AP - 7

STAGE 1 & 2 REPORTS

DATE: 10-10-08

NOVA
safety and environmental

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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: Notification of Plains Marketing, L.P. Installation of Monitor Well
Darr Angell #4
NW ¼, NE ¼, Section 11, T-15-S, R-37-E, SW ¼, SE ¼, Section 2, T-15-S, R-37-E
Lea County, NM
NMOCD Reference No. AP-007

Dear Mr. Hansen,

NOVA Safety and Environmental (NOVA), on behalf of Plains Marketing, L.P. (Plains) respectfully submits the following notification of the plugging and abandonment of monitor well MW-1 and the installation of monitor well MW-1A at the Plains Darr Angell #4 leak site (the site), located in the NW ¼, NE ¼, Section 11, T-15-S, R-37-E and SW ¼, SE ¼, Section 2, T-15-S, R-37-E in Lea County, NM. A Site Location Map is presented as Attachment Figure 1.

On July 24, 2008, one (1) monitor well, MW-1, was plugged and abandoned. This well was plugged and abandoned due to declining groundwater levels that created a situation where there was an insufficient volume of groundwater to collect samples. One (1) replacement monitor well, MW-1A, was installed approximately 10 feet northeast of the former MW-1 and completed to a depth of approximately 72 feet below ground surface (bgs). Monitor well MW-1 was plugged and abandoned with approximately five (5) bags of bentonite pellets to a depth of approximately one (1) foot below ground surface (bgs) and properly hydrated with water. A concrete cap was placed above the former monitor well to complete the procedure. A site map depicting the new well location is presented as Attachment Figure 2. The Plugging Log along with the State of New Mexico Well Record and Log are also included as attachments.

Monitor well MW-1A was installed by Straub Corporation (Straub) of Stanton, Texas, a licensed monitor well driller in the State of New Mexico. The monitor wells were drilled utilizing guidelines set forth by the office of the New Mexico State Engineer.

Following completion of well installation activities, the new monitor well (MW-1A) was 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 22, 2008, per the NMOCD directive for Initial Groundwater Sampling Parameters, groundwater samples were collected and field monitored for temperature, specific conductance and pH. The samples were subsequently submitted to Trace Analysis Laboratory in Lubbock, Texas and analyzed for Volatile Organic Compounds (VOCs), EPA Method 8260, Semi-Volatile Compounds (SVOCs), EPA Method 8270, Anions/cations, RCRA and WQCC Metals.

Laboratory results of groundwater samples collected indicated that no VOC or SVOC constituent concentrations were detected above the laboratory method detection limits and concentrations of Anion/Cation and select metals were either not detected above the laboratory method detection limits, were below WQCC standards, or were within ranges of concentrations normally observed in groundwater in this area. Tables 2 through 5 summarize the VOCs, SVOCs, Anion/Cation and Metals concentrations for the initial groundwater sampling of monitor well MW-1A. Laboratory analytical reports are attached.

Should you have any questions regarding this information, please contact me at 432-520-7720 or Ms. Camille Bryant of Plains Marketing, L.P. at 575-441-0965.

Sincerely,

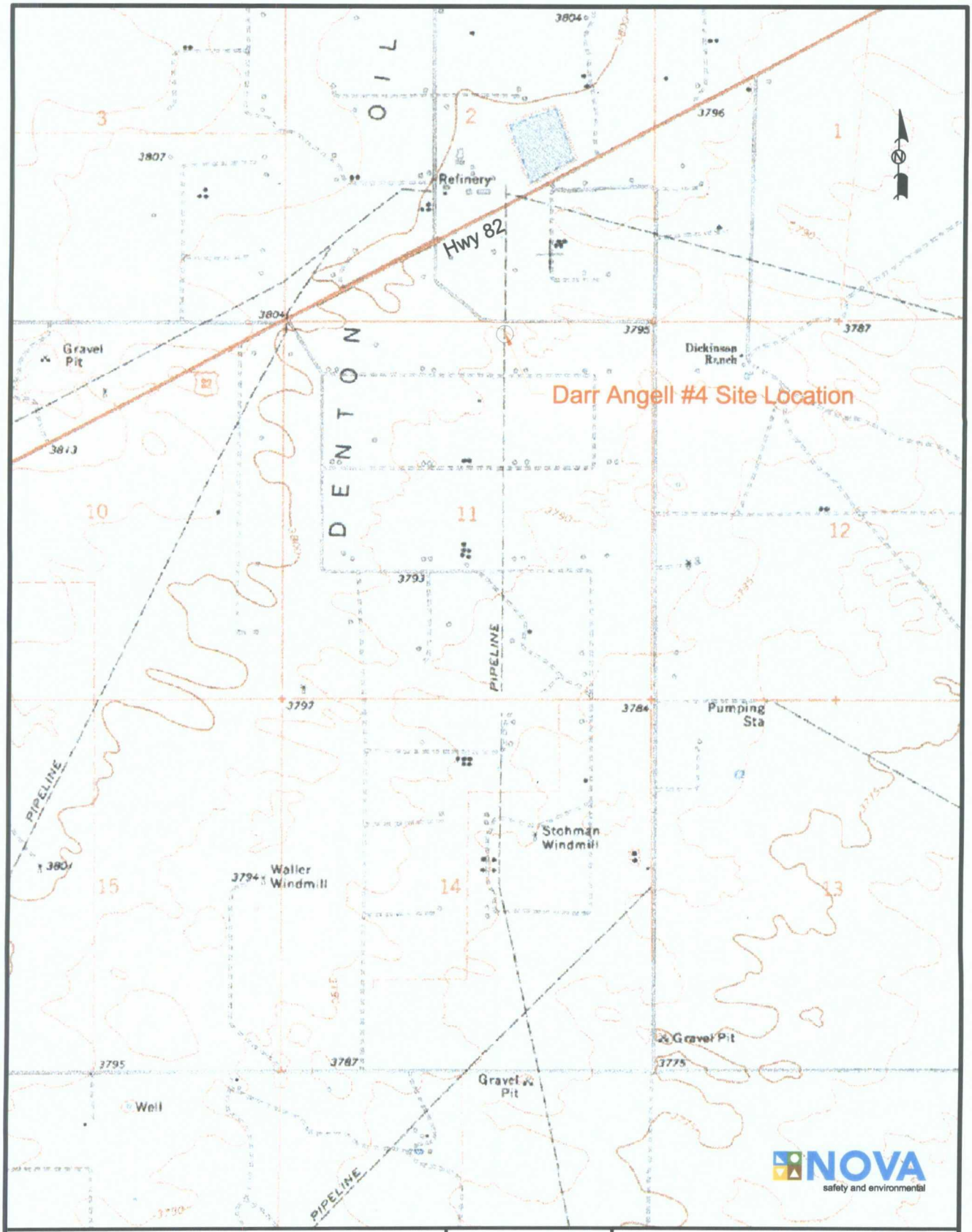
Ronald K. Rounsaville
Project Manager
NOVA Safety and Environmental

Attachments:

