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Certifications

WBENC: 237019 **HUB:** 1752439743100-86536 **DBE:** VN 20657
NCTRCA WFWB38444Y0909

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

Brad Davis
Zia Engineering & Environmental
755 S. Telshor Blvd.
Suite F-201
Las Cruces, NM, 88011

Report Date: September 4, 2009

Work Order: 9082608

Project Name: HELSTF Semi-Annual Groundwater

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
207800	HLSF-0143-HMW-041-0809	water	2009-08-24	10:15	2009-08-26
207801	HLSF-3839-HMW-029-0809	water	2009-08-20	12:54	2009-08-26
207802	HLSF-3839-HMW-033-0809	water	2009-08-20	09:58	2009-08-26
207803	HLSF-3839-HMW-133-0809	water	2009-08-20	09:58	2009-08-26
207804	HLSF-3839-HMW-032-0809	water	2009-08-21	13:40	2009-08-26
207805	HLSF-0143-HMW-039-0809	water	2009-08-24	13:10	2009-08-26
207806	HLSF-3839-HMW-035-0809	water	2009-08-19	13:05	2009-08-26
207807	HLSF-3839-HMW-034-0809	water	2009-08-19	10:17	2009-08-26
207808	HLSF-3839-TB-09-000	water	2009-08-24	13:10	2009-08-26

Comment(s)

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

This report consists of a total of 35 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Notes:
For inorganic analyses, the term MQL should actually read PQL.

Standard Flags

U - Not detected. The analyte is not detected above the SDL.
J - Estimated. The analyte is positively identified and the value is approximated between the SDL and MQL.
B - The sample contains less than ten times the concentration found in the method blank.
JB - The analyte is positively identified and the value is approximated between the SDL and MQL.
The sample contains less than ten times the concentration found in the method blank.
The result should be considered non-detect to the SDL.

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

Case Narrative

Samples for project HELSTF Semi-Annual Groundwater were received by TraceAnalysis, Inc. on 2009-08-26 and assigned to work order 9082608. Samples for work order 9082608 were received intact without headspace and at a temperature of 1.9 deg. C.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Volatiles	S 8260B	53764	2009-08-27 at 12:00	62999	2009-08-27 at 12:00

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 9082608 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: 207800 - HLSF-0143-HMW-041-0809

Laboratory:	Lubbock				
Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	62999	Date Analyzed:	2009-08-27	Analyzed By:	KB
Prep Batch:	53764	Sample Preparation:	2009-08-27	Prepared By:	KB

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromochloromethane	U	<0.370	<1.00	<0.370	μg/L	1	0.370	1	0.37
Dichlorodifluoromethane	[1] U	<0.450	<1.00	<0.450	μg/L	1	0.450	1	0.45
Chloromethane (methyl chloride)	U	<0.590	<1.00	<0.590	μg/L	1	0.590	1	0.59
Vinyl Chloride	U	<0.690	<1.00	<0.690	μg/L	1	0.690	1	0.69
Bromomethane (methyl bromide)	U	<0.750	<5.00	<0.750	μg/L	1	0.750	5	0.75
Chloroethane	U	<0.570	<1.00	<0.570	μg/L	1	0.570	1	0.57
Trichlorofluoromethane	[2] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Acetone	U	<1.75	<10.0	8.53	μg/L	1	1.75	10	1.75
Iodomethane (methyl iodide)	U	<0.320	<5.00	<0.320	μg/L	1	0.320	5	0.32
Carbon Disulfide	U	<0.250	<1.00	<0.250	μg/L	1	0.250	1	0.25
Acrylonitrile	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
2-Butanone (MEK)	[3] JB	**0.880**	<5.00	11.3	μg/L	1	0.810	5	0.81
4-Methyl-2-pentanone (MIBK)	U	<0.790	<5.00	<0.790	μg/L	1	0.790	5	0.79
2-Hexanone	U	<0.510	<5.00	<0.510	μg/L	1	0.510	5	0.51
trans 1,4-Dichloro-2-butene	[4] U	<0.490	<10.0	<0.490	μg/L	1	0.490	10	0.49
1,1-Dichloroethene		**3.79**	**3.79**	<0.400	μg/L	1	0.400	1	0.4
Methylene chloride	U	<0.450	<5.00	<0.450	μg/L	1	0.450	5	0.45
MTBE	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
trans-1,2-Dichloroethene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
1,1-Dichloroethane	J	**0.890**	<1.00	<0.290	μg/L	1	0.290	1	0.29
cis-1,2-Dichloroethene	U	<0.200	<1.00	<0.200	μg/L	1	0.200	1	0.2
2,2-Dichloropropane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
1,2-Dichloroethane (EDC)	[5] U	<0.350	<1.00	<0.350	μg/L	1	0.350	1	0.35
Chloroform		**1.14**	**1.14**	<0.270	μg/L	1	0.270	1	0.27
1,1,1-Trichloroethane	[6] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
1,1-Dichloropropene	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Benzene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
Carbon Tetrachloride	[7] U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dichloropropane	U	<0.360	<1.00	<0.360	μg/L	1	0.360	1	0.36
Trichloroethene (TCE)		**118**	**118**	<0.300	μg/L	1	0.300	1	0.3
Dibromomethane (methylene bromide)	[8] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47

continued ...

[1] Concentration biased low.
[2] Concentration biased low.
[3] Concentration biased high.
[4] Concentration biased low.
[5] Concentration biased low.
[6] Concentration biased low.
[7] Concentration biased low.
[8] Concentration biased low.

sample 207800 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromodichloromethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
2-Chloroethyl vinyl ether	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
cis-1,3-Dichloropropene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
trans-1,3-Dichloropropene	U	<0.380	<1.00	<0.380	μg/L	1	0.380	1	0.38
Toluene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,2-Trichloroethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichloropropane	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
Dibromochloromethane	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
1,2-Dibromoethane (EDB)	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Tetrachloroethene (PCE)	[9] J	**0.400**	<1.00	<0.280	μg/L	1	0.280	1	0.28
Chlorobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,1,2-Tetrachloroethane	[10] U	<0.220	<1.00	<0.220	μg/L	1	0.220	1	0.22
Ethylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
m,p-Xylene	U	<0.540	<1.00	<0.540	μg/L	1	0.540	1	0.54
Bromoform	[11] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
Styrene	U	<0.210	<1.00	<0.210	μg/L	1	0.210	1	0.21
o-Xylene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,2,2-Tetrachloroethane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
2-Chlorotoluene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
1,2,3-Trichloropropane	U	<0.430	<1.00	<0.430	μg/L	1	0.430	1	0.43
Isopropylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
Bromobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
n-Propylbenzene	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
1,3,5-Trimethylbenzene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
tert-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2,4-Trimethylbenzene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,4-Dichlorobenzene (para)	[12] U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
sec-Butylbenzene	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichlorobenzene (meta)	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
p-Isopropyltoluene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
4-Chlorotoluene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,2-Dichlorobenzene (ortho)	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
n-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dibromo-3-chloropropane	[13] U	<0.680	<5.00	<0.680	μg/L	1	0.680	5	0.68
1,2,3-Trichlorobenzene	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
1,2,4-Trichlorobenzene	U	<0.340	<5.00	<0.340	μg/L	1	0.340	5	0.34
Naphthalene	U	<0.280	<5.00	<0.280	μg/L	1	0.280	5	0.28
Hexachlorobutadiene	U	<0.540	<5.00	<0.540	μg/L	1	0.540	5	0.54

[9] Concentration biased low.
[10] Concentration biased low.
[11] Concentration biased low.
[12] Concentration biased low.
[13] Concentration biased low.

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.8	μg/L	1	50.0	100	75.3 - 131
Toluene-d8		54.1	μg/L	1	50.0	108	91.4 - 112
4-Bromofluorobenzene (4-BFB)		50.1	μg/L	1	50.0	100	83.8 - 108

Sample: 207801 - HLSF-3839-HMW-029-0809

Laboratory:	Lubbock				
Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	62999	Date Analyzed:	2009-08-27	Analyzed By:	KB
Prep Batch:	53764	Sample Preparation:	2009-08-27	Prepared By:	KB

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromochloromethane	U	<0.370	<1.00	<0.370	μg/L	1	0.370	1	0.37
Dichlorodifluoromethane	[14] U	<0.450	<1.00	<0.450	μg/L	1	0.450	1	0.45
Chloromethane (methyl chloride)	U	<0.590	<1.00	<0.590	μg/L	1	0.590	1	0.59
Vinyl Chloride	U	<0.690	<1.00	<0.690	μg/L	1	0.690	1	0.69
Bromomethane (methyl bromide)	U	<0.750	<5.00	<0.750	μg/L	1	0.750	5	0.75
Chloroethane	U	<0.570	<1.00	<0.570	μg/L	1	0.570	1	0.57
Trichlorofluoromethane	[15] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Acetone	U	<1.75	<10.0	8.53	μg/L	1	1.75	10	1.75
Iodomethane (methyl iodide)	U	<0.320	<5.00	<0.320	μg/L	1	0.320	5	0.32
Carbon Disulfide	U	<0.250	<1.00	<0.250	μg/L	1	0.250	1	0.25
Acrylonitrile	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
2-Butanone (MEK)	[16] U	<0.810	<5.00	11.3	μg/L	1	0.810	5	0.81
4-Methyl-2-pentanone (MIBK)	U	<0.790	<5.00	<0.790	μg/L	1	0.790	5	0.79
2-Hexanone	U	<0.510	<5.00	<0.510	μg/L	1	0.510	5	0.51
trans 1,4-Dichloro-2-butene	[17] U	<0.490	<10.0	<0.490	μg/L	1	0.490	10	0.49
1,1-Dichloroethene	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
Methylene chloride	U	<0.450	<5.00	<0.450	μg/L	1	0.450	5	0.45
MTBE	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
trans-1,2-Dichloroethene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
1,1-Dichloroethane	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
cis-1,2-Dichloroethene	U	<0.200	<1.00	<0.200	μg/L	1	0.200	1	0.2
2,2-Dichloropropane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
1,2-Dichloroethane (EDC)	[18] U	<0.350	<1.00	<0.350	μg/L	1	0.350	1	0.35
Chloroform	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,1-Trichloroethane	[19] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
1,1-Dichloropropene	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Benzene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24

continued . . .

[14] Concentration biased low.
[15] Concentration biased low.
[16] Concentration biased high.
[17] Concentration biased low.
[18] Concentration biased low.
[19] Concentration biased low.

sample 207801 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Carbon Tetrachloride	[20] U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dichloropropane	U	<0.360	<1.00	<0.360	μg/L	1	0.360	1	0.36
Trichloroethene (TCE)	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
Dibromomethane (methylene bromide)	[21] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Bromodichloromethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
2-Chloroethyl vinyl ether	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
cis-1,3-Dichloropropene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
trans-1,3-Dichloropropene	U	<0.380	<1.00	<0.380	μg/L	1	0.380	1	0.38
Toluene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,2-Trichloroethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichloropropane	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
Dibromochloromethane	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
1,2-Dibromoethane (EDB)	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Tetrachloroethene (PCE)	[22] U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
Chlorobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,1,2-Tetrachloroethane	[23] U	<0.220	<1.00	<0.220	μg/L	1	0.220	1	0.22
Ethylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
m,p-Xylene	U	<0.540	<1.00	<0.540	μg/L	1	0.540	1	0.54
Bromoform	[24] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
Styrene	U	<0.210	<1.00	<0.210	μg/L	1	0.210	1	0.21
o-Xylene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,2,2-Tetrachloroethane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
2-Chlorotoluene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
1,2,3-Trichloropropane	U	<0.430	<1.00	<0.430	μg/L	1	0.430	1	0.43
Isopropylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
Bromobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
n-Propylbenzene	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
1,3,5-Trimethylbenzene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
tert-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2,4-Trimethylbenzene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,4-Dichlorobenzene (para)	[25] U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
sec-Butylbenzene	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichlorobenzene (meta)	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
p-Isopropyltoluene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
4-Chlorotoluene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,2-Dichlorobenzene (ortho)	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
n-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dibromo-3-chloropropane	[26] U	<0.680	<5.00	<0.680	μg/L	1	0.680	5	0.68
1,2,3-Trichlorobenzene	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33

continued ...

