Analytical and Quality Control Report

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Report Date: January 16, 2007

Work Order: 7010504

Project Name: HELSTF Groundwater Samples
Project Number: 7

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
113153	HLSF-0085-HMW-007-0107	water	2007-01-04	13:25	2007-01-04
113154	HLSF-0085-TB-790-0107	water	2007-01-04	13:25	2007-01-04

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

Michael Abel

Dr. Blair Leftwich, Director

Standard Flags

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

Analytical Report

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	33523	Date Analyzed:	2007-01-09	Analyzed By:	JG
Prep Batch:	29120	Sample Preparation:	2007-01-09	Prepared By:	JR

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		**120**	mg/L as CaCo3	1	4.00
Total Alkalinity		**120**	mg/L as CaCo3	1	4.00

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	Conductivity	Analytical Method:	SM 2510B	Prep Method:	N/A
QC Batch:	33431	Date Analyzed:	2007-01-05	Analyzed By:	DR
Prep Batch:	29054	Sample Preparation:	2007-01-05	Prepared By:	JR

Parameter	Flag	RL Result	Units	Dilution	RL
Specific Conductance		**8600**	μMHOS/cm	1	0.00

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	Na, Dissolved	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	33433	Date Analyzed:	2007-01-08	Analyzed By:	TP
Prep Batch:	29032	Sample Preparation:	2007-01-05	Prepared By:	TS

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Sodium		**642**	mg/L	10	0.500

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	Na, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	33546	Date Analyzed:	2007-01-10	Analyzed By:	TP
Prep Batch:	29040	Sample Preparation:	2007-01-05	Prepared By:	TS

Parameter	Flag	RL Result	Units	Dilution	RL
Total Sodium		**635**	mg/L	10	0.500

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	P, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	33458	Date Analyzed:	2007-01-08	Analyzed By:	RR
Prep Batch:	29040	Sample Preparation:	2007-01-05	Prepared By:	TS

Parameter	Flag	RL Result	Units	Dilution	RL
Total Phosphorous		<0.0500	mg/L	1	0.0500

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	pH	Analytical Method:	SM 4500-H+	Prep Method:	N/A
QC Batch:	33430	Date Analyzed:	2007-01-05	Analyzed By:	DR
Prep Batch:	29053	Sample Preparation:	2007-01-05	Prepared By:	JR

Parameter	Flag	RL Result	Units	Dilution	RL
pH		**7.15**	s.u.	1	0.00

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	RCRA 7 Metals (Dissolved)	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	33455	Date Analyzed:	2007-01-08	Analyzed By:	RR
Prep Batch:	29032	Sample Preparation:	2007-01-05	Prepared By:	TS

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Silver		<0.00200	mg/L	1	0.00200
Dissolved Arsenic		<0.00500	mg/L	1	0.00500
Dissolved Barium		**0.0120**	mg/L	1	0.0100
Dissolved Cadmium		<0.00100	mg/L	1	0.00100
Dissolved Chromium		**0.673**	mg/L	1	0.00500
Dissolved Lead		<0.00500	mg/L	1	0.00500
Dissolved Selenium		**0.135**	mg/L	1	0.0100

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	33650	Date Analyzed:	2007-01-04	Analyzed By:	JG
Prep Batch:	29233	Sample Preparation:	2007-01-04	Prepared By:	JR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**7000**	mg/L	1	5.00

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	TOC	Analytical Method:	E 415.1	Prep Method:	N/A
QC Batch:	33459	Date Analyzed:	2007-01-08	Analyzed By:	KV
Prep Batch:	29072	Sample Preparation:	2007-01-05	Prepared By:	KV

Parameter	Flag	RL Result	Units	Dilution	RL
Total Organic Carbon		**3.75**	mg/L	1	1.00

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	Total 8 Metals	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	33458	Date Analyzed:	2007-01-08	Analyzed By:	RR
Prep Batch:	29040	Sample Preparation:	2007-01-05	Prepared By:	TS
Analysis:	Total 8 Metals	Analytical Method:	S 7470A	Prep Method:	N/A
QC Batch:	33492	Date Analyzed:	2007-01-09	Analyzed By:	TP
Prep Batch:	29094	Sample Preparation:	2007-01-09	Prepared By:	TP

Parameter	Flag	RL Result	Units	Dilution	RL
Total Silver		<0.00200	mg/L	1	0.00200
Total Arsenic		<0.0100	mg/L	1	0.0100
Total Barium		**0.0140**	mg/L	1	0.0100
Total Cadmium		<0.00100	mg/L	1	0.00100
Total Chromium		**0.607**	mg/L	1	0.00500
Total Mercury		<0.000200	mg/L	1	0.000200
Total Lead		<0.00500	mg/L	1	0.00500
Total Selenium		**0.164**	mg/L	1	0.0100