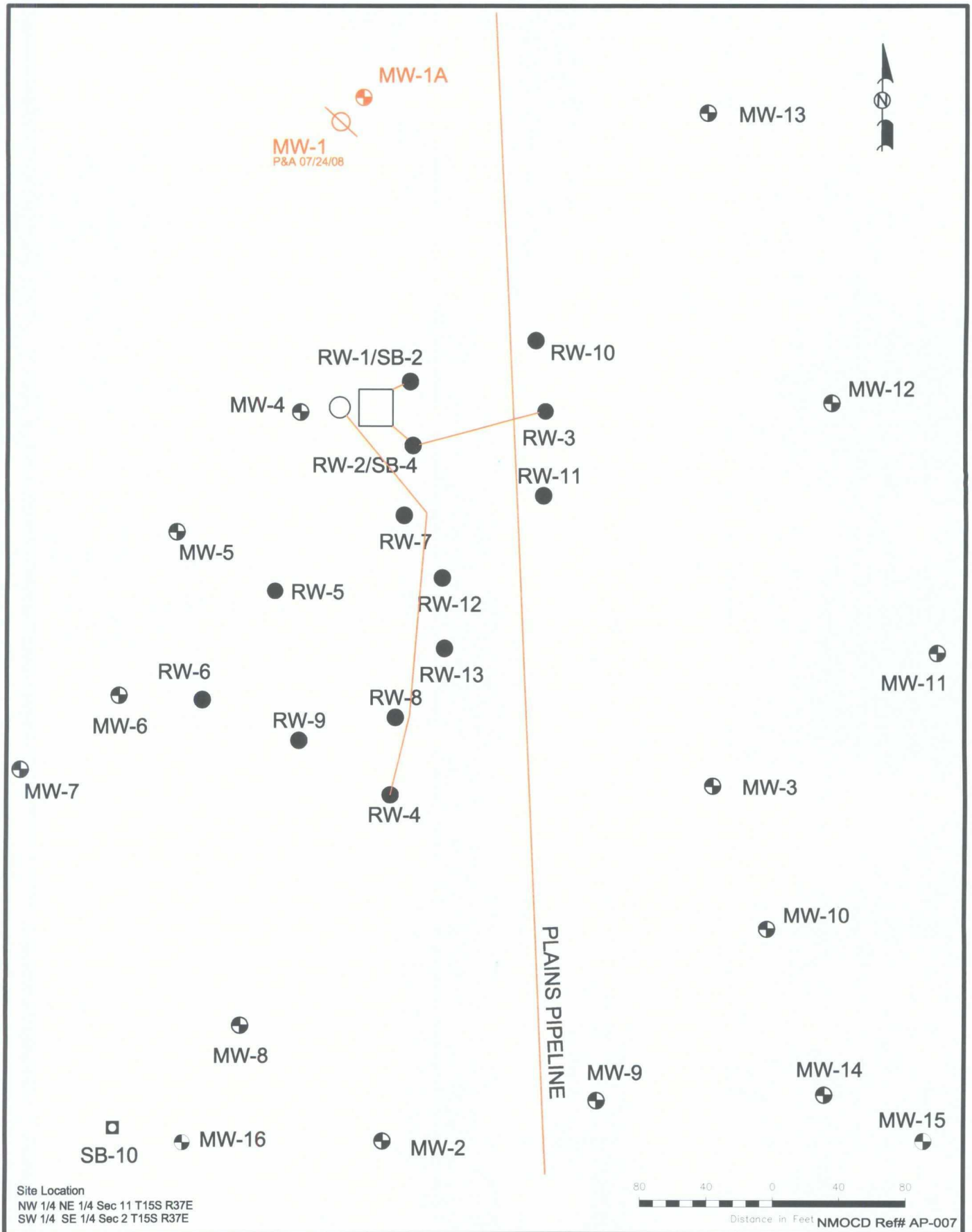
Figure 1 - Site Location Map
Figure 2 - Site Map
Table 1 – Groundwater Elevation Data
Table 2 – Concentrations of Volatiles
Table 3 – Concentrations of Semi-Volatiles in Groundwater
Table 4 – Concentrations of Anions/Cations in Groundwater
Table 5 – Concentrations of RCRA/WQCC Metals in Groundwater
Laboratory Analytical Reports
State of New Mexico Well Record and Logs

cc:

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



Site Location USGS Praieieview (NM) Topo 33° 02' 17.4" N 103° 10' 04.4" W NW 1/4 NE1/4 Sec 11 T15S R37E SW 1/4 SE 1/4 Sec 2 T15S R37E NMOCD Ref# AP-007	Figure 1 Site Location Map Plains Marketing, L.P Darr Angell # 4 Lea County, NM	NOVA Safety and Environmental Scale: 1"=2000' | Prep By: RKR | Checked By: TKC September 8, 2008



Site Location
NW 1/4 NE 1/4 Sec 11 T15S R37E
SW 1/4 SE 1/4 Sec 2 T15S R37E

NMOCD Ref# AP-007

LEGEND:

- Monitor Well Locations
- Recovery Well Locations
- Pipeline
- Poly Tank
- Shed

Figure 2
Site Map

Plains Marketing, L.P.
Darr Angell #4
Lea County, NM

NOVA Safety and Environmental

Scale: 1"=80'	CAD by: DGC	Checked By: CDS
October 05, 2005	33° 02' 17.4" N 103° 10' 04.4" W	

TABLE 1

GROUNDWATER ELEVATION DATA

PLAINS MARKETING, L.P.
DARR ANGELL 4
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007

WELL NUMBER	DATE MEASURED	TOP OF CASING ELEVATION	DEPTH TO PRODUCT	DEPTH TO WATER	PSH THICKNESS	CORRECTED GROUND WATER ELEVATION
MW - 1	07/31/00	3,800.66	-	64.55	0.00	3,736.11
MW - 1	09/13/00	3,800.66	-	64.65	0.00	3,736.01
MW - 1	11/15/00	3,800.66	-	64.76	0.00	3,735.90
MW - 1	02/14/01	3,800.66	-	64.82	0.00	3,735.84
MW - 1	04/24/01	3,800.66	-	64.92	0.00	3,735.74
MW - 1	08/21/01	3,800.66	-	65.11	0.00	3,735.55
MW - 1	10/30/01	3,800.66	-	65.22	0.00	3,735.44
MW - 1	02/18/02	3,800.66	-	65.39	0.00	3,735.27
MW - 1	06/19/02	3,800.66	-	65.59	0.00	3,735.07
MW - 1	09/18/02	3,800.66	-	65.77	0.00	3,734.89
MW - 1	12/18/02	3,800.66	-	65.89	0.00	3,734.77
MW - 1	03/12/03	3,800.66	-	66.00	0.00	3,734.66
MW - 1	06/16/03	3,800.66	-	66.18	0.00	3,734.48
MW - 1	09/10/03	3,800.66	-	66.32	0.00	3,734.34
MW - 1	12/11/03	3,800.66	-	66.48	0.00	3,734.18
MW - 1	03/09/04	3,800.66	-	66.61	0.00	3,734.05
MW - 1	05/24/04	3,800.66	-	66.71	0.00	3,733.95
MW - 1	08/03/04	3,800.66	-	66.80	0.00	3,733.86
MW - 1	09/02/04	3,800.66	-	66.85	0.00	3,733.81
MW - 1	12/22/04	3,800.66	-	66.82	0.00	3,733.84
MW - 1	*03/21/05*	3,800.66	-	67.00	0.00	3,733.66
MW - 1	*06/21/05*	3,800.66	-	67.09	0.00	3,733.57
MW - 1	*09/20/05*	3,800.66	-	67.70	0.00	3,732.96
MW - 1	*12/22/05*	3,800.66	-	67.27	0.00	3,733.39
MW - 1	*03/23/06*	3,800.66	-	67.44	0.00	3,733.22
MW - 1	*06/20/06*	3,800.66	-	67.56	0.00	3,733.10
MW - 1	*09/20/06*	3,800.66	-	67.70	0.00	3,732.96
MW - 1	*12/11/06*	3,800.66	-	67.83	0.00	3,732.83
MW - 1	*03/15/07*	3,800.66	-	67.95	0.00	3,732.71
MW - 1	*06/07/07*	3,800.66	-	68.07	0.00	3,732.59
MW - 1	*09/06/07*	3,800.66	-	67.22	0.00	3,733.44
MW - 1	*11/19/07*	3,800.66	-	68.46	0.00	3,732.20
MW - 1	*02/28/08*	3,800.66	-	68.39	0.00	3,732.27
MW - 1	*05/28/08*	3,800.66	-	68.40	0.00	3,732.26
MW - 1	07/24/08		Plugged and Abandoned			
MW-1A	08/22/08			68.81	0.00	0.00
MW-1A	*08/26/08*		-	68.81	0.00	0.00
MW - 2	07/31/00	3,796.33	-	60.55	0.00	3,735.78
MW - 2	09/13/00	3,796.33	-	60.66	0.00	3,735.67
MW - 2	11/15/00	3,796.33	-	60.76	0.00	3,735.57
MW - 2	02/14/01	3,796.33	-	60.74	0.00	3,735.59
MW - 2	04/24/01	3,796.33	-	60.90	0.00	3,735.43
MW - 2	08/21/01	3,796.33	-	61.10	0.00	3,735.23
MW - 2	10/30/01	3,796.33	-	61.20	0.00	3,735.13
MW - 2	02/18/02	3,796.33	-	61.31	0.00	3,735.02
MW - 2	06/19/02	3,796.33	-	61.57	0.00	3,734.76