[20] Concentration biased low.
[21] Concentration biased low.
[22] Concentration biased low.
[23] Concentration biased low.
[24] Concentration biased low.
[25] Concentration biased low.
[26] Concentration biased low.

sample 207801 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
1,2,4-Trichlorobenzene	U	<0.340	<5.00	<0.340	μg/L	1	0.340	5	0.34
Naphthalene	U	<0.280	<5.00	<0.280	μg/L	1	0.280	5	0.28
Hexachlorobutadiene	U	<0.540	<5.00	<0.540	μg/L	1	0.540	5	0.54

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.0	μg/L	1	50.0	100	75.3 - 131
Toluene-d8		52.5	μg/L	1	50.0	105	91.4 - 112
4-Bromofluorobenzene (4-BFB)		49.2	μg/L	1	50.0	98	83.8 - 108

Sample: 207802 - HLSF-3839-HMW-033-0809

Laboratory:	Lubbock				
Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	62999	Date Analyzed:	2009-08-27	Analyzed By:	KB
Prep Batch:	53764	Sample Preparation:	2009-08-27	Prepared By:	KB

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromochloromethane	U	<0.370	<1.00	<0.370	μg/L	1	0.370	1	0.37
Dichlorodifluoromethane	[27] U	<0.450	<1.00	<0.450	μg/L	1	0.450	1	0.45
Chloromethane (methyl chloride)	U	<0.590	<1.00	<0.590	μg/L	1	0.590	1	0.59
Vinyl Chloride	U	<0.690	<1.00	<0.690	μg/L	1	0.690	1	0.69
Bromomethane (methyl bromide)	U	<0.750	<5.00	<0.750	μg/L	1	0.750	5	0.75
Chloroethane	U	<0.570	<1.00	<0.570	μg/L	1	0.570	1	0.57
Trichlorofluoromethane	[28] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Acetone	U	<1.75	<10.0	8.53	μg/L	1	1.75	10	1.75
Iodomethane (methyl iodide)	U	<0.320	<5.00	<0.320	μg/L	1	0.320	5	0.32
Carbon Disulfide	U	<0.250	<1.00	<0.250	μg/L	1	0.250	1	0.25
Acrylonitrile	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
2-Butanone (MEK)	[29] U	<0.810	<5.00	11.3	μg/L	1	0.810	5	0.81
4-Methyl-2-pentanone (MIBK)	U	<0.790	<5.00	<0.790	μg/L	1	0.790	5	0.79
2-Hexanone	U	<0.510	<5.00	<0.510	μg/L	1	0.510	5	0.51
trans 1,4-Dichloro-2-butene	[30] U	<0.490	<10.0	<0.490	μg/L	1	0.490	10	0.49
1,1-Dichloroethene		**4.15**	**4.15**	<0.400	μg/L	1	0.400	1	0.4
Methylene chloride	U	<0.450	<5.00	<0.450	μg/L	1	0.450	5	0.45
MTBE	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
trans-1,2-Dichloroethene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
1,1-Dichloroethane	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29

continued ...

[27] Concentration biased low.
[28] Concentration biased low.
[29] Concentration biased high.
[30] Concentration biased low.

sample 207802 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
cis-1,2-Dichloroethene	U	<0.200	<1.00	<0.200	μg/L	1	0.200	1	0.2
2,2-Dichloropropane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
1,2-Dichloroethane (EDC)	[31] U	<0.350	<1.00	<0.350	μg/L	1	0.350	1	0.35
Chloroform		**1.36**	**1.36**	<0.270	μg/L	1	0.270	1	0.27
1,1,1-Trichloroethane	[32] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
1,1-Dichloropropene	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Benzene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
Carbon Tetrachloride	[33] U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dichloropropane	U	<0.360	<1.00	<0.360	μg/L	1	0.360	1	0.36
Trichloroethene (TCE)		**4.75**	**4.75**	<0.300	μg/L	1	0.300	1	0.3
Dibromomethane (methylene bromide)	[34] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Bromodichloromethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
2-Chloroethyl vinyl ether	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
cis-1,3-Dichloropropene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
trans-1,3-Dichloropropene	U	<0.380	<1.00	<0.380	μg/L	1	0.380	1	0.38
Toluene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,2-Trichloroethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichloropropane	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
Dibromochloromethane	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
1,2-Dibromoethane (EDB)	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Tetrachloroethene (PCE)	[35] J	**0.430**	<1.00	<0.280	μg/L	1	0.280	1	0.28
Chlorobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,1,2-Tetrachloroethane	[36] U	<0.220	<1.00	<0.220	μg/L	1	0.220	1	0.22
Ethylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
m,p-Xylene	U	<0.540	<1.00	<0.540	μg/L	1	0.540	1	0.54
Bromoform	[37] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
Styrene	U	<0.210	<1.00	<0.210	μg/L	1	0.210	1	0.21
o-Xylene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,2,2-Tetrachloroethane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
2-Chlorotoluene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
1,2,3-Trichloropropane	U	<0.430	<1.00	<0.430	μg/L	1	0.430	1	0.43
Isopropylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
Bromobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
n-Propylbenzene	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
1,3,5-Trimethylbenzene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
tert-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2,4-Trimethylbenzene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,4-Dichlorobenzene (para)	[38] U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24

continued ...

[31] Concentration biased low.
[32] Concentration biased low.
[33] Concentration biased low.
[34] Concentration biased low.
[35] Concentration biased low.
[36] Concentration biased low.
[37] Concentration biased low.
[38] Concentration biased low.

sample 207802 continued . . .

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
sec-Butylbenzene	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichlorobenzene (meta)	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
p-Isopropyltoluene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
4-Chlorotoluene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,2-Dichlorobenzene (ortho)	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
n-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dibromo-3-chloropropane	[39] U	<0.680	<5.00	<0.680	μg/L	1	0.680	5	0.68
1,2,3-Trichlorobenzene	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
1,2,4-Trichlorobenzene	U	<0.340	<5.00	<0.340	μg/L	1	0.340	5	0.34
Naphthalene	U	<0.280	<5.00	<0.280	μg/L	1	0.280	5	0.28
Hexachlorobutadiene	U	<0.540	<5.00	<0.540	μg/L	1	0.540	5	0.54

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.2	μg/L	1	50.0	98	75.3 - 131
Toluene-d8		52.8	μg/L	1	50.0	106	91.4 - 112
4-Bromofluorobenzene (4-BFB)		48.9	μg/L	1	50.0	98	83.8 - 108

Sample: 207803 - HLSF-3839-HMW-133-0809

Laboratory:	Lubbock				
Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	62999	Date Analyzed:	2009-08-27	Analyzed By:	KB
Prep Batch:	53764	Sample Preparation:	2009-08-27	Prepared By:	KB

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromochloromethane	U	<0.370	<1.00	<0.370	μg/L	1	0.370	1	0.37
Dichlorodifluoromethane	[40] U	<0.450	<1.00	<0.450	μg/L	1	0.450	1	0.45
Chloromethane (methyl chloride)	U	<0.590	<1.00	<0.590	μg/L	1	0.590	1	0.59
Vinyl Chloride	U	<0.690	<1.00	<0.690	μg/L	1	0.690	1	0.69
Bromomethane (methyl bromide)	U	<0.750	<5.00	<0.750	μg/L	1	0.750	5	0.75
Chloroethane	U	<0.570	<1.00	<0.570	μg/L	1	0.570	1	0.57
Trichlorofluoromethane	[41] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Acetone	U	<1.75	<10.0	8.53	μg/L	1	1.75	10	1.75
Iodomethane (methyl iodide)	U	<0.320	<5.00	<0.320	μg/L	1	0.320	5	0.32
Carbon Disulfide	U	<0.250	<1.00	<0.250	μg/L	1	0.250	1	0.25
Acrylonitrile	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
2-Butanone (MEK)	[42] U	<0.810	<5.00	11.3	μg/L	1	0.810	5	0.81

continued . . .

[39] Concentration biased low.
[40] Concentration biased low.
[41] Concentration biased low.
[42] Concentration biased high.

sample 207803 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
4-Methyl-2-pentanone (MIBK)	U	<0.790	<5.00	<0.790	μg/L	1	0.790	5	0.79
2-Hexanone	U	<0.510	<5.00	<0.510	μg/L	1	0.510	5	0.51
trans 1,4-Dichloro-2-butene	[43] U	<0.490	<10.0	<0.490	μg/L	1	0.490	10	0.49
1,1-Dichloroethene		**4.26**	**4.26**	<0.400	μg/L	1	0.400	1	0.4
Methylene chloride	U	<0.450	<5.00	<0.450	μg/L	1	0.450	5	0.45
MTBE	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
trans-1,2-Dichloroethene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
1,1-Dichloroethane	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
cis-1,2-Dichloroethene	U	<0.200	<1.00	<0.200	μg/L	1	0.200	1	0.2
2,2-Dichloropropane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
1,2-Dichloroethane (EDC)	[44] U	<0.350	<1.00	<0.350	μg/L	1	0.350	1	0.35
Chloroform		**1.35**	**1.35**	<0.270	μg/L	1	0.270	1	0.27
1,1,1-Trichloroethane	[45] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
1,1-Dichloropropene	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Benzene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
Carbon Tetrachloride	[46] U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dichloropropane	U	<0.360	<1.00	<0.360	μg/L	1	0.360	1	0.36
Trichloroethene (TCE)		**4.85**	**4.85**	<0.300	μg/L	1	0.300	1	0.3
Dibromomethane (methylene bromide)	[47] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Bromodichloromethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
2-Chloroethyl vinyl ether	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
cis-1,3-Dichloropropene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
trans-1,3-Dichloropropene	U	<0.380	<1.00	<0.380	μg/L	1	0.380	1	0.38
Toluene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,2-Trichloroethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichloropropane	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
Dibromochloromethane	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
1,2-Dibromoethane (EDB)	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Tetrachloroethene (PCE)	[48] U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
Chlorobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,1,2-Tetrachloroethane	[49] U	<0.220	<1.00	<0.220	μg/L	1	0.220	1	0.22
Ethylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
m,p-Xylene	U	<0.540	<1.00	<0.540	μg/L	1	0.540	1	0.54
Bromoform	[50] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
Styrene	U	<0.210	<1.00	<0.210	μg/L	1	0.210	1	0.21
o-Xylene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,2,2-Tetrachloroethane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
2-Chlorotoluene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24

continued ...

[43] Concentration biased low.
[44] Concentration biased low.
[45] Concentration biased low.
[46] Concentration biased low.
[47] Concentration biased low.
[48] Concentration biased low.
[49] Concentration biased low.
[50] Concentration biased low.

sample 207803 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
1,2,3-Trichloropropane	U	<0.430	<1.00	<0.430	μg/L	1	0.430	1	0.43
Isopropylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
Bromobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
n-Propylbenzene	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
1,3,5-Trimethylbenzene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
tert-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2,4-Trimethylbenzene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,4-Dichlorobenzene (para)	[51] U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
sec-Butylbenzene	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichlorobenzene (meta)	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
p-Isopropyltoluene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
4-Chlorotoluene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,2-Dichlorobenzene (ortho)	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
n-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dibromo-3-chloropropane	[52] U	<0.680	<5.00	<0.680	μg/L	1	0.680	5	0.68
1,2,3-Trichlorobenzene	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
1,2,4-Trichlorobenzene	U	<0.340	<5.00	<0.340	μg/L	1	0.340	5	0.34
Naphthalene	U	<0.280	<5.00	<0.280	μg/L	1	0.280	5	0.28
Hexachlorobutadiene	U	<0.540	<5.00	<0.540	μg/L	1	0.540	5	0.54

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.5	μg/L	1	50.0	103	75.3 - 131
Toluene-d8		52.9	μg/L	1	50.0	106	91.4 - 112
4-Bromofluorobenzene (4-BFB)		49.2	μg/L	1	50.0	98	83.8 - 108

Sample: 207804 - HLSF-3839-HMW-032-0809

Laboratory:	Lubbock				
Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	62999	Date Analyzed:	2009-08-27	Analyzed By:	KB
Prep Batch:	53764	Sample Preparation:	2009-08-27	Prepared By:	KB

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromochloromethane	U	<0.370	<1.00	<0.370	μg/L	1	0.370	1	0.37
Dichlorodifluoromethane	[53] U	<0.450	<1.00	<0.450	μg/L	1	0.450	1	0.45
Chloromethane (methyl chloride)	U	<0.590	<1.00	<0.590	μg/L	1	0.590	1	0.59
Vinyl Chloride	U	<0.690	<1.00	<0.690	μg/L	1	0.690	1	0.69
Bromomethane (methyl bromide)	U	<0.750	<5.00	<0.750	μg/L	1	0.750	5	0.75

continued ...

[51] Concentration biased low.
[52] Concentration biased low.
[53] Concentration biased low.

sample 207804 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloroethane	U	<0.570	<1.00	<0.570	μg/L	1	0.570	1	0.57
Trichlorofluoromethane	[54] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Acetone	U	<1.75	<10.0	8.53	μg/L	1	1.75	10	1.75
Iodomethane (methyl iodide)	U	<0.320	<5.00	<0.320	μg/L	1	0.320	5	0.32
Carbon Disulfide	U	<0.250	<1.00	<0.250	μg/L	1	0.250	1	0.25
Acrylonitrile	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
2-Butanone (MEK)	[55] U	<0.810	<5.00	11.3	μg/L	1	0.810	5	0.81
4-Methyl-2-pentanone (MIBK)	U	<0.790	<5.00	<0.790	μg/L	1	0.790	5	0.79
2-Hexanone	U	<0.510	<5.00	<0.510	μg/L	1	0.510	5	0.51
trans 1,4-Dichloro-2-butene	[56] U	<0.490	<10.0	<0.490	μg/L	1	0.490	10	0.49
1,1-Dichloroethene	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
Methylene chloride	U	<0.450	<5.00	<0.450	μg/L	1	0.450	5	0.45
MTBE	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
trans-1,2-Dichloroethene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
1,1-Dichloroethane	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
cis-1,2-Dichloroethene	U	<0.200	<1.00	<0.200	μg/L	1	0.200	1	0.2
2,2-Dichloropropane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
1,2-Dichloroethane (EDC)	[57] U	<0.350	<1.00	<0.350	μg/L	1	0.350	1	0.35
Chloroform	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,1-Trichloroethane	[58] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
1,1-Dichloropropene	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Benzene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
Carbon Tetrachloride	[59] U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dichloropropane	U	<0.360	<1.00	<0.360	μg/L	1	0.360	1	0.36
Trichloroethene (TCE)	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
Dibromomethane (methylene bromide)	[60] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Bromodichloromethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
2-Chloroethyl vinyl ether	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
cis-1,3-Dichloropropene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
trans-1,3-Dichloropropene	U	<0.380	<1.00	<0.380	μg/L	1	0.380	1	0.38
Toluene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,2-Trichloroethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichloropropane	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
Dibromochloromethane	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
1,2-Dibromoethane (EDB)	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Tetrachloroethene (PCE)	[61] U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
Chlorobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26

continued ...