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	Volatiles WTS	Analytical Method:	S 8260B	Prep Method:	S 3510C
QC Batch:	33556	Date Analyzed:	2007-01-10	Analyzed By:	JG
Prep Batch:	29145	Sample Preparation:	2007-01-10	Prepared By:	JG

Parameter	Flag	RL Result	Units	Dilution	RL
Bromochloromethane		<1.00	µg/L	1	1.00
Dichlorodifluoromethane		<1.00	µg/L	1	1.00
Chloromethane (methyl chloride)		<1.00	µg/L	1	1.00
Vinyl Chloride		<1.00	µg/L	1	1.00
Bromomethane (methyl bromide)		<5.00	µg/L	1	5.00
Chloroethane		<1.00	µg/L	1	1.00
Trichlorofluoromethane		**1.51**	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

continued . . .

sample 113153 continued . . .

Parameter	Flag	RL Result	Units	Dilution	RL
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		**3.05**	µg/L	1	1.00
Methylene chloride		<5.00	µg/L	1	5.00
MTBE		<1.00	µg/L	1	1.00
trans-1,2-Dichloroethene		<1.00	µg/L	1	1.00
1,1-Dichloroethane		<1.00	µg/L	1	1.00
cis-1,2-Dichloroethene		<1.00	µg/L	1	1.00
2,2-Dichloropropane		<1.00	µg/L	1	1.00
1,2-Dichloroethane (EDC)		<1.00	µg/L	1	1.00
Chloroform		**3.32**	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)		**4.06**	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

continued . . .

sample 113153 continued . . .

Parameter	Flag	RL Result	Units	Dilution	RL
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1	1.00
n-Butylbenzene		<1.00	µg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00	µg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00	µg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	µg/L	1	5.00
Naphthalene		<5.00	µg/L	1	5.00
Hexachlorobutadiene		<5.00	µg/L	1	5.00
Isopropyl Alcohol		<5.00	µg/L	1	5.00
Tert-butyl Alcohol		<5.00	µg/L	1	5.00
1,4-Dioxane		<5.00	µg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.3	µg/L	1	50.0	107	82.4 - 115
Toluene-d8	[1]	58.3	µg/L	1	50.0	117	89.7 - 108
4-Bromofluorobenzene (4-BFB)		49.2	µg/L	1	50.0	98	84.6 - 114

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	Zn, Dissolved	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	33455	Date Analyzed:	2007-01-08	Analyzed By:	RR
Prep Batch:	29032	Sample Preparation:	2007-01-05	Prepared By:	TS

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Zinc		<0.00500	mg/L	1	0.00500

Sample: 113153 - HLSF-0085-HMW-007-0107

Analysis:	Zn, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	33458	Date Analyzed:	2007-01-08	Analyzed By:	RR
Prep Batch:	29040	Sample Preparation:	2007-01-05	Prepared By:	TS

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

Sample: 113154 - HLSF-0085-TB-790-0107

Analysis:	Volatiles WTS	Analytical Method:	S 8260B	Prep Method:	S 3510C
QC Batch:	33556	Date Analyzed:	2007-01-10	Analyzed By:	JG
Prep Batch:	29145	Sample Preparation:	2007-01-10	Prepared By:	JG

Parameter	Flag	RL Result	Units	Dilution	RL
Bromochloromethane		<1.00	µg/L	1	1.00

[1] 8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preperation was performed properly.

continued . . .

sample 113154 continued . . .

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

continued . . .

sample 113154 continued . . .

Parameter	Flag	RL Result	Units	Dilution	RL
1,2,3-Trichloropropane		<1.00	μg/L	1	1.00
Isopropylbenzene		<1.00	μg/L	1	1.00
Bromobenzene		<1.00	μg/L	1	1.00
n-Propylbenzene		<1.00	μg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00	μg/L	1	1.00
tert-Butylbenzene		<1.00	μg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00	μg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00	μg/L	1	1.00
sec-Butylbenzene		<1.00	μg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00	μg/L	1	1.00
p-Isopropyltoluene		<1.00	μg/L	1	1.00
4-Chlorotoluene		<1.00	μg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00	μg/L	1	1.00
n-Butylbenzene		<1.00	μg/L	1	1.00
1,2-Dibromo-3-chloropropane		<5.00	μg/L	1	5.00
1,2,3-Trichlorobenzene		<5.00	μg/L	1	5.00
1,2,4-Trichlorobenzene		<5.00	μg/L	1	5.00
Naphthalene		<5.00	μg/L	1	5.00
Hexachlorobutadiene		<5.00	μg/L	1	5.00
Isopropyl Alcohol	[2]	**235**	μg/L	1	5.00
Tert-butyl Alcohol		**18.4**	μg/L	1	5.00
1,4-Dioxane		<5.00	μg/L	1	5.00