Table 2

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN WATER
Plains Marketing, L.P.
Darr Angell #4
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007
All water concentrations are in mg/L

Date Sampled	Sample Location	Bromochloromethane	Dichlorodifluoromethane	Chloromethane (methyl chloride)	Vinyl Chloride	Bromomethane (methyl bromide)	Chloroethane	Trichlorofluoromethane	Acetone	Iodomethane (methyl Iodide)	Carbon Disulfide	Acrylonitrile	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	2-Hexanone
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		-	-	-	**0.001 mg/L**	-	-	-	-	-	-	-	-	-	-
08/22/08	MW-1A	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.010	<0.005	<0.001	<0.001	<0.005	<0.005	<0.005

Table 2

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN WATER
Plains Marketing, L.P.
Darr Angell #4
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007
All water concentrations are in mg/L

Date Sampled	Sample Location	trans 1,4-Dichloro-2-butene	1,1-Dichloroethene	Methylene chloride	MTBE	trans-1,2-Dichloroethene	1,1-Dichloroethane	cis-1,2-Dichloroethene	2,2-Dichloropropane	1,2-Dichloroethane (EDC)	Chloroform	1,1,1-Trichloroethane	1,1-Dichloropropene	Benzene	Carbon Tetrachloride
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		-	-	0.1mg/L	-	0.1mg/L	0.025 mg/L	0.07 mg/L	-	0.01 mg/L	0.1mg/L	0.06 mg/L	-	0.01 mg/L	0.01 mg/L
08/22/08	MW-1A	<0.010	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Table 2

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN WATER
Plains Marketing, L.P.
Darr Angell #4
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007
All water concentrations are in mg/L

Date Sampled	Sample Location	1,2-Dichloropropane	Trichloroethene (TCE)	Dibromomethane (methylene bromide)	Bromodichloromethane	2-Chloroethyl vinyl ether	cis-1,3-Dichloropropene	trans-1,3-Dichloropropene	Toluene	1,1,2-Trichloroethane	1,3-Dichloropropane	Dibromochloromethane	1,2-Dibromoethane (EDB)	Tetrachloroethene (PCE)	Chlorobenzene
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		-	-	-	-	-	-	-	0.75 mg/L	0.01 mg/L	-	-	-	-	0.1 mg/L
08/22/08	MW-1A	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Table 2

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN WATER
Plains Marketing, L.P.
Darr Angell #4
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007
All water concentrations are in mg/L

Date Sampled	Sample Location	1,1,1,2-Tetrachloroethane	Ethylbenzene	m,p-Xylene	Bromoform	Styrene	o-Xylene	1,1,2,2-Tetrachloroethane	2-Chlorotoluene	1,2,3-Trichloropropane	Isopropylbenzene	Bromobenzene	n-Propylbenzene	1,3,5-Trimethylbenzene	tert-Butylbenzene
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		**0.01 mg/L**	**0.75 mg/L**	**Total Xylene 0.62 mg/L**	**-**	**-**	**Total Xylene 0.62 mg/L**	**0.01 mg/L**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
08/22/08	MW-1A	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Table 2

CONCENTRATIONS OF VOLATILE ORGANIC COMPOUNDS IN WATER
Plains Marketing, L.P.
Darr Angell #4
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007
All water concentrations are in mg/L

Date Sampled	Sample Location	1,2,4-Trimethylbenzene	1,4-Dichlorobenzene (para)	sec-Butylbenzene	1,3-Dichlorobenzene (meta)	p-Isopropyltoluene	4-Chlorotoluene	1,2-Dichlorobenzene (ortho)	n-Butylbenzene	1,2-Dibromo-3-chloropropane	1,2,3-Trichlorobenzene	1,2,4-Trichlorobenzene	Naphthalene	Hexachlorobutadiene
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		-	-	-	-	-	-	-	-	-	-	-	**0.03 mg/L**	-
08/22/08	MW-1A	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 3

CONCENTRATIONS OF SEMI-VOLATILES IN GROUNDWATER

PLAINS MARKETING, L.P.
DARR ANGELL #4
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007

All water concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	EPA SW846-8270C, 3510															
		Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
MW - 1A	08/22/08	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 4

CONCENTRATIONS OF ANIONS/CATIONS IN GROUNDWATER

PLAINS PIPELINE, L.P.
DARR ANGELL #4
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007

All water concentrations are reported in mg/L

SAMPLE DATE	SAMPLE LOCATION	EPA SW375.4, 325,3, 310, 160.1												TEMP ^{0}C	Specific Conductance ms/cm	pH
		Calcium	Magnesium	Potassium	Sodium	Chloride	Sulfate	Bicarbonate	Carbonate	Nitrate	Phosphate	Flouride	TDS			
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		-	-	-	-	250 mg/L	600 mg/L	-	-	10 mg/L	-	1.6 mg/L	1000 mg/L	-	-	6 - 9
08/22/08	MW - 1A	91.8	13	2.61	53	43.4	97.8	273	<1.00	2.22	<2.50	2.31	504	20.94	0.792	7.05

TABLE 5

CONCENTRATIONS OF RCRA AND WQCC METALS IN GROUNDWATER

PLAINS MARKETING, L.P.
DARR ANGELL #4
LEA COUNTY, NEW MEXICO
NMOCD REFERENCE NUMBER AP-007

All water concentrations are reported in mg/L

SAMPLE LOCATION	SAMPLE DATE	EPA SW846-6010B																
		Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver	Copper	Iron	Manganese	Zinc	Aluminum	Boron	Cobalt	Molybdenum	Nickel
Maximum Contaminant Levels from NM WQCC Drinking water standards Sections 1-101.UU and 3-103.A.		**0.1 mg/L**	**1.0 mg/L**	**0.01 mg/L**	**0.05 mg/L**	**0.05 mg/L**	**0.002 mg/L**	**0.05 mg/L**	**0.05 mg/L**	**1.0 mg/L**	**1.0 mg/L**	**0.2 mg/L**	**10 mg/L**	**5.0 mg/L**	**0.75 mg/L**	**0.05 mg/L**	**1.0 mg/L**	**0.2 mg/L**
MW - 1A	08/22/08	<0.010	**0.095**	<0.002	0.007	<0.005	<0.0002	0.020	<0.005	0.010	**2.9**	0.039	0.032	3.29	0.144	<0.002	<0.010	0.005

Summary Report

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

Report Date: September 8, 2008

Work Order: 8082527

Project Location: Lovington, NM
Project Name: Darr Angel #4
Project Number: 2001-10876

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
171776	MW-1A	water	2008-08-22	17:00	2008-08-25

Sample - Field Code	TPH DRO DRO (mg/L)	TPH GRO GRO (mg/L)
171776 - MW-1A	<5.00	<0.100

Sample: 171776 - MW-1A

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1.00
Bicarbonate Alkalinity		**273**	mg/L as CaCo3	4.00
Total Alkalinity		**273**	mg/L as CaCo3	4.00
Dissolved Calcium		**91.8**	mg/L	1.00
Dissolved Magnesium		**13.0**	mg/L	1.00
Dissolved Potassium		**2.61**	mg/L	1.00
Dissolved Sodium		**52.7**	mg/L	1.00
Pyridine		<0.00500	mg/L	0.00500
N-Nitrosodimethylamine		<0.00500	mg/L	0.00500
2-Picoline		<0.00500	mg/L	0.00500
Methyl methanesulfonate		<0.00500	mg/L	0.00500
Ethyl methanesulfonate		<0.00500	mg/L	0.00500
Phenol		<0.00500	mg/L	0.00500
Aniline		<0.00500	mg/L	0.00500
bis(2-chloroethyl)ether		<0.00500	mg/L	0.00500
2-Chlorophenol		<0.00500	mg/L	0.00500
1,3-Dichlorobenzene (meta)		<0.00500	mg/L	0.00500

continued ...

sample 171776 continued ...