[54] Concentration biased low.
[55] Concentration biased high.
[56] Concentration biased low.
[57] Concentration biased low.
[58] Concentration biased low.
[59] Concentration biased low.
[60] Concentration biased low.
[61] Concentration biased low.

sample 207804 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
1,1,1,2-Tetrachloroethane	[62] U	<0.220	<1.00	<0.220	μg/L	1	0.220	1	0.22
Ethylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
m,p-Xylene	U	<0.540	<1.00	<0.540	μg/L	1	0.540	1	0.54
Bromoform	[63] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
Styrene	U	<0.210	<1.00	<0.210	μg/L	1	0.210	1	0.21
o-Xylene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,2,2-Tetrachloroethane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
2-Chlorotoluene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
1,2,3-Trichloropropane	U	<0.430	<1.00	<0.430	μg/L	1	0.430	1	0.43
Isopropylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
Bromobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
n-Propylbenzene	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
1,3,5-Trimethylbenzene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
tert-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2,4-Trimethylbenzene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,4-Dichlorobenzene (para)	[64] U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
sec-Butylbenzene	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichlorobenzene (meta)	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
p-Isopropyltoluene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
4-Chlorotoluene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,2-Dichlorobenzene (ortho)	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
n-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dibromo-3-chloropropane	[65] U	<0.680	<5.00	<0.680	μg/L	1	0.680	5	0.68
1,2,3-Trichlorobenzene	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
1,2,4-Trichlorobenzene	U	<0.340	<5.00	<0.340	μg/L	1	0.340	5	0.34
Naphthalene	U	<0.280	<5.00	<0.280	μg/L	1	0.280	5	0.28
Hexachlorobutadiene	U	<0.540	<5.00	<0.540	μg/L	1	0.540	5	0.54

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.4	μg/L	1	50.0	103	75.3 - 131
Toluene-d8		52.6	μg/L	1	50.0	105	91.4 - 112
4-Bromofluorobenzene (4-BFB)		49.8	μg/L	1	50.0	100	83.8 - 108

Sample: 207805 - HLSF-0143-HMW-039-0809

Laboratory:	Lubbock				
Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	62999	Date Analyzed:	2009-08-27	Analyzed By:	KB
Prep Batch:	53764	Sample Preparation:	2009-08-27	Prepared By:	KB

[62] Concentration biased low.
[63] Concentration biased low.
[64] Concentration biased low.
[65] Concentration biased low.

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromochloromethane	U	<0.370	<1.00	<0.370	μg/L	1	0.370	1	0.37
Dichlorodifluoromethane	[66] U	<0.450	<1.00	<0.450	μg/L	1	0.450	1	0.45
Chloromethane (methyl chloride)	U	<0.590	<1.00	<0.590	μg/L	1	0.590	1	0.59
Vinyl Chloride	U	<0.690	<1.00	<0.690	μg/L	1	0.690	1	0.69
Bromomethane (methyl bromide)	U	<0.750	<5.00	<0.750	μg/L	1	0.750	5	0.75
Chloroethane	U	<0.570	<1.00	<0.570	μg/L	1	0.570	1	0.57
Trichlorofluoromethane	[67] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Acetone	U	<1.75	<10.0	8.53	μg/L	1	1.75	10	1.75
Iodomethane (methyl iodide)	U	<0.320	<5.00	<0.320	μg/L	1	0.320	5	0.32
Carbon Disulfide	U	<0.250	<1.00	<0.250	μg/L	1	0.250	1	0.25
Acrylonitrile	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
2-Butanone (MEK)	[68] U	<0.810	<5.00	11.3	μg/L	1	0.810	5	0.81
4-Methyl-2-pentanone (MIBK)	U	<0.790	<5.00	<0.790	μg/L	1	0.790	5	0.79
2-Hexanone	U	<0.510	<5.00	<0.510	μg/L	1	0.510	5	0.51
trans 1,4-Dichloro-2-butene	[69] U	<0.490	<10.0	<0.490	μg/L	1	0.490	10	0.49
1,1-Dichloroethene		**1.53**	**1.53**	<0.400	μg/L	1	0.400	1	0.4
Methylene chloride	U	<0.450	<5.00	<0.450	μg/L	1	0.450	5	0.45
MTBE	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
trans-1,2-Dichloroethene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
1,1-Dichloroethane	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
cis-1,2-Dichloroethene	U	<0.200	<1.00	<0.200	μg/L	1	0.200	1	0.2
2,2-Dichloropropane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
1,2-Dichloroethane (EDC)	[70] U	<0.350	<1.00	<0.350	μg/L	1	0.350	1	0.35
Chloroform	J	**0.440**	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,1-Trichloroethane	[71] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
1,1-Dichloropropene	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Benzene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
Carbon Tetrachloride	[72] U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dichloropropane	U	<0.360	<1.00	<0.360	μg/L	1	0.360	1	0.36
Trichloroethene (TCE)		**44.0**	**44.0**	<0.300	μg/L	1	0.300	1	0.3
Dibromomethane (methylene bromide)	[73] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Bromodichloromethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
2-Chloroethyl vinyl ether	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
cis-1,3-Dichloropropene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
trans-1,3-Dichloropropene	U	<0.380	<1.00	<0.380	μg/L	1	0.380	1	0.38
Toluene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,2-Trichloroethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichloropropane	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
Dibromochloromethane	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
1,2-Dibromoethane (EDB)	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34

continued . . .

[66] Concentration biased low.
[67] Concentration biased low.
[68] Concentration biased high.
[69] Concentration biased low.
[70] Concentration biased low.
[71] Concentration biased low.
[72] Concentration biased low.
[73] Concentration biased low.

sample 207805 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Tetrachloroethene (PCE)	[74] U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
Chlorobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,1,2-Tetrachloroethane	[75] U	<0.220	<1.00	<0.220	μg/L	1	0.220	1	0.22
Ethylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
m,p-Xylene	U	<0.540	<1.00	<0.540	μg/L	1	0.540	1	0.54
Bromoform	[76] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
Styrene	U	<0.210	<1.00	<0.210	μg/L	1	0.210	1	0.21
o-Xylene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,2,2-Tetrachloroethane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
2-Chlorotoluene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
1,2,3-Trichloropropane	U	<0.430	<1.00	<0.430	μg/L	1	0.430	1	0.43
Isopropylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
Bromobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
n-Propylbenzene	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
1,3,5-Trimethylbenzene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
tert-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2,4-Trimethylbenzene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,4-Dichlorobenzene (para)	[77] U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
sec-Butylbenzene	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichlorobenzene (meta)	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
p-Isopropyltoluene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
4-Chlorotoluene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,2-Dichlorobenzene (ortho)	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
n-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dibromo-3-chloropropane	[78] U	<0.680	<5.00	<0.680	μg/L	1	0.680	5	0.68
1,2,3-Trichlorobenzene	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
1,2,4-Trichlorobenzene	U	<0.340	<5.00	<0.340	μg/L	1	0.340	5	0.34
Naphthalene	U	<0.280	<5.00	<0.280	μg/L	1	0.280	5	0.28
Hexachlorobutadiene	U	<0.540	<5.00	<0.540	μg/L	1	0.540	5	0.54

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		50.3	μg/L	1	50.0	101	75.3 - 131
Toluene-d8		52.4	μg/L	1	50.0	105	91.4 - 112
4-Bromofluorobenzene (4-BFB)		49.7	μg/L	1	50.0	99	83.8 - 108

Sample: 207806 - HLSF-3839-HMW-035-0809

Laboratory: Lubbock
Analysis: Volatiles Analytical Method: S 8260B Prep Method: S 5030B

[74] Concentration biased low.
[75] Concentration biased low.
[76] Concentration biased low.
[77] Concentration biased low.
[78] Concentration biased low.

QC Batch: 62999 Date Analyzed: 2009-08-27 Analyzed By: KB
Prep Batch: 53764 Sample Preparation: 2009-08-27 Prepared By: KB

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromochloromethane	U	<0.370	<1.00	<0.370	μg/L	1	0.370	1	0.37
Dichlorodifluoromethane	[79] U	<0.450	<1.00	<0.450	μg/L	1	0.450	1	0.45
Chloromethane (methyl chloride)	U	<0.590	<1.00	<0.590	μg/L	1	0.590	1	0.59
Vinyl Chloride	U	<0.690	<1.00	<0.690	μg/L	1	0.690	1	0.69
Bromomethane (methyl bromide)	U	<0.750	<5.00	<0.750	μg/L	1	0.750	5	0.75
Chloroethane	U	<0.570	<1.00	<0.570	μg/L	1	0.570	1	0.57
Trichlorofluoromethane	[80] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Acetone	U	<1.75	<10.0	8.53	μg/L	1	1.75	10	1.75
Iodomethane (methyl iodide)	U	<0.320	<5.00	<0.320	μg/L	1	0.320	5	0.32
Carbon Disulfide	U	<0.250	<1.00	<0.250	μg/L	1	0.250	1	0.25
Acrylonitrile	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
2-Butanone (MEK)	[81] U	<0.810	<5.00	11.3	μg/L	1	0.810	5	0.81
4-Methyl-2-pentanone (MIBK)	U	<0.790	<5.00	<0.790	μg/L	1	0.790	5	0.79
2-Hexanone	U	<0.510	<5.00	<0.510	μg/L	1	0.510	5	0.51
trans 1,4-Dichloro-2-butene	[82] U	<0.490	<10.0	<0.490	μg/L	1	0.490	10	0.49
1,1-Dichloroethene	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
Methylene chloride	U	<0.450	<5.00	<0.450	μg/L	1	0.450	5	0.45
MTBE	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
trans-1,2-Dichloroethene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
1,1-Dichloroethane	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
cis-1,2-Dichloroethene	U	<0.200	<1.00	<0.200	μg/L	1	0.200	1	0.2
2,2-Dichloropropane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
1,2-Dichloroethane (EDC)	[83] U	<0.350	<1.00	<0.350	μg/L	1	0.350	1	0.35
Chloroform	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,1-Trichloroethane	[84] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
1,1-Dichloropropene	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Benzene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
Carbon Tetrachloride	[85] U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dichloropropane	U	<0.360	<1.00	<0.360	μg/L	1	0.360	1	0.36
Trichloroethene (TCE)	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
Dibromomethane (methylene bromide)	[86] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Bromodichloromethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
2-Chloroethyl vinyl ether	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
cis-1,3-Dichloropropene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
trans-1,3-Dichloropropene	U	<0.380	<1.00	<0.380	μg/L	1	0.380	1	0.38
Toluene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,2-Trichloroethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28

continued . . .

[79] Concentration biased low.
[80] Concentration biased low.
[81] Concentration biased high.
[82] Concentration biased low.
[83] Concentration biased low.
[84] Concentration biased low.
[85] Concentration biased low.
[86] Concentration biased low.

sample 207806 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
1,3-Dichloropropane	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
Dibromochloromethane	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
1,2-Dibromoethane (EDB)	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Tetrachloroethene (PCE)	[87] U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
Chlorobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,1,2-Tetrachloroethane	[88] U	<0.220	<1.00	<0.220	μg/L	1	0.220	1	0.22
Ethylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
m,p-Xylene	U	<0.540	<1.00	<0.540	μg/L	1	0.540	1	0.54
Bromoform	[89] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
Styrene	U	<0.210	<1.00	<0.210	μg/L	1	0.210	1	0.21
o-Xylene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,2,2-Tetrachloroethane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
2-Chlorotoluene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
1,2,3-Trichloropropane	U	<0.430	<1.00	<0.430	μg/L	1	0.430	1	0.43
Isopropylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
Bromobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
n-Propylbenzene	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
1,3,5-Trimethylbenzene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
tert-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2,4-Trimethylbenzene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,4-Dichlorobenzene (para)	[90] U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
sec-Butylbenzene	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichlorobenzene (meta)	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
p-Isopropyltoluene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
4-Chlorotoluene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,2-Dichlorobenzene (ortho)	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
n-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dibromo-3-chloropropane	[91] U	<0.680	<5.00	<0.680	μg/L	1	0.680	5	0.68
1,2,3-Trichlorobenzene	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
1,2,4-Trichlorobenzene	U	<0.340	<5.00	<0.340	μg/L	1	0.340	5	0.34
Naphthalene	U	<0.280	<5.00	<0.280	μg/L	1	0.280	5	0.28
Hexachlorobutadiene	U	<0.540	<5.00	<0.540	μg/L	1	0.540	5	0.54

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		51.5	μg/L	1	50.0	103	75.3 - 131
Toluene-d8		52.4	μg/L	1	50.0	105	91.4 - 112
4-Bromofluorobenzene (4-BFB)		50.4	μg/L	1	50.0	101	83.8 - 108

[87] Concentration biased low.
[88] Concentration biased low.
[89] Concentration biased low.
[90] Concentration biased low.
[91] Concentration biased low.

