b>	BORE HOLE DEPTH (FT) <b>70</b>	DEPTH WATER FIRST ENCOUNTERED (FT) <b>52'</b>			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (FT)	BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)	
	FROM <b>70'</b>	TO <b>45'</b>	<b>5</b>	<b>SCH 40 .010 SCREEN</b>	<b>FJ</b>	<b>2</b>	<b>0.154</b>	
	<b>45'</b>	<b>+43"</b>	<b>5</b>	<b>SCH 40 PVC RISER</b>	<b>FJ</b>	<b>2</b>	<b>0.154</b>	
4. WATER BEARING STRATA	DEPTH (FT)		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)			YIELD (GPM)	
	FROM	TO						
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA					TOTAL ESTIMATED WELL YIELD (GPM)			

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1. GENERAL AND WELL LOCATION	POD NUMBER (WELL NUMBER) <b>JUNCTION 34 SOUTH MW-14</b>				OSE FILE NUMBER(S)			
	WELL OWNER NAME(S) <b>PLAINS MARKETING LP</b>				PHONE (OPTIONAL)			
	WELL OWNER MAILING ADDRESS <b>333 CLAY STREET, SUITE 1600</b>				CITY <b>HOUSTON</b>	STATE <b>TX</b>	ZIP <b>77078</b>	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE	MINUTES 32 51	SECONDS 43.00 N	<small>* ACCURACY REQUIRED: ONE TENTH OF A SECOND</small> <small>* DATUM REQUIRED: WGS 84</small>			
LONGITUDE		103 19	57.00 W					
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS <b>FROM HOBBS GO N ON HWY 18 TO STILES RD GO W TO GATE BY CALICHE PIT TURN IN GO TO END OF RD</b>								
2. OPTIONAL	(2.5 ACRE) 1/4	(10 ACRE) 1/4	(40 ACRE) 1/4	(160 ACRE) 1/4	SECTION	TOWNSHIP <input type="checkbox"/> NORTH <input type="checkbox"/> SOUTH	RANGE <input type="checkbox"/> EAST <input type="checkbox"/> WEST	
	SUBDIVISION NAME				LOT NUMBER	BLOCK NUMBER	UNIT/TRACT	
	HYDROGRAPHIC SURVEY				MAP NUMBER	TRACT NUMBER		
3. DRILLING INFORMATION	LICENSE NUMBER <b>WD1478</b>	NAME OF LICENSED DRILLER <b>EDWARD BRYAN</b>				NAME OF WELL DRILLING COMPANY <b>STRAUB CORPORATION</b>		
	DRILLING STARTED <b>7-22-08</b>	DRILLING ENDED <b>7-22-08</b>	DEPTH OF COMPLETED WELL (FT) <b>70</b>	BORE HOLE DEPTH (FT) <b>70</b>	DEPTH WATER FIRST ENCOUNTERED (FT) <b>52'</b>			
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input type="checkbox"/> DRY HOLE <input checked="" type="checkbox"/> SHALLOW (UNCONFINED)					STATIC WATER LEVEL IN COMPLETED WELL (FT)		
	DRILLING FLUID: <input checked="" type="checkbox"/> AIR <input type="checkbox"/> MUD <input type="checkbox"/> ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input checked="" type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input type="checkbox"/> OTHER - SPECIFY:							
	DEPTH (FT)		BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
	FROM <b>70'</b>	TO <b>45'</b>						
<b>45'</b>	<b>+43"</b>	<b>5</b>	SCH 40 .010 SCREEN	FJ	<b>2</b>	<b>0.154</b>	.010	
		<b>5</b>	SCH 40 PVC RISER	FJ	<b>2</b>	<b>0.154</b>	RISER	
4. WATER BEARING STRATA	DEPTH (FT)		THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)				YIELD (GPM)
	FROM	TO						
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA					TOTAL ESTIMATED WELL YIELD (GPM)			

FOR OSE INTERNAL USE

WELL RECORD &amp; LOG (Version 6/9/08)

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THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 20 DAYS AFTER COMPLETION OF WELL DRILLING:

SIGNATURE OF DRILLER

DATE

FOR OSE INTERNAL USE

## WELL RECORD & LOG (Version 6/9/08)

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LOCATION	PAGE 2 OF 2	