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

continued ...

sample 171776 continued ...

Param	Flag	Result	Units	RL
Fluorene		<0.00500	mg/L	0.00500
4-Chlorophenyl-phenylether		<0.00500	mg/L	0.00500
Diethylphthalate		<0.00500	mg/L	0.00500
4-Nitroaniline		<0.00500	mg/L	0.00500
Diphenylhydrazine		<0.00500	mg/L	0.00500
4,6-Dinitro-2-methylphenol		<0.00500	mg/L	0.00500
Diphenylamine		<0.00500	mg/L	0.00500
4-Bromophenyl-phenylether		<0.00500	mg/L	0.00500
Phenacetin		<0.00500	mg/L	0.00500
Hexachlorobenzene		<0.00500	mg/L	0.00500
4-Aminobiphenyl		<0.00500	mg/L	0.00500
Pentachlorophenol		<0.0100	mg/L	0.0100
Anthracene		<0.00500	mg/L	0.00500
Pentachloronitrobenzene		<0.00500	mg/L	0.00500
Pronamide		<0.00500	mg/L	0.00500
Phenanthrene		<0.00500	mg/L	0.00500
Di-n-butylphthalate		<0.00500	mg/L	0.00500
Fluoranthene		<0.00500	mg/L	0.00500
Benzidine		<0.0250	mg/L	0.0250
Pyrene		<0.00500	mg/L	0.00500
p-Dimethylaminoazobenzene		<0.00500	mg/L	0.00500
Butylbenzylphthalate		<0.00500	mg/L	0.00500
Benzo(a)anthracene		<0.00500	mg/L	0.00500
3,3-Dichlorobenzidine		<0.00500	mg/L	0.00500
Chrysene		<0.00500	mg/L	0.00500
bis(2-ethylhexyl)phthalate		<0.00500	mg/L	0.00500
Di-n-octylphthalate		<0.00500	mg/L	0.00500
Benzo(b)fluoranthene		<0.00500	mg/L	0.00500
Benzo(k)fluoranthene		<0.00500	mg/L	0.00500
7,12-Dimethylbenz(a)anthracene		<0.00500	mg/L	0.00500
Benzo(a)pyrene		<0.00500	mg/L	0.00500
3-Methylcholanthrene		<0.00500	mg/L	0.00500
Dibenzo(a,j)acridine		<0.00500	mg/L	0.00500
Indeno(1,2,3-cd)pyrene		<0.00500	mg/L	0.00500
Dibenzo(a,h)anthracene		<0.00500	mg/L	0.00500
Benzo(g,h,i)perylene		<0.00500	mg/L	0.00500
Total Dissolved Solids		**504**	mg/L	10.0
Total Silver		<0.00500	mg/L	0.00500
Total Arsenic		<0.0100	mg/L	0.0100
Total Barium		**0.0950**	mg/L	0.00500
Total Cadmium		<0.00200	mg/L	0.00200
Total Chromium		**0.00700**	mg/L	0.00500
Total Mercury		<0.000200	mg/L	0.000200
Total Lead		<0.00500	mg/L	0.00500
Total Selenium		**0.0200**	mg/L	0.0200
Total Aluminum		**3.29**	mg/L	0.0500
Total Boron		**0.144**	mg/L	0.00500

continued ...

sample 171776 continued ...

Param	Flag	Result	Units	RL
Total Cobalt		<0.00200	mg/L	0.00200
Total Copper		**0.0100**	mg/L	0.00500
Total Iron		**2.90**	mg/L	0.0100
Total Manganese		**0.0390**	mg/L	0.00250
Total Molybdenum		<0.0100	mg/L	0.0100
Total Nickel		**0.00500**	mg/L	0.00500
Total Zinc		**0.0320**	mg/L	0.00500
Bromochloromethane		<1.00	µg/L	1.00
Dichlorodifluoromethane		<1.00	µg/L	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1.00
Vinyl Chloride		<1.00	µg/L	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	5.00
Chloroethane		<1.00	µg/L	1.00
Trichlorofluoromethane		<1.00	µg/L	1.00
Acetone		<10.0	µg/L	10.0
Iodomethane (methyl iodide)		<5.00	µg/L	5.00
Carbon Disulfide		<1.00	µg/L	1.00
Acrylonitrile		<1.00	µg/L	1.00
2-Butanone (MEK)		<5.00	µg/L	5.00
4-Methyl-2-pentanone (MIBK)		<5.00	µg/L	5.00
2-Hexanone		<5.00	µg/L	5.00
trans 1,4-Dichloro-2-butene		<10.0	µg/L	10.0
1,1-Dichloroethene		<1.00	µg/L	1.00
Methylene chloride		<5.00	µg/L	5.00
MTBE		<1.00	µg/L	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1.00
1,1-Dichloroethane		<1.00	µg/L	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1.00
2,2-Dichloropropane		<1.00	µg/L	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1.00
Chloroform		<1.00	µg/L	1.00
1,1,1-Trichloroethane		<1.00	µg/L	1.00
1,1-Dichloropropene		<1.00	µg/L	1.00
Benzene		<1.00	µg/L	1.00
Carbon Tetrachloride		<1.00	µg/L	1.00
1,2-Dichloropropane		<1.00	µg/L	1.00
Trichloroethene (TCE)		<1.00	µg/L	1.00
Dibromomethane (methylene bromide)		<1.00	µg/L	1.00
Bromodichloromethane		<1.00	µg/L	1.00
2-Chloroethyl vinyl ether		<5.00	µg/L	5.00
cis-1,3-Dichloropropene		<1.00	µg/L	1.00
trans-1,3-Dichloropropene		<1.00	µg/L	1.00
Toluene		<1.00	µg/L	1.00
1,1,2-Trichloroethane		<1.00	µg/L	1.00
1,3-Dichloropropane		<1.00	µg/L	1.00
Dibromochloromethane		<1.00	µg/L	1.00
1,2-Dibromoethane (EDB)		<1.00	µg/L	1.00

continued ...

sample 171776 continued ...

Param	Flag	Result	Units	RL
Tetrachloroethene (PCE)		<1.00	µg/L	1.00
Chlorobenzene		<1.00	µg/L	1.00
1,1,1,2-Tetrachloroethane		<1.00	µg/L	1.00
Ethylbenzene		<1.00	µg/L	1.00
m,p-Xylene		<1.00	µg/L	1.00
Bromoform		<1.00	µg/L	1.00
Styrene		<1.00	µg/L	1.00
o-Xylene		<1.00	µg/L	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1.00
2-Chlorotoluene		<1.00	µg/L	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1.00
Isopropylbenzene		<1.00	µg/L	1.00
Bromobenzene		<1.00	µg/L	1.00
n-Propylbenzene		<1.00	µg/L	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1.00
tert-Butylbenzene		<1.00	µg/L	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1.00
sec-Butylbenzene		<1.00	µg/L	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1.00
p-Isopropyltoluene		<1.00	µg/L	1.00
4-Chlorotoluene		<1.00	µg/L	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1.00
n-Butylbenzene		<1.00	µg/L	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	5.00
Naphthalene		<5.00	µg/L	5.00
Hexachlorobutadiene		<5.00	µg/L	5.00

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NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: September 8, 2008

Work Order: 8082527

Project Location: Lovington, NM
Project Name: Darr Angel #4
Project Number: 2001-10876

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
171776	MW-1A	water	2008-08-22	17:00	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.