Sample: 207807 - HLSF-3839-HMW-034-0809

Laboratory:	Lubbock				
Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	62999	Date Analyzed:	2009-08-27	Analyzed By:	KB
Prep Batch:	53764	Sample Preparation:	2009-08-27	Prepared By:	KB

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromochloromethane	U	<0.370	<1.00	<0.370	µg/L	1	0.370	1	0.37
Dichlorodifluoromethane	U	<0.450	<1.00	<0.450	µg/L	1	0.450	1	0.45
Chloromethane (methyl chloride)	U	<0.590	<1.00	<0.590	µg/L	1	0.590	1	0.59
Vinyl Chloride	U	<0.690	<1.00	<0.690	µg/L	1	0.690	1	0.69
Bromomethane (methyl bromide)	U	<0.750	<5.00	<0.750	µg/L	1	0.750	5	0.75
Chloroethane	U	<0.570	<1.00	<0.570	µg/L	1	0.570	1	0.57
Trichlorofluoromethane	U	<0.470	<1.00	<0.470	µg/L	1	0.470	1	0.47
Acetone	U	<1.75	<10.0	8.53	µg/L	1	1.75	10	1.75
Iodomethane (methyl iodide)	U	<0.320	<5.00	<0.320	µg/L	1	0.320	5	0.32
Carbon Disulfide	[92] U	<0.250	<1.00	<0.250	µg/L	1	0.250	1	0.25
Acrylonitrile	U	<0.320	<1.00	<0.320	µg/L	1	0.320	1	0.32
2-Butanone (MEK)	[93] U	<0.810	<5.00	11.3	µg/L	1	0.810	5	0.81
4-Methyl-2-pentanone (MIBK)	U	<0.790	<5.00	<0.790	µg/L	1	0.790	5	0.79
2-Hexanone	U	<0.510	<5.00	<0.510	µg/L	1	0.510	5	0.51
trans 1,4-Dichloro-2-butene	U	<0.490	<10.0	<0.490	µg/L	1	0.490	10	0.49
1,1-Dichloroethene	U	<0.400	<1.00	<0.400	µg/L	1	0.400	1	0.4
Methylene chloride	U	<0.450	<5.00	<0.450	µg/L	1	0.450	5	0.45
MTBE	U	<0.400	<1.00	<0.400	µg/L	1	0.400	1	0.4
trans-1,2-Dichloroethene	U	<0.330	<1.00	<0.330	µg/L	1	0.330	1	0.33
1,1-Dichloroethane	U	<0.290	<1.00	<0.290	µg/L	1	0.290	1	0.29
cis-1,2-Dichloroethene	U	<0.200	<1.00	<0.200	µg/L	1	0.200	1	0.2
2,2-Dichloropropane	[94] U	<0.420	<1.00	<0.420	µg/L	1	0.420	1	0.42
1,2-Dichloroethane (EDC)	[95] U	<0.350	<1.00	<0.350	µg/L	1	0.350	1	0.35
Chloroform	U	<0.270	<1.00	<0.270	µg/L	1	0.270	1	0.27
1,1,1-Trichloroethane	[96] U	<0.230	<1.00	<0.230	µg/L	1	0.230	1	0.23
1,1-Dichloropropene	U	<0.340	<1.00	<0.340	µg/L	1	0.340	1	0.34
Benzene	U	<0.240	<1.00	<0.240	µg/L	1	0.240	1	0.24
Carbon Tetrachloride	[97] U	<0.300	<1.00	<0.300	µg/L	1	0.300	1	0.3
1,2-Dichloropropane	U	<0.360	<1.00	<0.360	µg/L	1	0.360	1	0.36
Trichloroethene (TCE)	U	<0.300	<1.00	<0.300	µg/L	1	0.300	1	0.3
Dibromomethane (methylene bromide)	[98] U	<0.470	<1.00	<0.470	µg/L	1	0.470	1	0.47
Bromodichloromethane	U	<0.280	<1.00	<0.280	µg/L	1	0.280	1	0.28
2-Chloroethyl vinyl ether	[99] U	<0.330	<5.00	<0.330	µg/L	1	0.330	5	0.33

continued . . .

[92] Concentration biased high.
[93] Concentration biased high.
[94] Concentration biased low.
[95] Concentration biased low.
[96] Concentration biased low.
[97] Concentration biased low.
[98] Concentration biased low.
[99] Concentration biased high.

sample 207807 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
cis-1,3-Dichloropropene	[100] U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
trans-1,3-Dichloropropene	U	<0.380	<1.00	<0.380	μg/L	1	0.380	1	0.38
Toluene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,2-Trichloroethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichloropropane	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
Dibromochloromethane	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
1,2-Dibromoethane (EDB)	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Tetrachloroethene (PCE)	[101] U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
Chlorobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,1,2-Tetrachloroethane	[102] U	<0.220	<1.00	<0.220	μg/L	1	0.220	1	0.22
Ethylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
m,p-Xylene	U	<0.540	<1.00	<0.540	μg/L	1	0.540	1	0.54
Bromoform	[103] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
Styrene	U	<0.210	<1.00	<0.210	μg/L	1	0.210	1	0.21
o-Xylene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,2,2-Tetrachloroethane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
2-Chlorotoluene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
1,2,3-Trichloropropane	U	<0.430	<1.00	<0.430	μg/L	1	0.430	1	0.43
Isopropylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
Bromobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
n-Propylbenzene	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
1,3,5-Trimethylbenzene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
tert-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2,4-Trimethylbenzene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,4-Dichlorobenzene (para)	[104] U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
sec-Butylbenzene	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichlorobenzene (meta)	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
p-Isopropyltoluene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
4-Chlorotoluene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,2-Dichlorobenzene (ortho)	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
n-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dibromo-3-chloropropane	U	<0.680	<5.00	<0.680	μg/L	1	0.680	5	0.68
1,2,3-Trichlorobenzene	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
1,2,4-Trichlorobenzene	U	<0.340	<5.00	<0.340	μg/L	1	0.340	5	0.34
Naphthalene	U	<0.280	<5.00	<0.280	μg/L	1	0.280	5	0.28
Hexachlorobutadiene	U	<0.540	<5.00	<0.540	μg/L	1	0.540	5	0.54

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.9	μg/L	1	50.0	108	75.3 - 131
Toluene-d8		52.7	μg/L	1	50.0	105	91.4 - 112

continued ...

[100] Concentration biased high.
[101] Concentration biased high.
[102] Concentration biased low.
[103] Concentration biased low.
[104] Concentration biased low.

sample continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		51.4	μg/L	1	50.0	103	83.8 - 108

Sample: 207808 - HLSF-3839-TB-09-000

Laboratory:	Lubbock				
Analysis:	Volatiles	Analytical Method:	S 8260B	Prep Method:	S 5030B
QC Batch:	62999	Date Analyzed:	2009-08-27	Analyzed By:	KB
Prep Batch:	53764	Sample Preparation:	2009-08-27	Prepared By:	KB

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromochloromethane	U	<0.370	<1.00	<0.370	μg/L	1	0.370	1	0.37
Dichlorodifluoromethane	[105] U	<0.450	<1.00	<0.450	μg/L	1	0.450	1	0.45
Chloromethane (methyl chloride)	U	<0.590	<1.00	<0.590	μg/L	1	0.590	1	0.59
Vinyl Chloride	U	<0.690	<1.00	<0.690	μg/L	1	0.690	1	0.69
Bromomethane (methyl bromide)	U	<0.750	<5.00	<0.750	μg/L	1	0.750	5	0.75
Chloroethane	U	<0.570	<1.00	<0.570	μg/L	1	0.570	1	0.57
Trichlorofluoromethane	[106] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Acetone	JB	**3.08**	<10.0	8.53	μg/L	1	1.75	10	1.75
Iodomethane (methyl iodide)	U	<0.320	<5.00	<0.320	μg/L	1	0.320	5	0.32
Carbon Disulfide	U	<0.250	<1.00	<0.250	μg/L	1	0.250	1	0.25
Acrylonitrile	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
2-Butanone (MEK)	[107] U	<0.810	<5.00	11.3	μg/L	1	0.810	5	0.81
4-Methyl-2-pentanone (MIBK)	U	<0.790	<5.00	<0.790	μg/L	1	0.790	5	0.79
2-Hexanone	U	<0.510	<5.00	<0.510	μg/L	1	0.510	5	0.51
trans 1,4-Dichloro-2-butene	[108] U	<0.490	<10.0	<0.490	μg/L	1	0.490	10	0.49
1,1-Dichloroethene	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
Methylene chloride	J	**1.92**	<5.00	<0.450	μg/L	1	0.450	5	0.45
MTBE	U	<0.400	<1.00	<0.400	μg/L	1	0.400	1	0.4
trans-1,2-Dichloroethene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
1,1-Dichloroethane	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
cis-1,2-Dichloroethene	U	<0.200	<1.00	<0.200	μg/L	1	0.200	1	0.2
2,2-Dichloropropane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
1,2-Dichloroethane (EDC)	[109] U	<0.350	<1.00	<0.350	μg/L	1	0.350	1	0.35
Chloroform	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,1-Trichloroethane	[110] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
1,1-Dichloropropene	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Benzene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24

continued ...

[105] Concentration biased low.
[106] Concentration biased low.
[107] Concentration biased high.
[108] Concentration biased low.
[109] Concentration biased low.
[110] Concentration biased low.

sample 207808 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Carbon Tetrachloride	[111] U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dichloropropane	U	<0.360	<1.00	<0.360	μg/L	1	0.360	1	0.36
Trichloroethene (TCE)	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
Dibromomethane (methylene bromide)	[112] U	<0.470	<1.00	<0.470	μg/L	1	0.470	1	0.47
Bromodichloromethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
2-Chloroethyl vinyl ether	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33
cis-1,3-Dichloropropene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
trans-1,3-Dichloropropene	U	<0.380	<1.00	<0.380	μg/L	1	0.380	1	0.38
Toluene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
1,1,2-Trichloroethane	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichloropropane	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
Dibromochloromethane	U	<0.320	<1.00	<0.320	μg/L	1	0.320	1	0.32
1,2-Dibromoethane (EDB)	U	<0.340	<1.00	<0.340	μg/L	1	0.340	1	0.34
Tetrachloroethene (PCE)	[113] U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
Chlorobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,1,2-Tetrachloroethane	[114] U	<0.220	<1.00	<0.220	μg/L	1	0.220	1	0.22
Ethylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
m,p-Xylene	U	<0.540	<1.00	<0.540	μg/L	1	0.540	1	0.54
Bromoform	[115] U	<0.230	<1.00	<0.230	μg/L	1	0.230	1	0.23
Styrene	U	<0.210	<1.00	<0.210	μg/L	1	0.210	1	0.21
o-Xylene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
1,1,2,2-Tetrachloroethane	U	<0.420	<1.00	<0.420	μg/L	1	0.420	1	0.42
2-Chlorotoluene	U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
1,2,3-Trichloropropane	U	<0.430	<1.00	<0.430	μg/L	1	0.430	1	0.43
Isopropylbenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
Bromobenzene	U	<0.260	<1.00	<0.260	μg/L	1	0.260	1	0.26
n-Propylbenzene	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
1,3,5-Trimethylbenzene	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
tert-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2,4-Trimethylbenzene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,4-Dichlorobenzene (para)	[116] U	<0.240	<1.00	<0.240	μg/L	1	0.240	1	0.24
sec-Butylbenzene	U	<0.280	<1.00	<0.280	μg/L	1	0.280	1	0.28
1,3-Dichlorobenzene (meta)	U	<0.310	<1.00	<0.310	μg/L	1	0.310	1	0.31
p-Isopropyltoluene	U	<0.330	<1.00	<0.330	μg/L	1	0.330	1	0.33
4-Chlorotoluene	U	<0.290	<1.00	<0.290	μg/L	1	0.290	1	0.29
1,2-Dichlorobenzene (ortho)	U	<0.270	<1.00	<0.270	μg/L	1	0.270	1	0.27
n-Butylbenzene	U	<0.300	<1.00	<0.300	μg/L	1	0.300	1	0.3
1,2-Dibromo-3-chloropropane	[117] U	<0.680	<5.00	<0.680	μg/L	1	0.680	5	0.68
1,2,3-Trichlorobenzene	U	<0.330	<5.00	<0.330	μg/L	1	0.330	5	0.33

continued ...

[111] Concentration biased low.
[112] Concentration biased low.
[113] Concentration biased low.
[114] Concentration biased low.
[115] Concentration biased low.
[116] Concentration biased low.
[117] Concentration biased low.

sample 207808 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
1,2,4-Trichlorobenzene	U	<0.340	<5.00	<0.340	μg/L	1	0.340	5	0.34
Naphthalene	U	<0.280	<5.00	<0.280	μg/L	1	0.280	5	0.28
Hexachlorobutadiene	U	<0.540	<5.00	<0.540	μg/L	1	0.540	5	0.54

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.2	μg/L	1	50.0	98	75.3 - 131
Toluene-d8		53.8	μg/L	1	50.0	108	91.4 - 112
4-Bromofluorobenzene (4-BFB)		50.6	μg/L	1	50.0	101	83.8 - 108

Method Blank (1)

QC Batch: 62999 Date Analyzed: 2009-08-27 Analyzed By: KB
Prep Batch: 53764 QC Preparation: 2009-08-27 Prepared By: KB

Parameter	Flag	Result	Units	Reporting Limits
Bromochloromethane		<0.370	μg/L	0.37
Dichlorodifluoromethane		<0.450	μg/L	0.45
Chloromethane (methyl chloride)		<0.590	μg/L	0.59
Vinyl Chloride		<0.690	μg/L	0.69
Bromomethane (methyl bromide)		<0.750	μg/L	0.75
Chloroethane		<0.570	μg/L	0.57
Trichlorofluoromethane		<0.470	μg/L	0.47
Acetone		8.53	μg/L	1.75
Iodomethane (methyl iodide)		<0.320	μg/L	0.32
Carbon Disulfide		<0.250	μg/L	0.25
Acrylonitrile		<0.320	μg/L	0.32
2-Butanone (MEK)		11.3	μg/L	0.81
4-Methyl-2-pentanone (MIBK)		<0.790	μg/L	0.79
2-Hexanone		<0.510	μg/L	0.51
trans 1,4-Dichloro-2-butene		<0.490	μg/L	0.49
1,1-Dichloroethene		<0.400	μg/L	0.4
Methylene chloride		<0.450	μg/L	0.45
MTBE		<0.400	μg/L	0.4
trans-1,2-Dichloroethene		<0.330	μg/L	0.33
1,1-Dichloroethane		<0.290	μg/L	0.29
cis-1,2-Dichloroethene		<0.200	μg/L	0.2
2,2-Dichloropropane		<0.420	μg/L	0.42
1,2-Dichloroethane (EDC)		<0.350	μg/L	0.35
Chloroform		<0.270	μg/L	0.27
1,1,1-Trichloroethane		<0.230	μg/L	0.23
1,1-Dichloropropene		<0.340	μg/L	0.34
Benzene		<0.240	μg/L	0.24

continued ...

method blank continued . . .