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		53.0	μg/L	1	50.0	106	82.4 - 115
Toluene-d8	[3]	58.4	μg/L	1	50.0	117	89.7 - 108
4-Bromofluorobenzene (4-BFB)		48.4	μg/L	1	50.0	97	84.6 - 114

Method Blank (1) QC Batch: 33431

QC Batch:	33431	Date Analyzed:	2007-01-05	Analyzed By:	DR
Prep Batch:	29054	QC Preparation:	2007-01-05	Prepared By:	DR

Parameter	Flag	MDL Result	Units	RL
Specific Conductance		0.00	μMHOS/cm	

Method Blank (1) QC Batch: 33433

QC Batch:	33433	Date Analyzed:	2007-01-08	Analyzed By:	TP
Prep Batch:	29032	QC Preparation:	2007-01-05	Prepared By:	TS

[2] Estimated concentration value greater than standard range.
[3] 8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preperation was performed properly.

Parameter	Flag	MDL Result	Units	RL
Dissolved Sodium		<0.0309	mg/L	0.5

Method Blank (1) QC Batch: 33455

QC Batch:	33455	Date Analyzed:	2007-01-08	Analyzed By:	RR
Prep Batch:	29032	QC Preparation:	2007-01-05	Prepared By:	TS

Parameter	Flag	MDL Result	Units	RL
Dissolved Zinc		<0.00300	mg/L	0.005

Method Blank (1) QC Batch: 33455

QC Batch:	33455	Date Analyzed:	2007-01-08	Analyzed By:	RR
Prep Batch:	29032	QC Preparation:	2007-01-05	Prepared By:	TS

Parameter	Flag	MDL Result	Units	RL
Dissolved Silver		<0.000199	mg/L	0.002
Dissolved Arsenic		<0.00360	mg/L	0.005
Dissolved Barium		<0.000450	mg/L	0.01
Dissolved Cadmium		<0.000577	mg/L	0.001
Dissolved Chromium		<0.00357	mg/L	0.005
Dissolved Lead		<0.00398	mg/L	0.005
Dissolved Selenium		<0.00556	mg/L	0.01

Method Blank (1) QC Batch: 33458

QC Batch:	33458	Date Analyzed:	2007-01-08	Analyzed By:	RR
Prep Batch:	29040	QC Preparation:	2007-01-05	Prepared By:	TS

Parameter	Flag	MDL Result	Units	RL
Total Phosphorous		<0.0229	mg/L	0.05

Method Blank (1) QC Batch: 33458

QC Batch:	33458	Date Analyzed:	2007-01-08	Analyzed By:	RR
Prep Batch:	29040	QC Preparation:	2007-01-05	Prepared By:	TS

Parameter	Flag	MDL Result	Units	RL
Total Zinc		<0.000666	mg/L	0.005

Method Blank (1) QC Batch: 33458

QC Batch: 33458 Date Analyzed: 2007-01-08 Analyzed By: RR
Prep Batch: 29040 QC Preparation: 2007-01-05 Prepared By: TS

Parameter	Flag	MDL Result	Units	RL
Total Silver		<0.000274	mg/L	0.002
Total Arsenic		<0.00489	mg/L	0.01
Total Barium		<0.000450	mg/L	0.01
Total Cadmium		<0.000268	mg/L	0.001
Total Chromium		<0.00357	mg/L	0.005
Total Lead		<0.00310	mg/L	0.005
Total Selenium		<0.00556	mg/L	0.01

Method Blank (1) QC Batch: 33459

QC Batch: 33459 Date Analyzed: 2007-01-08 Analyzed By: KV
Prep Batch: 29072 QC Preparation: 2007-01-08 Prepared By: KV

Parameter	Flag	MDL Result	Units	RL
Total Organic Carbon		<0.382	mg/L	1

Method Blank (1) QC Batch: 33492

QC Batch: 33492 Date Analyzed: 2007-01-09 Analyzed By: TP
Prep Batch: 29094 QC Preparation: 2007-01-09 Prepared By: TP