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 Darr Angel #4 were received by TraceAnalysis, Inc. on 2008-08-25 and assigned to work order 8082527. Samples for work order 8082527 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 8082527 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: 171776 - MW-1A

Laboratory:	Midland				
Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	51776	Date Analyzed:	2008-08-25	Analyzed By:	AR
Prep Batch:	44400	Sample Preparation:	2008-08-25	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		**273**	mg/L as CaCo3	1	4.00
Total Alkalinity		**273**	mg/L as CaCo3	1	4.00

Sample: 171776 - MW-1A

Laboratory:	Lubbock				
Analysis:	Salts, Dissolved	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	51999	Date Analyzed:	2008-09-02	Analyzed By:	TP
Prep Batch:	44452	Sample Preparation:	2008-08-27	Prepared By:	KV

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		**91.8**	mg/L	1	1.00
Dissolved Magnesium		**13.0**	mg/L	1	1.00
Dissolved Potassium		**2.61**	mg/L	1	1.00
Dissolved Sodium		**52.7**	mg/L	1	1.00

Sample: 171776 - MW-1A

Laboratory:	Lubbock				
Analysis:	Semivolatiles	Analytical Method:	S 8270C	Prep Method:	S 3510C
QC Batch:	51812	Date Analyzed:	2008-08-26	Analyzed By:	DS
Prep Batch:	44438	Sample Preparation:	2008-08-25	Prepared By:	DS

Parameter	Flag	RL 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 171776 continued ...

Parameter	Flag	Result	RL	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 171776 continued ...

Parameter	Flag	Result	RL	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		<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

continued ...

sample 171776 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
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		0.0302	mg/L	1	0.0800	38	10 - 84.7
Phenol-d5		0.0204	mg/L	1	0.0800	26	10 - 54.9
Nitrobenzene-d5		0.0520	mg/L	1	0.0800	65	10 - 202
2-Fluorobiphenyl		0.0524	mg/L	1	0.0800	66	10 - 199
2,4,6-Tribromophenol		0.0499	mg/L	1	0.0800	62	10 - 141
Terphenyl-d14		0.0633	mg/L	1	0.0800	79	10 - 160

Sample: 171776 - MW-1A

Laboratory:	Midland				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	51931	Date Analyzed:	2008-08-29	Analyzed By:	AR
Prep Batch:	44451	Sample Preparation:	2008-08-27	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**504**	mg/L	1	10.0

Sample: 171776 - MW-1A

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

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		**0.0950**	mg/L	1	0.00500
Total Cadmium		<0.00200	mg/L	1	0.00200
Total Chromium		**0.00700**	mg/L	1	0.00500
Total Mercury		<0.000200	mg/L	1	0.000200

continued ...

sample 171776 continued ...

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

Sample: 171776 - MW-1A

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

Parameter	Flag	RL Result	Units	Dilution	RL
Total Aluminum		**3.29**	mg/L	1	0.0500
Total Boron		**0.144**	mg/L	1	0.00500
Total Cobalt		<0.00200	mg/L	1	0.00200
Total Copper		**0.0100**	mg/L	1	0.00500
Total Iron		**2.90**	mg/L	1	0.0100
Total Manganese		**0.0390**	mg/L	1	0.00250
Total Molybdenum		<0.0100	mg/L	1	0.0100
Total Nickel		**0.00500**	mg/L	1	0.00500
Total Zinc		**0.0320**	mg/L	1	0.00500

Sample: 171776 - MW-1A

Laboratory:	Midland				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	51809	Date Analyzed:	2008-08-26	Analyzed By:	LD
Prep Batch:	44428	Sample Preparation:	2008-08-26	Prepared By:	LD

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		10.0	mg/L	1	10.0	100	70 - 130

Sample: 171776 - MW-1A

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0934	mg/L	1	0.100	93	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0804	mg/L	1	0.100	80	70 - 130

Sample: 171776 - MW-1A

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

Parameter	Flag	Result	RL	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 171776 continued ...

Parameter	Flag	Result	RL	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 ...

sample 171776 continued ...

Parameter	Flag	RL 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		50.8	µg/L	1	50.0	102	83.6 - 120
Toluene-d8		50.8	µg/L	1	50.0	102	85.1 - 120
4-Bromofluorobenzene (4-BFB)		49.7	µg/L	1	50.0	99	73.7 - 111

Method Blank (1) QC Batch: 51776

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

Parameter	Flag	MDL Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1) QC Batch: 51809

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

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		10.7	mg/L	1	10.0	107	70 - 130

Method Blank (1) QC Batch: 51812

QC Batch: 51812 | Date Analyzed: 2008-08-26 | Analyzed By: DS
Prep Batch: 44438 | QC Preparation: 2008-08-25 | Prepared By: DS

Parameter	Flag	MDL Result	Units	RL
Pyridine		<0.00128	mg/L	0.005
N-Nitrosodimethylamine		<0.00192	mg/L	0.005
2-Picoline		<0.00132	mg/L	0.005
Methyl methanesulfonate		<0.00175	mg/L	0.005
Ethyl methanesulfonate		<0.00122	mg/L	0.005
Phenol		<0.00165	mg/L	0.005
Aniline		<0.00138	mg/L	0.005
bis(2-chloroethyl)ether		<0.00217	mg/L	0.005
2-Chlorophenol		<0.00150	mg/L	0.005
1,3-Dichlorobenzene (meta)		<0.00166	mg/L	0.005
1,4-Dichlorobenzene (para)		<0.00156	mg/L	0.005
Benzyl alcohol		<0.00100	mg/L	0.005
1,2-Dichlorobenzene (ortho)		<0.00164	mg/L	0.005
2-Methylphenol		<0.00158	mg/L	0.005
bis(2-chloroisopropyl)ether		<0.000828	mg/L	0.005
4-Methylphenol / 3-Methylphenol		<0.00124	mg/L	0.005
N-Nitrosodi-n-propylamine		<0.00127	mg/L	0.005
Hexachloroethane		<0.00198	mg/L	0.005
Acetophenone		<0.00127	mg/L	0.005
Nitrobenzene		<0.00193	mg/L	0.005
N-Nitrosopiperidine		<0.00120	mg/L	0.005
Isophorone		<0.00194	mg/L	0.005
2-Nitrophenol		<0.00140	mg/L	0.005
2,4-Dimethylphenol		<0.00109	mg/L	0.005
bis(2-chloroethoxy)methane		<0.00124	mg/L	0.005
2,4-Dichlorophenol		<0.00134	mg/L	0.005
1,2,4-Trichlorobenzene		<0.00193	mg/L	0.005
Benzoic acid		<0.00304	mg/L	0.005
Naphthalene		<0.00165	mg/L	0.005
a,a-Dimethylphenethylamine		<0.000758	mg/L	0.005
4-Chloroaniline		<0.00115	mg/L	0.005
2,6-Dichlorophenol		<0.00120	mg/L	0.01
Hexachlorobutadiene		<0.00184	mg/L	0.005
N-Nitroso-di-n-butylamine		<0.00169	mg/L	0.005
4-Chloro-3-methylphenol		<0.00120	mg/L	0.005
2-Methylnaphthalene		<0.00145	mg/L	0.005
1-Methylnaphthalene		<0.00155	mg/L	0.005
1,2,4,5-Tetrachlorobenzene		<0.00205	mg/L	0.005
Hexachlorocyclopentadiene		<0.00385	mg/L	0.005
2,4,6-Trichlorophenol		<0.00152	mg/L	0.01
2,4,5-Trichlorophenol		<0.00320	mg/L	0.005

continued ...