Parameter	Flag	Result	Units	Reporting Limits
Carbon Tetrachloride		<0.300	μg/L	0.3
1,2-Dichloropropane		<0.360	μg/L	0.36
Trichloroethene (TCE)		<0.300	μg/L	0.3
Dibromomethane (methylene bromide)		<0.470	μg/L	0.47
Bromodichloromethane		<0.280	μg/L	0.28
2-Chloroethyl vinyl ether		<0.330	μg/L	0.33
cis-1,3-Dichloropropene		<0.330	μg/L	0.33
trans-1,3-Dichloropropene		<0.380	μg/L	0.38
Toluene		<0.270	μg/L	0.27
1,1,2-Trichloroethane		<0.280	μg/L	0.28
1,3-Dichloropropane		<0.270	μg/L	0.27
Dibromochloromethane		<0.320	μg/L	0.32
1,2-Dibromoethane (EDB)		<0.340	μg/L	0.34
Tetrachloroethene (PCE)		<0.280	μg/L	0.28
Chlorobenzene		<0.260	μg/L	0.26
1,1,1,2-Tetrachloroethane		<0.220	μg/L	0.22
Ethylbenzene		<0.260	μg/L	0.26
m,p-Xylene		<0.540	μg/L	0.54
Bromoform		<0.230	μg/L	0.23
Styrene		<0.210	μg/L	0.21
o-Xylene		<0.260	μg/L	0.26
1,1,2,2-Tetrachloroethane		<0.420	μg/L	0.42
2-Chlorotoluene		<0.240	μg/L	0.24
1,2,3-Trichloropropane		<0.430	μg/L	0.43
Isopropylbenzene		<0.260	μg/L	0.26
Bromobenzene		<0.260	μg/L	0.26
n-Propylbenzene		<0.310	μg/L	0.31
1,3,5-Trimethylbenzene		<0.270	μg/L	0.27
tert-Butylbenzene		<0.300	μg/L	0.3
1,2,4-Trimethylbenzene		<0.290	μg/L	0.29
1,4-Dichlorobenzene (para)		<0.240	μg/L	0.24
sec-Butylbenzene		<0.280	μg/L	0.28
1,3-Dichlorobenzene (meta)		<0.310	μg/L	0.31
p-Isopropyltoluene		<0.330	μg/L	0.33
4-Chlorotoluene		<0.290	μg/L	0.29
1,2-Dichlorobenzene (ortho)		<0.270	μg/L	0.27
n-Butylbenzene		<0.300	μg/L	0.3
1,2-Dibromo-3-chloropropane		<0.680	μg/L	0.68
1,2,3-Trichlorobenzene		<0.330	μg/L	0.33
1,2,4-Trichlorobenzene		<0.340	μg/L	0.34
Naphthalene		<0.280	μg/L	0.28
Hexachlorobutadiene		<0.540	μg/L	0.54

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		49.5	μg/L	1	50.0	99	75.3 - 131
Toluene-d8		52.9	μg/L	1	50.0	106	91.4 - 112

continued . . .

method blank continued . . .

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)		49.0	µg/L	1	50.0	98	83.8 - 108

Laboratory Control Spike (LCS-1)

QC Batch: 62999 Date Analyzed: 2009-08-27 Analyzed By: KB
Prep Batch: 53764 QC Preparation: 2009-08-27 Prepared By: KB

Param		LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromochloromethane		42.1	µg/L	1	50.0	<0.370	84	80.2 - 127
Dichlorodifluoromethane		33.2	µg/L	1	50.0	<0.450	66	37.7 - 159
Chloromethane (methyl chloride)		39.3	µg/L	1	50.0	<0.590	79	46.1 - 146
Vinyl Chloride		49.3	µg/L	1	50.0	<0.690	99	49.9 - 145
Bromomethane (methyl bromide)		40.3	µg/L	1	50.0	<0.750	81	48.1 - 144
Chloroethane		42.3	µg/L	1	50.0	<0.570	85	50.1 - 138
Trichlorofluoromethane		36.8	µg/L	1	50.0	<0.470	74	54.8 - 151
Acetone		43.3	µg/L	1	50.0	8.53	87	19.1 - 189
Iodomethane (methyl iodide)		48.3	µg/L	1	50.0	<0.320	97	77.6 - 134
Carbon Disulfide		58.2	µg/L	1	50.0	<0.250	116	67.9 - 138
Acrylonitrile		43.6	µg/L	1	50.0	<0.320	87	76.7 - 131
2-Butanone (MEK)		60.9	µg/L	1	50.0	11.3	122	39.9 - 171
4-Methyl-2-pentanone (MIBK)		44.6	µg/L	1	50.0	<0.790	89	68.6 - 133
2-Hexanone		41.5	µg/L	1	50.0	<0.510	83	43.4 - 167
trans 1,4-Dichloro-2-butene		33.0	µg/L	1	50.0	<0.490	66	40.2 - 160
1,1-Dichloroethene		50.4	µg/L	1	50.0	<0.400	101	77 - 127
Methylene chloride		48.4	µg/L	1	50.0	<0.450	97	73.7 - 133
MTBE		47.0	µg/L	1	50.0	<0.400	94	81.3 - 125
trans-1,2-Dichloroethene		42.1	µg/L	1	50.0	<0.330	84	75.9 - 131
1,1-Dichloroethane		46.5	µg/L	1	50.0	<0.290	93	73.3 - 135
cis-1,2-Dichloroethene		48.9	µg/L	1	50.0	<0.200	98	76.7 - 132
2,2-Dichloropropane		44.4	µg/L	1	50.0	<0.420	89	57.1 - 147
1,2-Dichloroethane (EDC)	[118]	35.7	µg/L	1	50.0	<0.350	71	75.5 - 129
Chloroform		42.8	µg/L	1	50.0	<0.270	86	75.8 - 129
1,1,1-Trichloroethane	[119]	37.1	µg/L	1	50.0	<0.230	74	80.2 - 126
1,1-Dichloropropene		50.3	µg/L	1	50.0	<0.340	101	89.2 - 120
Benzene		54.8	µg/L	1	50.0	<0.240	110	86.6 - 116
Carbon Tetrachloride	[120]	38.2	µg/L	1	50.0	<0.300	76	76.6 - 133
1,2-Dichloropropane		52.0	µg/L	1	50.0	<0.360	104	85.6 - 121
Trichloroethene (TCE)		42.4	µg/L	1	50.0	<0.300	85	80.2 - 127
Dibromomethane (methylene bromide)		44.5	µg/L	1	50.0	<0.470	89	88.7 - 118
Bromodichloromethane		43.6	µg/L	1	50.0	<0.280	87	82.4 - 129
2-Chloroethyl vinyl ether		53.3	µg/L	1	50.0	<0.330	107	12.4 - 157

continued . . .

[118] Spike recovery outside control limits. Concentration biased low. •
[119] Spike recovery outside control limits. Concentration biased low. •
[120] Spike recovery outside control limits. Concentration biased low. •

control spikes continued ...

Param		LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
cis-1,3-Dichloropropene		56.3	μg/L	1	50.0	<0.330	113	89 - 121
trans-1,3-Dichloropropene		51.4	μg/L	1	50.0	<0.380	103	85.3 - 125
Toluene		47.8	μg/L	1	50.0	<0.270	96	86.6 - 117
1,1,2-Trichloroethane		50.4	μg/L	1	50.0	<0.280	101	87.5 - 117
1,3-Dichloropropane		50.9	μg/L	1	50.0	<0.270	102	87.9 - 118
Dibromochloromethane		40.5	μg/L	1	50.0	<0.320	81	69.4 - 135
1,2-Dibromoethane (EDB)		46.7	μg/L	1	50.0	<0.340	93	88.3 - 121
Tetrachloroethene (PCE)		40.1	μg/L	1	50.0	<0.280	80	49.4 - 137
Chlorobenzene		48.5	μg/L	1	50.0	<0.260	97	86.9 - 116
1,1,1,2-Tetrachloroethane	[121]	41.3	μg/L	1	50.0	<0.220	83	83.7 - 125
Ethylbenzene		46.3	μg/L	1	50.0	<0.260	93	88.4 - 115
m,p-Xylene		89.3	μg/L	1	100	<0.540	89	86.7 - 116
Bromoform	[122]	31.6	μg/L	1	50.0	<0.230	63	71.8 - 119
Styrene		51.8	μg/L	1	50.0	<0.210	104	86.4 - 117
o-Xylene		45.1	μg/L	1	50.0	<0.260	90	86.4 - 120
1,1,2,2-Tetrachloroethane		50.8	μg/L	1	50.0	<0.420	102	71 - 131
2-Chlorotoluene		46.8	μg/L	1	50.0	<0.240	94	85 - 120
1,2,3-Trichloropropane		53.9	μg/L	1	50.0	<0.430	108	78.1 - 137
Isopropylbenzene		48.7	μg/L	1	50.0	<0.260	97	84 - 127
Bromobenzene		51.8	μg/L	1	50.0	<0.260	104	84.2 - 121
n-Propylbenzene		48.9	μg/L	1	50.0	<0.310	98	81.1 - 122
1,3,5-Trimethylbenzene		46.6	μg/L	1	50.0	<0.270	93	84.7 - 121
tert-Butylbenzene		46.1	μg/L	1	50.0	<0.300	92	82 - 122
1,2,4-Trimethylbenzene		45.8	μg/L	1	50.0	<0.290	92	84.6 - 124
1,4-Dichlorobenzene (para)	[123]	42.2	μg/L	1	50.0	<0.240	84	84.6 - 114
sec-Butylbenzene		49.3	μg/L	1	50.0	<0.280	99	81.7 - 124
1,3-Dichlorobenzene (meta)		43.3	μg/L	1	50.0	<0.310	87	85.6 - 116
p-Isopropyltoluene		46.4	μg/L	1	50.0	<0.330	93	81.4 - 124
4-Chlorotoluene		46.7	μg/L	1	50.0	<0.290	93	85.8 - 121
1,2-Dichlorobenzene (ortho)		43.9	μg/L	1	50.0	<0.270	88	86.5 - 118
n-Butylbenzene		49.2	μg/L	1	50.0	<0.300	98	81.2 - 129
1,2-Dibromo-3-chloropropane		38.4	μg/L	1	50.0	<0.680	77	71.7 - 128
1,2,3-Trichlorobenzene		48.6	μg/L	1	50.0	<0.330	97	79.5 - 126
1,2,4-Trichlorobenzene		51.0	μg/L	1	50.0	<0.340	102	64.5 - 126
Naphthalene		41.6	μg/L	1	50.0	<0.280	83	67.7 - 127
Hexachlorobutadiene		44.5	μg/L	1	50.0	<0.540	89	76.7 - 134

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	41.6	μg/L	1	50.0	<0.370	83	80.2 - 127	1	20
Dichlorodifluoromethane	35.9	μg/L	1	50.0	<0.450	72	37.7 - 159	8	20
Chloromethane (methyl chloride)	39.2	μg/L	1	50.0	<0.590	78	46.1 - 146	0	20
Vinyl Chloride	48.5	μg/L	1	50.0	<0.690	97	49.9 - 145	2	20

continued ...

[121] Spike recovery outside control limits. Concentration biased low. •
[122] Spike recovery outside control limits. Concentration biased low. •
[123] Spike recovery outside control limits. Concentration biased low. •

control spikes continued ...