Parameter	Flag	MDL Result	Units	RL
Total Mercury		<0.0000217	mg/L	0.0002

Method Blank (1) QC Batch: 33523

QC Batch: 33523 Date Analyzed: 2007-01-09 Analyzed By: JG
Prep Batch: 29120 QC Preparation: 2007-01-09 Prepared By: JG

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		<2.38	mg/L as CaCo3	4

Method Blank (1) QC Batch: 33546

QC Batch: 33546 Date Analyzed: 2007-01-10 Analyzed By: TP
Prep Batch: 29040 QC Preparation: 2007-01-05 Prepared By: TS

Parameter	Flag	MDL Result	Units	RL
Total Sodium		<0.0309	mg/L	0.5

Method Blank (1) QC Batch: 33556

QC Batch:	33556	Date Analyzed:	2007-01-10	Analyzed By:	JG
Prep Batch:	29145	QC Preparation:	2007-01-10	Prepared By:	JG

Parameter	Flag	MDL Result	Units	RL
Bromochloromethane		<0.0699	µg/L	1
Dichlorodifluoromethane		<0.0598	µg/L	1
Chloromethane (methyl chloride)		<0.230	µg/L	1
Vinyl Chloride		<0.0902	µg/L	1
Bromomethane (methyl bromide)		<0.740	µg/L	5
Chloroethane		<0.195	µg/L	1
Trichlorofluoromethane		<0.160	µg/L	1
Acetone		<0.854	µg/L	10
Iodomethane (methyl iodide)		<0.112	µg/L	5
Carbon Disulfide		<0.0764	µg/L	1
Acrylonitrile		<0.184	µg/L	1
2-Butanone (MEK)		<0.394	µg/L	5
4-Methyl-2-pentanone (MIBK)		<0.484	µg/L	5
2-Hexanone		<0.0975	µg/L	5
trans 1,4-Dichloro-2-butene		<0.420	µg/L	10
1,1-Dichloroethene		<0.0736	µg/L	1
Methylene chloride		<0.689	µg/L	5
MTBE		<0.0504	µg/L	1
trans-1,2-Dichloroethene		<0.0598	µg/L	1
1,1-Dichloroethane		<0.0299	µg/L	1
cis-1,2-Dichloroethene		<0.101	µg/L	1
2,2-Dichloropropane		<0.0665	µg/L	1
1,2-Dichloroethane (EDC)		<0.0557	µg/L	1
Chloroform		<0.0475	µg/L	1
1,1,1-Trichloroethane		<0.0846	µg/L	1
1,1-Dichloropropene		<0.0423	µg/L	1
Benzene		<0.0495	µg/L	1
Carbon Tetrachloride		<0.121	µg/L	1
1,2-Dichloropropane		<0.0933	µg/L	1
Trichloroethene (TCE)		<0.0495	µg/L	1
Dibromomethane (methylene bromide)		<0.0640	µg/L	1
Bromodichloromethane		<0.0651	µg/L	1
2-Chloroethyl vinyl ether		<0.0905	µg/L	5
cis-1,3-Dichloropropene		<0.0640	µg/L	1
trans-1,3-Dichloropropene		<0.0504	µg/L	1
Toluene		0.400	µg/L	1
1,1,2-Trichloroethane		<0.106	µg/L	1
1,3-Dichloropropane		<0.0625	µg/L	1
Dibromochloromethane		<0.0791	µg/L	1
1,2-Dibromoethane (EDB)		<0.0460	µg/L	1
Tetrachloroethene (PCE)		<0.0696	µg/L	1

continued . . .

method blank continued . . .