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
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
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

continued ...

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
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 | Date Analyzed: 2008-08-28 | Analyzed By: RR
Prep Batch: 44471 | QC Preparation: 2008-08-28 | Prepared By: KV

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

Method Blank (1) QC Batch: 51880

QC Batch: 51880 | Date Analyzed: 2008-08-28 | Analyzed By: RR
Prep Batch: 44471 | QC Preparation: 2008-08-28 | Prepared By: KV

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

continued ...

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
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 Date Analyzed: 2008-08-28 Analyzed By: TP
Prep Batch: 44491 QC Preparation: 2008-08-28 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 Date Analyzed: 2008-08-29 Analyzed By: AR
Prep Batch: 44451 QC Preparation: 2008-08-27 Prepared By: AR

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

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
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

continued ...

method blank continued ...

Parameter	Flag	MDL Result	Units	RL
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

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 | Date Analyzed: 2008-09-02 | Analyzed By: TP
Prep Batch: 44452 | QC Preparation: 2008-08-27 | Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Dissolved Calcium		<0.175	mg/L	1

continued ...

method blank continued ...

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

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 CaCo3	1	200	20
Carbonate Alkalinity	38.0	34.0	mg/L as CaCo3	1	11	20
Bicarbonate Alkalinity	<4.00	8.00	mg/L as CaCo3	1	200	20
Total Alkalinity	43.0	42.0	mg/L as CaCo3	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

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	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 Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
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 | Date Analyzed: 2008-08-26 | Analyzed By: DS
Prep Batch: 44438 | QC Preparation: 2008-08-25 | Prepared By: DS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	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 [1]	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
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	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

continued ...

[1]Benzo(b)fluoranthene out of control limits for LCS/LCSD. Majority of analytes within range show process is within control. •

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
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 [2]	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

Laboratory Control Spike (LCS-1)

QC Batch: 51880 | Date Analyzed: 2008-08-28 | Analyzed By: RR
Prep Batch: 44471 | QC Preparation: 2008-08-28 | 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

continued ...

[2]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
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 | Date Analyzed: 2008-08-28 | Analyzed By: RR
Prep Batch: 44471 | QC Preparation: 2008-08-28 | 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.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	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

continued ...

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
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 | Date Analyzed: 2008-08-28 | Analyzed By: TP
Prep Batch: 44491 | QC Preparation: 2008-08-28 | Prepared By: TP

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	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. Limit	RPD	RPD Limit
Total Mercury	0.00100	mg/L	1	0.00100	<0.0000251	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: 51945 | Date Analyzed: 2008-08-29 | Analyzed By: DC
Prep Batch: 44537 | QC Preparation: 2008-08-29 | Prepared By: DC

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	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. Limit	RPD	RPD Limit
GRO	0.969	mg/L	1	1.00	0.087	88	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
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
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

continued ...

control spikes continued ...

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
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. 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
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

continued ...

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
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
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

continued ...

control spikes continued ...

Param		LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
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	[3]	73.4	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	[4]	69.9	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 | Date Analyzed: 2008-09-02 | Analyzed By: TP
Prep Batch: 44452 | QC Preparation: 2008-08-27 | Prepared By: KV

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

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

continued ...

[3]LCS/LCSD RPD outside RPD limits. •
[4]LCS/LCSD RPD outside RPD limits. •

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
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.

Matrix Spike (MS-1) Spiked Sample: 171776

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

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO [5]	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.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO [6]	16.5	mg/L	1	25.0	<2.44	66	70 - 130	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. 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

continued ...

[5]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[6]Matrix spike recovery out of control limits due to peak 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
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
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 | Date Analyzed: 2008-08-28 | Analyzed By: RR
Prep Batch: 44471 | QC Preparation: 2008-08-28 | 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
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 | Date Analyzed: 2008-08-28 | Analyzed By: RR
Prep Batch: 44471 | QC Preparation: 2008-08-28 | 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
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. 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. Limit	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. Limit
GRO	[7]	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. Limit	RPD	RPD Limit
GRO	[8]	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

Matrix Spike (MS-1) Spiked Sample: 172137

QC Batch: 51997 | Date Analyzed: 2008-09-02 | Analyzed By: KB
Prep Batch: 44591 | QC Preparation: 2008-09-02 | 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	[9]	70.0	µg/L	1	50.0	<0.294	140	75.1 - 130.9
Acrylonitrile	[10]	76.8	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	[11]	64.6	µg/L	1	50.0	<0.217	129	78.2 - 125.1

continued ...

[7]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[8]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[9]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[10]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[11]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

matrix spikes continued ...

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,1-Dichloroethane	[12]	64.3	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	[13]	68.2	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	[14]	63.8	µg/L	1	50.0	<0.266	128	84 - 124.5
Trichloroethene (TCE)	[15]	231	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	[16]	<0.293	µg/L	1	50.0	<0.293	0	10 - 174.1
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
Tetrachloroethene (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

continued ...

[12]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[13]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[14]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[15]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[16]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

matrix spikes continued ...

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,3-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	[17]	35.6	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
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	[18]	70.8	µg/L	1	50.0	<0.294	142	75.1 - 130.9	1	20
Acrylonitrile	[19]	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	[20]	76.3	µg/L	1	50.0	<0.318	153	60 - 149.2	8	20
trans-1,2-Dichloroethene	[21]	65.2	µg/L	1	50.0	<0.217	130	78.2 - 125.1	1	20
1,1-Dichloroethane	[22]	65.3	µg/L	1	50.0	0.39	130	79 - 126.5	2	20
cis-1,2-Dichloroethene	[23]	63.9	µg/L	1	50.0	<0.309	128	82.5 - 127.1	5	20

continued ...

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

[18]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits.

[19]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

[20]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

[21]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

[22]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

[23]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

matrix spikes continued ...

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
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	[24]	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)	[25]	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	[26]	<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
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	[27]	59.9	µg/L	1	50.0	<0.245	120	84.8 - 116	4	20
n-Propylbenzene	[28]	60.1	µg/L	1	50.0	<0.234	120	79.4 - 117.1	4	20
1,3,5-Trimethylbenzene	[29]	58.2	µg/L	1	50.0	<0.261	116	82.6 - 115.9	4	20
tert-Butylbenzene		48.6	µg/L	1	50.0	<0.281	97	83 - 115.2	5	20
1,2,4-Trimethylbenzene	[30]	60.2	µg/L	1	50.0	<0.285	120	86.2 - 116.1	4	20

continued ...

[24]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

[25]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

[26]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control. RPD within RPD limits. •

[27]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

[28]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

[29]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

[30]MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.

matrix spikes continued ...

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
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	[31]	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	[32]	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	[33]	46.4	µg/L	1	50.0	<0.736	93	22.9 - 143.5	25	20
1,2,4-Trichlorobenzene	[34]	46.6	µg/L	1	50.0	<0.432	93	55.2 - 123.7	20	20
Naphthalene	[35]	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.

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Dibromofluoromethane	[36] [37]	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 | Date Analyzed: 2008-09-02 | Analyzed By: TP
Prep Batch: 44452 | QC Preparation: 2008-08-27 | 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 Magnesium	58.5	mg/L	1	50.0	8.85	99	75 - 125
Dissolved Potassium	51.2	mg/L	1	50.0	3.11	96	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.	Rec. Limit	RPD	RPD Limit
Dissolved Calcium	63.6	mg/L	1	50.0	10.7	106	75 - 125	6	20

continued ...