Param		LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromomethane (methyl bromide)		36.9	μg/L	1	50.0	<0.750	74	48.1 - 144	9	20
Chloroethane		39.8	μg/L	1	50.0	<0.570	80	50.1 - 138	6	20
Trichlorofluoromethane		38.4	μg/L	1	50.0	<0.470	77	54.8 - 151	4	20
Acetone		43.7	μg/L	1	50.0	8.53	87	19.1 - 189	1	20
Iodomethane (methyl iodide)		47.1	μg/L	1	50.0	<0.320	94	77.6 - 134	2	20
Carbon Disulfide		56.6	μg/L	1	50.0	<0.250	113	67.9 - 138	3	20
Acrylonitrile		45.0	μg/L	1	50.0	<0.320	90	76.7 - 131	3	20
2-Butanone (MEK)		63.9	μg/L	1	50.0	11.3	128	39.9 - 171	5	20
4-Methyl-2-pentanone (MIBK)		45.2	μg/L	1	50.0	<0.790	90	68.6 - 133	1	20
2-Hexanone		41.1	μg/L	1	50.0	<0.510	82	43.4 - 167	1	20
trans 1,4-Dichloro-2-butene		34.2	μg/L	1	50.0	<0.490	68	40.2 - 160	4	20
1,1-Dichloroethene		48.9	μg/L	1	50.0	<0.400	98	77 - 127	3	20
Methylene chloride		46.9	μg/L	1	50.0	<0.450	94	73.7 - 133	3	20
MTBE		46.7	μg/L	1	50.0	<0.400	93	81.3 - 125	1	20
trans-1,2-Dichloroethene		41.5	μg/L	1	50.0	<0.330	83	75.9 - 131	1	20
1,1-Dichloroethane		45.6	μg/L	1	50.0	<0.290	91	73.3 - 135	2	20
cis-1,2-Dichloroethene		47.4	μg/L	1	50.0	<0.200	95	76.7 - 132	3	20
2,2-Dichloropropane		42.8	μg/L	1	50.0	<0.420	86	57.1 - 147	4	20
1,2-Dichloroethane (EDC)	[124]	34.9	μg/L	1	50.0	<0.350	70	75.5 - 129	2	20
Chloroform		41.3	μg/L	1	50.0	<0.270	83	75.8 - 129	4	20
1,1,1-Trichloroethane	[125]	35.7	μg/L	1	50.0	<0.230	71	80.2 - 126	4	20
1,1-Dichloropropene		49.5	μg/L	1	50.0	<0.340	99	89.2 - 120	2	20
Benzene		54.0	μg/L	1	50.0	<0.240	108	86.6 - 116	2	20
Carbon Tetrachloride	[126]	37.4	μg/L	1	50.0	<0.300	75	76.6 - 133	2	20
1,2-Dichloropropane		50.8	μg/L	1	50.0	<0.360	102	85.6 - 121	2	20
Trichloroethene (TCE)		41.7	μg/L	1	50.0	<0.300	83	80.2 - 127	2	20
Dibromomethane (methylene bromide)	[127]	43.6	μg/L	1	50.0	<0.470	87	88.7 - 118	2	20
Bromodichloromethane		43.4	μg/L	1	50.0	<0.280	87	82.4 - 129	0	20
2-Chloroethyl vinyl ether		48.8	μg/L	1	50.0	<0.330	98	12.4 - 157	9	20
cis-1,3-Dichloropropene		55.5	μg/L	1	50.0	<0.330	111	89 - 121	1	20
trans-1,3-Dichloropropene		51.1	μg/L	1	50.0	<0.380	102	85.3 - 125	1	20
Toluene		47.0	μg/L	1	50.0	<0.270	94	86.6 - 117	2	20
1,1,2-Trichloroethane		50.9	μg/L	1	50.0	<0.280	102	87.5 - 117	1	20
1,3-Dichloropropane		51.4	μg/L	1	50.0	<0.270	103	87.9 - 118	1	20
Dibromochloromethane		41.2	μg/L	1	50.0	<0.320	82	69.4 - 135	2	20
1,2-Dibromoethane (EDB)		46.1	μg/L	1	50.0	<0.340	92	88.3 - 121	1	20
Tetrachloroethene (PCE)		42.6	μg/L	1	50.0	<0.280	85	49.4 - 137	6	20
Chlorobenzene		48.5	μg/L	1	50.0	<0.260	97	86.9 - 116	0	20
1,1,1,2-Tetrachloroethane	[128]	41.3	μg/L	1	50.0	<0.220	83	83.7 - 125	0	20
Ethylbenzene		46.0	μg/L	1	50.0	<0.260	92	88.4 - 115	1	20
m,p-Xylene		89.4	μg/L	1	100	<0.540	89	86.7 - 116	0	20
Bromoform	[129]	32.9	μg/L	1	50.0	<0.230	66	71.8 - 119	4	20

continued ...

[124] Spike recovery outside control limits. Concentration biased low. RPD within RPD limits. •
[125] Spike recovery outside control limits. Concentration biased low. RPD within RPD limits. •
[126] Spike recovery outside control limits. Concentration biased low. RPD within RPD limits. •
[127] LCSD analyte out of range. LCS/LCSD has a RPD within limits. Therfore, LCS shows extraction occured properly.
[128] Spike recovery outside control limits. Concentration biased low. RPD within RPD limits. •
[129] Spike recovery outside control limits. Concentration biased low. RPD within RPD limits. •

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Styrene	51.3	µg/L	1	50.0	<0.210	103	86.4 - 117	1	20
o-Xylene	44.8	µg/L	1	50.0	<0.260	90	86.4 - 120	1	20
1,1,2,2-Tetrachloroethane	51.0	µg/L	1	50.0	<0.420	102	71 - 131	0	20
2-Chlorotoluene	46.3	µg/L	1	50.0	<0.240	93	85 - 120	1	20
1,2,3-Trichloropropane	55.0	µg/L	1	50.0	<0.430	110	78.1 - 137	2	20
Isopropylbenzene	48.1	µg/L	1	50.0	<0.260	96	84 - 127	1	20
Bromobenzene	51.8	µg/L	1	50.0	<0.260	104	84.2 - 121	0	20
n-Propylbenzene	48.4	µg/L	1	50.0	<0.310	97	81.1 - 122	1	20
1,3,5-Trimethylbenzene	46.8	µg/L	1	50.0	<0.270	94	84.7 - 121	0	20
tert-Butylbenzene	45.9	µg/L	1	50.0	<0.300	92	82 - 122	0	20
1,2,4-Trimethylbenzene	46.5	µg/L	1	50.0	<0.290	93	84.6 - 124	2	20
1,4-Dichlorobenzene (para) [130]	42.2	µg/L	1	50.0	<0.240	84	84.6 - 114	0	20
sec-Butylbenzene	48.4	µg/L	1	50.0	<0.280	97	81.7 - 124	2	20
1,3-Dichlorobenzene (meta)	43.6	µg/L	1	50.0	<0.310	87	85.6 - 116	1	20
p-Isopropyltoluene	45.9	µg/L	1	50.0	<0.330	92	81.4 - 124	1	20
4-Chlorotoluene	45.8	µg/L	1	50.0	<0.290	92	85.8 - 121	2	20
1,2-Dichlorobenzene (ortho)	43.5	µg/L	1	50.0	<0.270	87	86.5 - 118	1	20
n-Butylbenzene	49.1	µg/L	1	50.0	<0.300	98	81.2 - 129	0	20
1,2-Dibromo-3-chloropropane	40.3	µg/L	1	50.0	<0.680	81	71.7 - 128	5	20
1,2,3-Trichlorobenzene	49.7	µg/L	1	50.0	<0.330	99	79.5 - 126	2	20
1,2,4-Trichlorobenzene	51.9	µg/L	1	50.0	<0.340	104	64.5 - 126	2	20
Naphthalene	43.0	µg/L	1	50.0	<0.280	86	67.7 - 127	3	20
Hexachlorobutadiene	45.1	µg/L	1	50.0	<0.540	90	76.7 - 134	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	49.8	48.1	µg/L	1	50.0	100	96	77.3 - 126
Toluene-d8	52.9	51.6	µg/L	1	50.0	106	103	91.9 - 108
4-Bromofluorobenzene (4-BFB)	49.7	48.2	µg/L	1	50.0	99	96	93 - 107

Matrix Spike (MS-1) Spiked Sample: 207780

QC Batch:	62999	Date Analyzed:	2009-08-27	Analyzed By:	KB
Prep Batch:	53764	QC Preparation:	2009-08-27	Prepared By:	KB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromochloromethane	45.0	µg/L	1	50.0	<0.370	90	56.3 - 153
Dichlorodifluoromethane	42.3	µg/L	1	50.0	<0.450	85	33.3 - 142
Chloromethane (methyl chloride)	45.8	µg/L	1	50.0	<0.590	92	39.6 - 149
Vinyl Chloride	55.4	µg/L	1	50.0	<0.690	111	33.6 - 159
Bromomethane (methyl bromide)	51.0	µg/L	1	50.0	<0.750	102	35.2 - 161
Chloroethane	50.3	µg/L	1	50.0	<0.570	101	28.1 - 169

continued ...

[130] Spike recovery outside control limits. Concentration biased low. RPD within RPD limits. •

matrix spikes continued ...

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Trichlorofluoromethane	52.5	µg/L	1	50.0	<0.470	105	34.7 - 158
Acetone	25.3	µg/L	1	50.0	<1.75	51	10 - 123
Iodomethane (methyl iodide)	52.7	µg/L	1	50.0	<0.320	105	60.9 - 143
Carbon Disulfide	63.5	µg/L	1	50.0	<0.250	127	41.3 - 162
Acrylonitrile	51.8	µg/L	1	50.0	<0.320	104	37.4 - 188
2-Butanone (MEK)	45.1	µg/L	1	50.0	<0.810	90	34.8 - 143
4-Methyl-2-pentanone (MIBK)	46.7	µg/L	1	50.0	<0.790	93	57.3 - 153
2-Hexanone	41.3	µg/L	1	50.0	<0.510	83	37 - 159
trans 1,4-Dichloro-2-butene	52.6	µg/L	1	50.0	<0.490	105	10 - 182
1,1-Dichloroethene	54.3	µg/L	1	50.0	<0.400	109	44.8 - 153
Methylene chloride	51.1	µg/L	1	50.0	<0.450	102	48.6 - 161
MTBE	53.5	µg/L	1	50.0	<0.400	107	45.3 - 173
trans-1,2-Dichloroethene	45.0	µg/L	1	50.0	<0.330	90	45.4 - 164
1,1-Dichloroethane	52.8	µg/L	1	50.0	<0.290	106	43.2 - 168
cis-1,2-Dichloroethene	52.2	µg/L	1	50.0	<0.200	104	48.8 - 163
2,2-Dichloropropane	40.9	µg/L	1	50.0	<0.420	82	10 - 160
1,2-Dichloroethane (EDC)	46.0	µg/L	1	50.0	<0.350	92	50.6 - 164
Chloroform	52.5	µg/L	1	50.0	2.31	100	44.7 - 162
1,1,1-Trichloroethane	47.6	µg/L	1	50.0	<0.230	95	49.4 - 158
1,1-Dichloropropene	58.1	µg/L	1	50.0	<0.340	116	50.9 - 156
Benzene	59.7	µg/L	1	50.0	<0.240	119	59.1 - 151
Carbon Tetrachloride	54.1	µg/L	1	50.0	2.13	104	49.2 - 155
1,2-Dichloropropane	56.6	µg/L	1	50.0	<0.360	113	50.1 - 158
Trichloroethene (TCE)	47.6	µg/L	1	50.0	2.84	90	66 - 130
Dibromomethane (methylene bromide)	52.3	µg/L	1	50.0	<0.470	105	60.1 - 146
Bromodichloromethane	56.4	µg/L	1	50.0	<0.280	113	54.8 - 157
2-Chloroethyl vinyl ether	<0.330	µg/L	1	50.0	<0.330	0	0 - 24.7
cis-1,3-Dichloropropene	62.0	µg/L	1	50.0	<0.330	124	54.6 - 141
trans-1,3-Dichloropropene	61.6	µg/L	1	50.0	<0.380	123	54.2 - 143
Toluene	52.5	µg/L	1	50.0	<0.270	105	61.7 - 143
1,1,2-Trichloroethane	54.8	µg/L	1	50.0	<0.280	110	59.4 - 145
1,3-Dichloropropane	57.8	µg/L	1	50.0	<0.270	116	61.4 - 149
Dibromochloromethane	52.5	µg/L	1	50.0	<0.320	105	63.8 - 136
1,2-Dibromoethane (EDB)	52.6	µg/L	1	50.0	<0.340	105	66.2 - 140
Tetrachloroethene (PCE)	34.9	µg/L	1	50.0	0.34	69	42.6 - 72.8
Chlorobenzene	53.4	µg/L	1	50.0	<0.260	107	67.2 - 133
1,1,1,2-Tetrachloroethane	49.2	µg/L	1	50.0	<0.220	98	59.9 - 142
Ethylbenzene	52.3	µg/L	1	50.0	<0.260	105	59.2 - 144
m,p-Xylene	102	µg/L	1	100	<0.540	102	59.6 - 144
Bromoform	46.6	µg/L	1	50.0	<0.230	93	56.2 - 122
Styrene [131]	2.50	µg/L	1	50.0	<0.210	5	10 - 203
o-Xylene	51.8	µg/L	1	50.0	<0.260	104	59.9 - 151
1,1,2,2-Tetrachloroethane	58.8	µg/L	1	50.0	<0.420	118	57.9 - 160
2-Chlorotoluene	51.1	µg/L	1	50.0	<0.240	102	56.8 - 150
1,2,3-Trichloropropane	61.0	µg/L	1	50.0	<0.430	122	47.7 - 156
Isopropylbenzene	51.2	µg/L	1	50.0	<0.260	102	54.8 - 150

continued ...