[31] MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[32] MSD analyte out of range. MS/MSD has a RPD within limits. Therfore, MS shows extraction occured properly.
[33] MS/MSD RPD out of RPD Limits.
[34] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[35] MS/MSD RPD out of RPD Limits.
[36] 8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preperation was performed properly.
[37] 8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preperation was performed properly.

matrix spikes continued ...

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Magnesium	62.2	mg/L	1	50.0	8.85	107	75 - 125	6	20
Dissolved Potassium	54.5	mg/L	1	50.0	3.11	103	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 CaCo3	0.00	<1.00		0 - 200	2008-08-25
Carbonate Alkalinity		mg/L as CaCo3	0.00	244		0 - 200	2008-08-25
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	9.00		0 - 200	2008-08-25
Total Alkalinity		mg/L as CaCo3	250	253	101	90 - 110	2008-08-25

Standard (CCV-1)

QC Batch: 51776 Date Analyzed: 2008-08-25 Analyzed By: AR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2008-08-25
Carbonate Alkalinity		mg/L as CaCo3	0.00	234		0 - 200	2008-08-25
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	20.0		0 - 200	2008-08-25
Total Alkalinity		mg/L as CaCo3	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
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 True Conc.	ICVs Found Conc.	ICVs 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	1.01	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

continued ...

standard continued ...

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
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: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
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

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

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
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 True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
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 True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
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 True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
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 True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
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: KB

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)	[38]	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)	[39]	µg/L	50.0	33.8	68	70 - 130	2008-09-02

continued ...

[38]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.

[39]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.

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	41.6	83	70 - 130	2008-09-02
2-Hexanone	[40]	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	[41]	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
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)	[42]	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

continued ...

[40] 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.

[41] 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.

[42] 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.

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
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

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	51.3	103	90 - 110	2008-09-02
Dissolved Magnesium		mg/L	50.0	52.1	104	90 - 110	2008-09-02
Dissolved Potassium		mg/L	50.0	50.8	102	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 True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	50.0	49.1	98	90 - 110	2008-09-02
Dissolved Magnesium		mg/L	50.0	50.2	100	90 - 110	2008-09-02
Dissolved Potassium		mg/L	50.0	49.6	99	90 - 110	2008-09-02

continued ...

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Sodium		mg/L	50.0	49.2	98	90 - 110	2008-09-02

LAB Order ID # 8082527 Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

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Company Name: Nova
Phone #: 520-7720
Address: (Street, City, Zip) 2507 Commerce
Fax #:
Contact Person: Ron R.
E-mail:
Invoice to: (If different from above) Plains
Project #: 2001-10876
Project Name: Durr #4
Project Location (including state):
Sampler Signature: SI

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
11776	MW 1A	5	voa	X				X				X		8-22	17:00
	MW 1A	1	1L plastic	X								X	X		
	~~MW 1A~~	1	1L amb	X								X	X		
	MW-1A	1	500ml plastic	X								X			
	MW 1A	1	L amb	X											
	MW 1A	3	voa	X											

MTBE 8021B / 602 / 8260B / 624	BTEX 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005 / TX4005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C / 625	PCB's 8082 / 608	Pesticides 8081A / 608	BOD, TSS, pH	Moisture Content	Cations / Anions / Alkalinity	WQCC Metals					Turn Around Time if different from standard	Hold
X	X	X	X															X							
					X													X							
					X																				
					X														X						
												X	X												
											X														

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:
	NOA	8.25.8	1435		TRACE	8/25/08	14:35	3.2°c
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:

LAB USE ONLY
Intact (Y) N NA
Headspace Y (N) NA
3.2
Log-In-Review

REMARKS:
TPH DRO/GRO, Anions, Alkalinity - Midland
Vol, Semi-Vol, Cations, Metals - Lubbock

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

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

Carrier # carry in / Lone Star

ORIGINAL COPY

TRACEANALYSIS, INC.

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NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 **El Paso:** T104704221-08-TX LELAP-02002 **Midland:** T104704392-08-TX

Analytical and Quality Control Report

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

Report Date: September 4, 2008

Work Order: 8082621

Project Location: Lovington, NM
Project Name: Darr Angel #4
Project Number: 2001-10876

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
171857	MW-1A	water	2008-08-26	12:00	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.

Michael Abel

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 Darr Angel #4 were received by TraceAnalysis, Inc. on 2008-08-26 and assigned to work order 8082621. Samples for work order 8082621 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
NO3 (IC)	E 300.0
PO4 (IC)	E 300.0
SO4 (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 8082621 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: 171857 - MW-1A

Laboratory:	Midland				
Analysis:	Ion Chromatography	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	51818	Date Analyzed:	2008-08-27	Analyzed By:	AR
Prep Batch:	44443	Sample Preparation:	2008-08-26	Prepared By:	AR
QC Batch:	51991	Date Analyzed:	2008-09-03	Analyzed By:	AR
Prep Batch:	44588	Sample Preparation:	2008-09-02	Prepared By:	AR

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		**43.4**	mg/L	5	0.500
Fluoride		**2.31**	mg/L	5	0.200
Nitrate-N		**2.22**	mg/L	5	0.200
PO4-P		<2.50	mg/L	5	0.500
Sulfate		**97.8**	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	MDL Result	Units	RL
Fluoride		<0.199	mg/L	0.2
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

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	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

continued ...

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
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	RPD Limit
Fluoride	[4]	14.7	mg/L	5	12.5	1.9	102	90 - 110	24	
Nitrate-N	[5]	15.9	mg/L	5	12.5	4.76	89	90 - 110	0	
PO4-P		61.1	mg/L	5	62.5	<0.135	98	90 - 110	0	
Sulfate	[6]	111	mg/L	5	62.5	56	88	90 - 110	1	

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

Matrix Spike (MS-1) Spiked Sample: 171860

QC Batch: 51991 | Date Analyzed: 2008-09-03 | Analyzed By: AR
Prep Batch: 44588 | QC Preparation: 2008-09-02 | Prepared By: AR

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	[7]	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.	Rec. Limit	RPD	RPD Limit
Chloride	[8]	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

[1]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[2]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[3]Matrix spike recovery out of control limits due to peak interference. Use LCS/LCSD to demonstrate analysis is under control.
[4]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[5]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[6]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[7]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[8]Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

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

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

LAB Order ID # 5082621 Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9, Lubbock, Texas 79424, Tel (806) 794-1296, Fax (806) 794-1298, 1 (800) 378-1296
5002 Basin Street, Suite A1, Midland, Texas 79703, Tel (432) 689-6301, Fax (432) 689-6313
200 East Sunset Rd., Suite E, El Paso, Texas 79922, Tel (915) 585-3443, Fax (915) 585-4944, 1 (888) 588-3443
8808 Camp Bowie Blvd. West, Suite 180, Ft. Worth, Texas 76116, Tel (817) 201-5260, Fax (817) 560-4336

Company Name: Nova
Phone #: 520.7720
Address: (Street, City, Zip) 2057 Commerce
Fax #:
Contact Person: Ron R.
E-mail:
Invoice to: (If different from above) Plains
Project #: 2001-10876
Project Name: Darr 4
Project Location (including state): NM
Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B / 602 / 8260B / 624	BTEX 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C / 625	PCB's 8082 / 608	Pesticides 8081A / 608	BOD, TSS, pH	Moisture Content	anions					Turn Around Time if different from standard	Hold
31551	MW-1A	1	250 plas	X								X		8-26	12:00																X						

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:
[signature]	NOVA	8.26.8	1655	[signature]	TRACE	8/26/08	16:55	3-9
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:

LAB USE ONLY
Intact Y N
Headspace Y N NA
Log-in Review

REMARKS: All tests - Midland

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

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

Carrier # Courier in

ORIGINAL COPY

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

POD NUMBER (WELL NUMBER): DAR ANGEL #4 MW-1	OSE FILE NUMBER(S):
WELL OWNER NAME(S): PLAINS MARKETING LP	PHONE (OPTIONAL):
WELL OWNER MAILING ADDRESS: 333 CLAY STREET, SUITE 1600	CITY: HOUSTON STATE: TX ZIP: 77078

WELL LOCATION (FROM GPS)	DEGREES	MINUTES	SECONDS	
LATITUDE	33	2	20.00	N
LONGITUDE	103	10	9.00	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND
* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS: GO NE ON 82 FROM LOVINGTON FOR 8-9 MI TURN I ON DICKENSON RD STAY ON MAIN RD FOLLOW GPS #

2. OPTIONAL

(2.5 ACRE)	(10 ACRE)	(40 ACRE)	(160 ACRE)	SECTION	TOWNSHIP	RANGE
¼	¼	¼	¼		☐ NORTH ☐ SOUTH	☐ EAST ☐ WEST

SUBDIVISION NAME	LOT NUMBER	BLOCK NUMBER	UNIT/TRACT

HYDROGRAPHIC SURVEY	MAP NUMBER	TRACT NUMBER

3. DRILLING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD1478	EDWARD BRYAN	STRAUB CORPORATION

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
7-24-08	7-24-08	64	64	

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED) — STATIC WATER LEVEL IN COMPLETED WELL (FT):

DRILLING FLUID: ☑ AIR ☐ MUD ☐ ADDITIVES – SPECIFY:

DRILLING METHOD: ☐ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)

4. WATER BEARING STRATA

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	YIELD (GPM)

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA	TOTAL ESTIMATED WELL YIELD (GPM)

FOR OSE INTERNAL USE

WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

5. SEAL AND PUMP

TYPE OF PUMP: ☐ SUBMERSIBLE ☐ JET ☐ NO PUMP – WELL NOT EQUIPPED
☐ TURBINE ☐ CYLINDER ☐ OTHER – SPECIFY:

ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
	64'	2'	5	3 BAGS OF 3/8 HOLEPLUG		TOPLOAD
	2'	0	5	.5 BAGS OF CEMENT		TOPLOAD

6. GEOLOGIC LOG OF WELL

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL

7. TEST & ADDITIONAL INFO

WELL TEST

METHOD: ☐ BAILER ☐ PUMP ☐ AIR LIFT ☐ OTHER – SPECIFY:

TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

ADDITIONAL STATEMENTS OR EXPLANATIONS:

PLUGGING REPORT

8. SIGNATURE

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

8-13-08
DATE

FOR OSE INTERNAL USE

WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2

WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

www.ose.state.nm.us

1. GENERAL AND WELL LOCATION

POD NUMBER (WELL NUMBER)	OSE FILE NUMBER(S)
DAR ANGEL #4 MW-1A	
WELL OWNER NAME(S)	**PHONE (OPTIONAL)**
PLAINS MARKETING LP	
WELL OWNER MAILING ADDRESS	**CITY / STATE / ZIP**
333 CLAY STREET, SUITE 1600	HOUSTON / TX / 77078

WELL LOCATION (FROM GPS)		DEGREES	MINUTES	SECONDS	
	LATITUDE	33	2	20.00	N
	LONGITUDE	103	10	9.00	W

* ACCURACY REQUIRED: ONE TENTH OF A SECOND

* DATUM REQUIRED: WGS 84

DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS

GO NE ON 82 FROM LOVINGTON FOR 8-9 MI TURN I ON DICKENSON RD STAY ON MAIN RD FOLLOW GPS #

2. OPTIONAL

(2.5 ACRE)	(10 ACRE)	(40 ACRE)	(160 ACRE)	SECTION	TOWNSHIP	RANGE
¼	¼	¼	¼		☐ NORTH ☐ SOUTH	☐ EAST ☐ WEST

SUBDIVISION NAME	LOT NUMBER	BLOCK NUMBER	UNIT/TRACT

HYDROGRAPHIC SURVEY	MAP NUMBER	TRACT NUMBER

3. DRILLING INFORMATION

LICENSE NUMBER	NAME OF LICENSED DRILLER	NAME OF WELL DRILLING COMPANY
WD1478	EDWARD BRYAN	STRAUB CORPORATION

DRILLING STARTED	DRILLING ENDED	DEPTH OF COMPLETED WELL (FT)	BORE HOLE DEPTH (FT)	DEPTH WATER FIRST ENCOUNTERED (FT)
7-24-08	7-24-08	72	72	62'

COMPLETED WELL IS: ☐ ARTESIAN ☐ DRY HOLE ☑ SHALLOW (UNCONFINED)

STATIC WATER LEVEL IN COMPLETED WELL (FT)

DRILLING FLUID: ☑ AIR ☐ MUD ☐ ADDITIVES – SPECIFY:

DRILLING METHOD: ☑ ROTARY ☐ HAMMER ☐ CABLE TOOL ☐ OTHER – SPECIFY:

DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	CASING MATERIAL	CONNECTION TYPE (CASING)	INSIDE DIA. CASING (IN)	CASING WALL THICKNESS (IN)	SLOT SIZE (IN)
72'	47'	5	SCH 40 .010 SCREEN	FJ	2	0.154	.010
47'	+43"	5	SCH 40 PVC RISER	FJ	2	0.154	RISER

4. WATER BEARING STRATA

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	FORMATION DESCRIPTION OF PRINCIPAL WATER-BEARING STRATA (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	YIELD (GPM)

METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA	TOTAL ESTIMATED WELL YIELD (GPM)

FOR OSE INTERNAL USE

WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 1 OF 2

5. SEAL AND PUMP

TYPE OF PUMP: ☐ SUBMERSIBLE ☐ JET ☐ NO PUMP – WELL NOT EQUIPPED
☐ TURBINE ☐ CYLINDER ☐ OTHER – SPECIFY:

ANNULAR SEAL AND GRAVEL PACK	DEPTH (FT) FROM	DEPTH (FT) TO	BORE HOLE DIA. (IN)	MATERIAL TYPE AND SIZE	AMOUNT (CUBIC FT)	METHOD OF PLACEMENT
	72'	42'	5	7 BAGS OF 20/40 SAND		TOPLOAD
	42'	2'	5	8 BAGS OF 3/8 HOLEPLUG		TOPLOAD
	2'	0	5	1BAG OF CEMENT		TOPLOAD

6. GEOLOGIC LOG OF WELL

DEPTH (FT) FROM	DEPTH (FT) TO	THICKNESS (FT)	COLOR AND TYPE OF MATERIAL ENCOUNTERED (INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES)	WATER BEARING?
0	13	13	TAN FINE SAND - CALICHE - SANDSTONE	☐ YES ☑ NO
13	25	12	TAN FINE SAND - SANDSTONE	☐ YES ☑ NO
25	29	4	TAN FINE SAND - CALICHE - SANDSTONE	☐ YES ☑ NO
29	42	13	CALICHE - DENCE, DENCE SANDSTONE	☐ YES ☑ NO
42	58	16	TAN FINE SAND - SANDSTONE	☐ YES ☑ NO
58	72	14	TAN FINE -VERY FINE SAND - SANDSTONE	☐ YES ☑ NO
TD	72			☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO
				☐ YES ☐ NO

ATTACH ADDITIONAL PAGES AS NEEDED TO FULLY DESCRIBE THE GEOLOGIC LOG OF THE WELL

7. TEST & ADDITIONAL INFO

WELL TEST

METHOD: ☐ BAILER ☐ PUMP ☐ AIR LIFT ☐ OTHER – SPECIFY:

TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.

ADDITIONAL STATEMENTS OR EXPLANATIONS:

2X2 PAD - 4X4 HIGH RISER

8. SIGNATURE

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

8-12-08
DATE

FOR OSE INTERNAL USE

WELL RECORD & LOG (Version 6/9/08)

FILE NUMBER	POD NUMBER	TRN NUMBER
LOCATION		PAGE 2 OF 2