[131] 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
Bromobenzene	57.2	μg/L	1	50.0	<0.260	114	57.5 - 144
n-Propylbenzene	51.8	μg/L	1	50.0	<0.310	104	64.6 - 141
1,3,5-Trimethylbenzene	50.2	μg/L	1	50.0	<0.270	100	63.9 - 140
tert-Butylbenzene	48.6	μg/L	1	50.0	<0.300	97	61.5 - 142
1,2,4-Trimethylbenzene	50.8	μg/L	1	50.0	<0.290	102	45.5 - 157
1,4-Dichlorobenzene (para)	44.9	μg/L	1	50.0	<0.240	90	69.8 - 126
sec-Butylbenzene	51.0	μg/L	1	50.0	<0.280	102	61.9 - 144
1,3-Dichlorobenzene (meta)	46.6	μg/L	1	50.0	<0.310	93	69.4 - 131
p-Isopropyltoluene	48.0	μg/L	1	50.0	<0.330	96	59.2 - 141
4-Chlorotoluene	50.8	μg/L	1	50.0	<0.290	102	68.6 - 139
1,2-Dichlorobenzene (ortho)	46.9	μg/L	1	50.0	<0.270	94	70.4 - 132
n-Butylbenzene	50.8	μg/L	1	50.0	<0.300	102	55.7 - 146
1,2-Dibromo-3-chloropropane	50.9	μg/L	1	50.0	<0.680	102	59.6 - 136
1,2,3-Trichlorobenzene	51.3	μg/L	1	50.0	<0.330	103	54.2 - 130
1,2,4-Trichlorobenzene	52.7	μg/L	1	50.0	<0.340	105	49 - 123
Naphthalene	44.1	μg/L	1	50.0	<0.280	88	56.4 - 131
Hexachlorobutadiene	43.4	μg/L	1	50.0	<0.540	87	24.8 - 144

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	45.3	μg/L	1	50.0	<0.370	91	56.3 - 153	1	20
Dichlorodifluoromethane	39.9	μg/L	1	50.0	<0.450	80	33.3 - 142	6	20
Chloromethane (methyl chloride)	47.2	μg/L	1	50.0	<0.590	94	39.6 - 149	3	20
Vinyl Chloride	55.2	μg/L	1	50.0	<0.690	110	33.6 - 159	0	20
Bromomethane (methyl bromide)	50.0	μg/L	1	50.0	<0.750	100	35.2 - 161	2	20
Chloroethane	48.7	μg/L	1	50.0	<0.570	97	28.1 - 169	3	20
Trichlorofluoromethane	49.3	μg/L	1	50.0	<0.470	99	34.7 - 158	6	20
Acetone	26.2	μg/L	1	50.0	<1.75	52	10 - 123	4	20
Iodomethane (methyl iodide)	53.3	μg/L	1	50.0	<0.320	107	60.9 - 143	1	20
Carbon Disulfide	62.8	μg/L	1	50.0	<0.250	126	41.3 - 162	1	20
Acrylonitrile	52.5	μg/L	1	50.0	<0.320	105	37.4 - 188	1	20
2-Butanone (MEK)	45.8	μg/L	1	50.0	<0.810	92	34.8 - 143	2	20
4-Methyl-2-pentanone (MIBK)	47.7	μg/L	1	50.0	<0.790	95	57.3 - 153	2	20
2-Hexanone	41.6	μg/L	1	50.0	<0.510	83	37 - 159	1	20
trans 1,4-Dichloro-2-butene	58.0	μg/L	1	50.0	<0.490	116	10 - 182	10	20
1,1-Dichloroethene	54.5	μg/L	1	50.0	<0.400	109	44.8 - 153	0	20
Methylene chloride	51.4	μg/L	1	50.0	<0.450	103	48.6 - 161	1	20
MTBE	53.6	μg/L	1	50.0	<0.400	107	45.3 - 173	0	20
trans-1,2-Dichloroethene	45.0	μg/L	1	50.0	<0.330	90	45.4 - 164	0	20
1,1-Dichloroethane	53.3	μg/L	1	50.0	<0.290	107	43.2 - 168	1	20
cis-1,2-Dichloroethene	51.6	μg/L	1	50.0	<0.200	103	48.8 - 163	1	20
2,2-Dichloropropane	39.4	μg/L	1	50.0	<0.420	79	10 - 160	4	20
1,2-Dichloroethane (EDC)	45.9	μg/L	1	50.0	<0.350	92	50.6 - 164	0	20
Chloroform	52.0	μg/L	1	50.0	2.31	99	44.7 - 162	1	20
1,1,1-Trichloroethane	47.2	μg/L	1	50.0	<0.230	94	49.4 - 158	1	20
1,1-Dichloropropene	57.6	μg/L	1	50.0	<0.340	115	50.9 - 156	1	20

continued ...

matrix spikes continued . . .

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Benzene	59.2	µg/L	1	50.0	<0.240	118	59.1 - 151	1	20
Carbon Tetrachloride	52.8	µg/L	1	50.0	2.13	101	49.2 - 155	2	20
1,2-Dichloropropane	56.5	µg/L	1	50.0	<0.360	113	50.1 - 158	0	20
Trichloroethene (TCE)	48.5	µg/L	1	50.0	2.84	91	66 - 130	2	20
Dibromomethane (methylene bromide)	52.9	µg/L	1	50.0	<0.470	106	60.1 - 146	1	20
Bromodichloromethane	55.8	µg/L	1	50.0	<0.280	112	54.8 - 157	1	20
2-Chloroethyl vinyl ether	<0.330	µg/L	1	50.0	<0.330	0	0 - 24.7	0	20
cis-1,3-Dichloropropene	62.5	µg/L	1	50.0	<0.330	125	54.6 - 141	1	20
trans-1,3-Dichloropropene	61.1	µg/L	1	50.0	<0.380	122	54.2 - 143	1	20
Toluene	51.4	µg/L	1	50.0	<0.270	103	61.7 - 143	2	20
1,1,2-Trichloroethane	56.6	µg/L	1	50.0	<0.280	113	59.4 - 145	3	20
1,3-Dichloropropane	58.5	µg/L	1	50.0	<0.270	117	61.4 - 149	1	20
Dibromochloromethane	54.2	µg/L	1	50.0	<0.320	108	63.8 - 136	3	20
1,2-Dibromoethane (EDB)	53.2	µg/L	1	50.0	<0.340	106	66.2 - 140	1	20
Tetrachloroethene (PCE)	34.1	µg/L	1	50.0	0.34	68	42.6 - 72.8	2	20
Chlorobenzene	53.4	µg/L	1	50.0	<0.260	107	67.2 - 133	0	20
1,1,1,2-Tetrachloroethane	50.2	µg/L	1	50.0	<0.220	100	59.9 - 142	2	20
Ethylbenzene	51.5	µg/L	1	50.0	<0.260	103	59.2 - 144	2	20
m,p-Xylene	102	µg/L	1	100	<0.540	102	59.6 - 144	0	20
Bromoform	49.5	µg/L	1	50.0	<0.230	99	56.2 - 122	6	20
Styrene [132]	32.3	µg/L	1	50.0	<0.210	65	10 - 203	171	20
o-Xylene	52.1	µg/L	1	50.0	<0.260	104	59.9 - 151	1	20
1,1,2,2-Tetrachloroethane	60.0	µg/L	1	50.0	<0.420	120	57.9 - 160	2	20
2-Chlorotoluene	49.8	µg/L	1	50.0	<0.240	100	56.8 - 150	3	20
1,2,3-Trichloropropane	62.6	µg/L	1	50.0	<0.430	125	47.7 - 156	3	20
Isopropylbenzene	49.4	µg/L	1	50.0	<0.260	99	54.8 - 150	4	20
Bromobenzene	56.5	µg/L	1	50.0	<0.260	113	57.5 - 144	1	20
n-Propylbenzene	49.3	µg/L	1	50.0	<0.310	99	64.6 - 141	5	20
1,3,5-Trimethylbenzene	47.6	µg/L	1	50.0	<0.270	95	63.9 - 140	5	20
tert-Butylbenzene	46.1	µg/L	1	50.0	<0.300	92	61.5 - 142	5	20
1,2,4-Trimethylbenzene	48.1	µg/L	1	50.0	<0.290	96	45.5 - 157	6	20
1,4-Dichlorobenzene (para)	44.4	µg/L	1	50.0	<0.240	89	69.8 - 126	1	20
sec-Butylbenzene	46.6	µg/L	1	50.0	<0.280	93	61.9 - 144	9	20
1,3-Dichlorobenzene (meta)	44.9	µg/L	1	50.0	<0.310	90	69.4 - 131	4	20
p-Isopropyltoluene	44.4	µg/L	1	50.0	<0.330	89	59.2 - 141	8	20
4-Chlorotoluene	49.6	µg/L	1	50.0	<0.290	99	68.6 - 139	2	20
1,2-Dichlorobenzene (ortho)	46.6	µg/L	1	50.0	<0.270	93	70.4 - 132	1	20
n-Butylbenzene	45.8	µg/L	1	50.0	<0.300	92	55.7 - 146	10	20
1,2-Dibromo-3-chloropropane	53.0	µg/L	1	50.0	<0.680	106	59.6 - 136	4	20
1,2,3-Trichlorobenzene	48.2	µg/L	1	50.0	<0.330	96	54.2 - 130	6	20
1,2,4-Trichlorobenzene	50.3	µg/L	1	50.0	<0.340	101	49 - 123	5	20
Naphthalene	43.5	µg/L	1	50.0	<0.280	87	56.4 - 131	1	20
Hexachlorobutadiene	37.8	µg/L	1	50.0	<0.540	76	24.8 - 144	14	20

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

[132] RPD outside RPD limits. •

Surrogate		MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Dibromofluoromethane		52.6	52.6	μg/L	1	50	105	105	82.8 - 123
Toluene-d8	[133]	51.8	53.4	μg/L	1	50	104	107	92.3 - 106
4-Bromofluorobenzene (4-BFB)	[134]	53.0	54.8	μg/L	1	50	106	110	93.2 - 108

Standard (CCV-1)

QC Batch: 62999 Date Analyzed: 2009-08-27 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	42.5	85	80 - 120	2009-08-27
Dichlorodifluoromethane	[135]	μg/L	50.0	35.2	70	80 - 120	2009-08-27
Chloromethane (methyl chloride)		μg/L	50.0	40.9	82	80 - 120	2009-08-27
Vinyl Chloride		μg/L	50.0	50.8	102	80 - 120	2009-08-27
Bromomethane (methyl bromide)		μg/L	50.0	42.8	86	80 - 120	2009-08-27
Chloroethane		μg/L	50.0	44.7	89	80 - 120	2009-08-27
Trichlorofluoromethane	[136]	μg/L	50.0	39.3	79	80 - 120	2009-08-27
Acetone		μg/L	50.0	41.0	82	80 - 120	2009-08-27
Iodomethane (methyl iodide)		μg/L	50.0	49.5	99	80 - 120	2009-08-27
Carbon Disulfide		μg/L	50.0	59.1	118	80 - 120	2009-08-27
Acrylonitrile		μg/L	50.0	43.6	87	80 - 120	2009-08-27
2-Butanone (MEK)	[137]	μg/L	50.0	62.0	124	80 - 120	2009-08-27
4-Methyl-2-pentanone (MIBK)		μg/L	50.0	43.7	87	80 - 120	2009-08-27
2-Hexanone		μg/L	50.0	40.9	82	80 - 120	2009-08-27
trans 1,4-Dichloro-2-butene	[138]	μg/L	50.0	38.9	78	80 - 120	2009-08-27
1,1-Dichloroethene		μg/L	50.0	50.1	100	80 - 120	2009-08-27
Methylene chloride		μg/L	50.0	49.0	98	80 - 120	2009-08-27
MTBE		μg/L	50.0	47.4	95	80 - 120	2009-08-27
trans-1,2-Dichloroethene		μg/L	50.0	43.3	87	80 - 120	2009-08-27
1,1-Dichloroethane		μg/L	50.0	46.9	94	80 - 120	2009-08-27
cis-1,2-Dichloroethene		μg/L	50.0	49.7	99	80 - 120	2009-08-27
2,2-Dichloropropane		μg/L	50.0	46.5	93	80 - 120	2009-08-27
1,2-Dichloroethane (EDC)	[139]	μg/L	50.0	35.8	72	80 - 120	2009-08-27
Chloroform		μg/L	50.0	42.6	85	80 - 120	2009-08-27
1,1,1-Trichloroethane	[140]	μg/L	50.0	38.1	76	80 - 120	2009-08-27
1,1-Dichloropropene		μg/L	50.0	50.5	101	80 - 120	2009-08-27
Benzene		μg/L	50.0	55.0	110	80 - 120	2009-08-27
Carbon Tetrachloride	[141]	μg/L	50.0	37.9	76	80 - 120	2009-08-27
1,2-Dichloropropane		μg/L	50.0	52.3	105	80 - 120	2009-08-27

continued ...

[133] Surrogate recovery out of control on MS/MSD due to matrix interference. LCS/LCSD show method to be in control.
[134] Surrogate recovery out of control on MS/MSD due to matrix interference. LCS/LCSD show method to be in control.
[135] Analyte recovery outside CCV limits. Concentration biased low. •
[136] Analyte recovery outside CCV limits. Concentration biased low. •
[137] Analyte recovery outside CCV limits. Concentration biased high. •
[138] Analyte recovery outside CCV limits. Concentration biased low. •
[139] Analyte recovery outside CCV limits. Concentration biased low. •
[140] Analyte recovery outside CCV limits. Concentration biased low. •
[141] Analyte recovery outside CCV limits. Concentration biased low. •

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Trichloroethene (TCE)		µg/L	50.0	42.6	85	80 - 120	2009-08-27
Dibromomethane (methylene bromide)		µg/L	50.0	44.1	88	80 - 120	2009-08-27
Bromodichloromethane		µg/L	50.0	43.7	87	80 - 120	2009-08-27
2-Chloroethyl vinyl ether		µg/L	50.0	52.6	105	80 - 120	2009-08-27
cis-1,3-Dichloropropene		µg/L	50.0	57.8	116	80 - 120	2009-08-27
trans-1,3-Dichloropropene		µg/L	50.0	51.6	103	80 - 120	2009-08-27
Toluene		µg/L	50.0	48.2	96	80 - 120	2009-08-27
1,1,2-Trichloroethane		µg/L	50.0	51.3	103	80 - 120	2009-08-27
1,3-Dichloropropane		µg/L	50.0	52.1	104	80 - 120	2009-08-27
Dibromochloromethane		µg/L	50.0	42.0	84	80 - 120	2009-08-27
1,2-Dibromoethane (EDB)		µg/L	50.0	46.6	93	80 - 120	2009-08-27
Tetrachloroethene (PCE)	142	µg/L	50.0	37.2	74	80 - 120	2009-08-27
Chlorobenzene		µg/L	50.0	50.2	100	80 - 120	2009-08-27
1,1,1,2-Tetrachloroethane		µg/L	50.0	42.2	84	80 - 120	2009-08-27
Ethylbenzene		µg/L	50.0	47.3	95	80 - 120	2009-08-27
m,p-Xylene		µg/L	100	91.0	91	80 - 120	2009-08-27
Bromoform	143	µg/L	50.0	33.3	67	80 - 120	2009-08-27
Styrene		µg/L	50.0	52.9	106	80 - 120	2009-08-27
o-Xylene		µg/L	50.0	46.4	93	80 - 120	2009-08-27
1,1,2,2-Tetrachloroethane		µg/L	50.0	51.6	103	80 - 120	2009-08-27
2-Chlorotoluene		µg/L	50.0	47.0	94	80 - 120	2009-08-27
1,2,3-Trichloropropane		µg/L	50.0	55.5	111	80 - 120	2009-08-27
Isopropylbenzene		µg/L	50.0	49.1	98	80 - 120	2009-08-27
Bromobenzene		µg/L	50.0	52.1	104	80 - 120	2009-08-27
n-Propylbenzene		µg/L	50.0	49.7	99	80 - 120	2009-08-27
1,3,5-Trimethylbenzene		µg/L	50.0	47.7	95	80 - 120	2009-08-27
tert-Butylbenzene		µg/L	50.0	46.8	94	80 - 120	2009-08-27
1,2,4-Trimethylbenzene		µg/L	50.0	46.9	94	80 - 120	2009-08-27
1,4-Dichlorobenzene (para)		µg/L	50.0	42.6	85	80 - 120	2009-08-27
sec-Butylbenzene		µg/L	50.0	49.6	99	80 - 120	2009-08-27
1,3-Dichlorobenzene (meta)		µg/L	50.0	44.2	88	80 - 120	2009-08-27
p-Isopropyltoluene		µg/L	50.0	46.8	94	80 - 120	2009-08-27
4-Chlorotoluene		µg/L	50.0	47.2	94	80 - 120	2009-08-27
1,2-Dichlorobenzene (ortho)		µg/L	50.0	44.2	88	80 - 120	2009-08-27
n-Butylbenzene		µg/L	50.0	49.8	100	80 - 120	2009-08-27
1,2-Dibromo-3-chloropropane	144	µg/L	50.0	39.4	79	80 - 120	2009-08-27
1,2,3-Trichlorobenzene		µg/L	50.0	48.0	96	80 - 120	2009-08-27
1,2,4-Trichlorobenzene		µg/L	50.0	51.4	103	80 - 120	2009-08-27
Naphthalene		µg/L	50.0	41.5	83	80 - 120	2009-08-27
Hexachlorobutadiene		µg/L	50.0	44.0	88	80 - 120	2009-08-27

Standard (CCV-2)

QC Batch: 62999 Date Analyzed: 2009-08-27 Analyzed By: KB

[142] Analyte recovery outside CCV limits. Concentration biased low. •
[143] Analyte recovery outside CCV limits. Concentration biased low. •
[144] Analyte recovery outside CCV limits. Concentration biased low. •

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromochloromethane		µg/L	50.0	45.9	92	80 - 120	2009-08-27
Dichlorodifluoromethane		µg/L	50.0	45.2	90	80 - 120	2009-08-27
Chloromethane (methyl chloride)		µg/L	50.0	47.8	96	80 - 120	2009-08-27
Vinyl Chloride		µg/L	50.0	58.0	116	80 - 120	2009-08-27
Bromomethane (methyl bromide)		µg/L	50.0	49.8	100	80 - 120	2009-08-27
Chloroethane		µg/L	50.0	51.4	103	80 - 120	2009-08-27
Trichlorofluoromethane		µg/L	50.0	55.5	111	80 - 120	2009-08-27
Acetone		µg/L	50.0	50.1	100	80 - 120	2009-08-27
Iodomethane (methyl iodide)		µg/L	50.0	53.6	107	80 - 120	2009-08-27
Carbon Disulfide	145	µg/L	50.0	64.1	128	80 - 120	2009-08-27
Acrylonitrile		µg/L	50.0	51.0	102	80 - 120	2009-08-27
2-Butanone (MEK)	146	µg/L	50.0	64.2	128	80 - 120	2009-08-27
4-Methyl-2-pentanone (MIBK)		µg/L	50.0	45.1	90	80 - 120	2009-08-27
2-Hexanone		µg/L	50.0	47.0	94	80 - 120	2009-08-27
trans 1,4-Dichloro-2-butene		µg/L	50.0	48.4	97	80 - 120	2009-08-27
1,1-Dichloroethene		µg/L	50.0	57.0	114	80 - 120	2009-08-27
Methylene chloride		µg/L	50.0	52.1	104	80 - 120	2009-08-27
MTBE		µg/L	50.0	52.8	106	80 - 120	2009-08-27
trans-1,2-Dichloroethene		µg/L	50.0	45.4	91	80 - 120	2009-08-27
1,1-Dichloroethane		µg/L	50.0	54.5	109	80 - 120	2009-08-27
cis-1,2-Dichloroethene		µg/L	50.0	52.0	104	80 - 120	2009-08-27
2,2-Dichloropropane	147	µg/L	50.0	38.6	77	80 - 120	2009-08-27
1,2-Dichloroethane (EDC)		µg/L	50.0	46.6	93	80 - 120	2009-08-27
Chloroform		µg/L	50.0	52.1	104	80 - 120	2009-08-27
1,1,1-Trichloroethane		µg/L	50.0	48.6	97	80 - 120	2009-08-27
1,1-Dichloropropene		µg/L	50.0	57.8	116	80 - 120	2009-08-27
Benzene		µg/L	50.0	58.7	117	80 - 120	2009-08-27
Carbon Tetrachloride		µg/L	50.0	51.7	103	80 - 120	2009-08-27
1,2-Dichloropropane		µg/L	50.0	56.9	114	80 - 120	2009-08-27
Trichloroethene (TCE)		µg/L	50.0	48.4	97	80 - 120	2009-08-27
Dibromomethane (methylene bromide)		µg/L	50.0	51.9	104	80 - 120	2009-08-27
Bromodichloromethane		µg/L	50.0	56.0	112	80 - 120	2009-08-27
2-Chloroethyl vinyl ether	148	µg/L	50.0	61.0	122	80 - 120	2009-08-27
cis-1,3-Dichloropropene	149	µg/L	50.0	61.3	123	80 - 120	2009-08-27
trans-1,3-Dichloropropene		µg/L	50.0	59.7	119	80 - 120	2009-08-27
Toluene		µg/L	50.0	51.9	104	80 - 120	2009-08-27
1,1,2-Trichloroethane		µg/L	50.0	55.2	110	80 - 120	2009-08-27
1,3-Dichloropropane		µg/L	50.0	57.0	114	80 - 120	2009-08-27
Dibromochloromethane		µg/L	50.0	51.5	103	80 - 120	2009-08-27
1,2-Dibromoethane (EDB)		µg/L	50.0	52.0	104	80 - 120	2009-08-27
Tetrachloroethene (PCE)	150	µg/L	50.0	61.8	124	80 - 120	2009-08-27

continued ...

[145] Spike recovery outside control limits. Concentration biased high. •
[146] Spike recovery outside control limits. Concentration biased high. •
[147] Spike recovery outside control limits. Concentration biased low. •
[148] Spike recovery outside control limits. Concentration biased high. •
[149] Spike recovery outside control limits. Concentration biased high. •
[150] Spike recovery outside control limits. Concentration biased high. •

standard continued ...

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chlorobenzene		μg/L	50.0	53.4	107	80 - 120	2009-08-27
1,1,1,2-Tetrachloroethane		μg/L	50.0	50.3	101	80 - 120	2009-08-27
Ethylbenzene		μg/L	50.0	52.6	105	80 - 120	2009-08-27
m,p-Xylene		μg/L	100	103	103	80 - 120	2009-08-27
Bromoform		μg/L	50.0	46.2	92	80 - 120	2009-08-27
Styrene		μg/L	50.0	58.7	117	80 - 120	2009-08-27
o-Xylene		μg/L	50.0	52.7	105	80 - 120	2009-08-27
1,1,2,2-Tetrachloroethane		μg/L	50.0	48.0	96	80 - 120	2009-08-27
2-Chlorotoluene		μg/L	50.0	51.2	102	80 - 120	2009-08-27
1,2,3-Trichloropropane		μg/L	50.0	57.5	115	80 - 120	2009-08-27
Isopropylbenzene		μg/L	50.0	51.2	102	80 - 120	2009-08-27
Bromobenzene		μg/L	50.0	55.6	111	80 - 120	2009-08-27
n-Propylbenzene		μg/L	50.0	51.5	103	80 - 120	2009-08-27
1,3,5-Trimethylbenzene		μg/L	50.0	50.1	100	80 - 120	2009-08-27
tert-Butylbenzene		μg/L	50.0	49.2	98	80 - 120	2009-08-27
1,2,4-Trimethylbenzene		μg/L	50.0	50.0	100	80 - 120	2009-08-27
1,4-Dichlorobenzene (para)		μg/L	50.0	44.7	89	80 - 120	2009-08-27
sec-Butylbenzene		μg/L	50.0	51.1	102	80 - 120	2009-08-27
1,3-Dichlorobenzene (meta)		μg/L	50.0	45.8	92	80 - 120	2009-08-27
p-Isopropyltoluene		μg/L	50.0	48.8	98	80 - 120	2009-08-27
4-Chlorotoluene		μg/L	50.0	50.2	100	80 - 120	2009-08-27
1,2-Dichlorobenzene (ortho)		μg/L	50.0	46.5	93	80 - 120	2009-08-27
n-Butylbenzene		μg/L	50.0	51.4	103	80 - 120	2009-08-27
1,2-Dibromo-3-chloropropane		μg/L	50.0	48.2	96	80 - 120	2009-08-27
1,2,3-Trichlorobenzene		μg/L	50.0	50.1	100	80 - 120	2009-08-27
1,2,4-Trichlorobenzene		μg/L	50.0	53.2	106	80 - 120	2009-08-27
Naphthalene		μg/L	50.0	42.2	84	80 - 120	2009-08-27
Hexachlorobutadiene		μg/L	50.0	46.2	92	80 - 120	2009-08-27

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9082608

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CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

PROJECT NO.:

PROJECT NAME: HELSTF Semi-Annual GroundWater

SAMPLER'S SIGNATURE: Brad T. Davis

DATE	TIME	SAMPLE ID	MATRIX	LAB NO.	NO. OF CONTAINERS	VOCs										REMARKS
8-24-09	1015	HLSF-0143-HMW-041-0809	Water	207800	3	X										
8-20-09	1254	HLSF-3839-HMW-029-0809	Water	801	3	X										
8-20-09	0958	HLSF-3839-HMW-033-0809	Water	802	3	X										
8-20-09	0958	HLSF-3839-HMW-133-0809	Water	803	3	X										
8-21-09	1340	HLSF-3839-HMW-032-0809	Water	804	3	X										
8-24-09	1310	HLSF-0143-HMW-039-0809	Water	805	3	X										
8-19-09	1305	HLSF-3839-HMW-035-0809	Water	806	3	X										
8-19-09	1017	HLSF-3839-HMW-034-0809	Water	807	3	X										
8-24-09	1310	HLSF-3839-TB-09-000	Water	808	2	X										Trip Blank

PROJECT INFORMATION	SAMPLES RECEIVED		1. RELINQUISHED BY: (SIGNATURE)	2. RELINQUISHED BY: (SIGNATURE)	3. RECEIVED BY LAB: (SIGNATURE)
PROJECT MANAGER: Brad Davis	TOTAL NO. OF CONTAINERS		(PRINTED NAME) Bradley T. Davis 8-25-09 1300	(PRINTED NAME)	(PRINTED NAME) Carol Fox
SHIPPING ID NO.	CHAIN OF CUSTODY SEALS	Yes	RECEIVED BY: (SIGNATURE)	RECEIVED BY: (SIGNATURE)	(COMPANY) Trace
	GOOD CONDITION/COOLED BY IR 1.4/1.9°C	Yes	(TIME/DATE)	(TIME/DATE) CF 8-26-09	(TIME/DATE) 8-26-09 8:30 AM
VIA: ~~Lab Courier~~ FedEx	CONFORMS TO RECORD	Yes	SPECIAL INSTRUCTIONS/COMMENTS: ~~LS 43635691, 43635692~~ PLEASE SEE ATTACHED ANALYTE LIST FOR DETAILS VOCs		

PLEASE USE BALL POINT PEN

DISTRIBUTION: WHITE - PROJECT FILES; YELLOW - LAB; PINK - FIELD COPY