Parameter	Flag	MDL Result	Units	RL
Chlorobenzene		<0.0217	µg/L	1
1,1,1,2-Tetrachloroethane		<0.125	µg/L	1
Ethylbenzene		<0.0566	µg/L	1
m,p-Xylene		<0.0363	µg/L	1
Bromoform		<0.0859	µg/L	1
Styrene		<0.0394	µg/L	1
o-Xylene		<0.0505	µg/L	1
1,1,2,2-Tetrachloroethane		<0.0672	µg/L	1
2-Chlorotoluene		<0.0283	µg/L	1
1,2,3-Trichloropropane		<0.0679	µg/L	1
Isopropylbenzene		<0.0406	µg/L	1
Bromobenzene		<0.103	µg/L	1
n-Propylbenzene		<0.0423	µg/L	1
1,3,5-Trimethylbenzene		<0.0557	µg/L	1
tert-Butylbenzene		<0.0770	µg/L	1
1,2,4-Trimethylbenzene		<0.0336	µg/L	1
1,4-Dichlorobenzene (para)		<0.0672	µg/L	1
sec-Butylbenzene		<0.0439	µg/L	1
1,3-Dichlorobenzene (meta)		<0.0672	µg/L	1
p-Isopropyltoluene		<0.0513	µg/L	1
4-Chlorotoluene		<0.0460	µg/L	1
1,2-Dichlorobenzene (ortho)		<0.0629	µg/L	1
n-Butylbenzene		<0.0400	µg/L	1
1,2-Dibromo-3-chloropropane		<0.538	µg/L	5
1,2,3-Trichlorobenzene		<0.504	µg/L	5
1,2,4-Trichlorobenzene		<0.166	µg/L	5
Naphthalene		<0.417	µg/L	5
Hexachlorobutadiene		<0.176	µg/L	5
Isopropyl Alcohol		<5.00	µg/L	5
Tert-butyl Alcohol		<5.00	µg/L	5
1,4-Dioxane		<5.00	µg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Dibromofluoromethane		55.8	µg/L	1	50.0	112	82.4 - 115
Toluene-d8	[4]	57.8	µg/L	1	50.0	116	89.7 - 108
4-Bromofluorobenzene (4-BFB)		48.8	µg/L	1	50.0	98	84.6 - 114

Method Blank (1) QC Batch: 33650

QC Batch:	33650	Date Analyzed:	2007-01-04	Analyzed By:	JG
Prep Batch:	29233	QC Preparation:	2007-01-04	Prepared By:	JG

Parameter	Flag	MDL Result	Units	RL
Total Dissolved Solids		<5.00	mg/L	5

[4]8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preperation was performed properly.

Duplicates (1)

QC Batch: 33430 Date Analyzed: 2007-01-05 Analyzed By: DR
Prep Batch: 29053 QC Preparation: 2007-01-05 Prepared By: DR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH	7.20	7.15	s.u.	1	1	20

Duplicates (1)

QC Batch: 33431 Date Analyzed: 2007-01-05 Analyzed By: DR
Prep Batch: 29054 QC Preparation: 2007-01-05 Prepared By: DR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance	8620	8600	μMHOS/cm	1	0	6.7

Duplicates (1)

QC Batch: 33523 Date Analyzed: 2007-01-09 Analyzed By: JG
Prep Batch: 29120 QC Preparation: 2007-01-09 Prepared By: JG

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	6.3
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	6.3
Bicarbonate Alkalinity	122	120	mg/L as CaCo3	1	2	6.3
Total Alkalinity	122	120	mg/L as CaCo3	1	2	6.3

Duplicates (1)

QC Batch: 33650 Date Analyzed: 2007-01-04 Analyzed By: JG
Prep Batch: 29233 QC Preparation: 2007-01-04 Prepared By: JG

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	16000	16600	mg/L	1	4	20

Laboratory Control Spike (LCS-1)

QC Batch: 33433 Date Analyzed: 2007-01-08 Analyzed By: TP
Prep Batch: 29032 QC Preparation: 2007-01-05 Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Sodium	53.3	mg/L	1	50.0	<0.0309	107	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 Sodium	51.2	mg/L	1	50.0	<0.0309	102	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: 33455 Date Analyzed: 2007-01-08 Analyzed By: RR
Prep Batch: 29032 QC Preparation: 2007-01-05 Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Zinc	0.237	mg/L	1	0.250	<0.00300	95	84.7 - 113

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 Zinc	0.239	mg/L	1	0.250	<0.00300	96	84.7 - 113	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: 33455 Date Analyzed: 2007-01-08 Analyzed By: RR
Prep Batch: 29032 QC Preparation: 2007-01-05 Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Silver	0.123	mg/L	1	0.125	<0.000199	98	86.2 - 116
Dissolved Arsenic	0.509	mg/L	1	0.500	<0.00360	102	78.7 - 116
Dissolved Barium	1.02	mg/L	1	1.00	<0.000450	102	85 - 114
Dissolved Cadmium	0.248	mg/L	1	0.250	<0.000577	99	83.3 - 113
Dissolved Chromium	0.108	mg/L	1	0.100	<0.00357	108	83 - 112
Dissolved Lead	0.518	mg/L	1	0.500	<0.00398	104	81.1 - 111
Dissolved Selenium	0.440	mg/L	1	0.500	<0.00556	88	69.6 - 111

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 Silver	0.125	mg/L	1	0.125	<0.000199	100	86.2 - 116	2	20
Dissolved Arsenic	0.542	mg/L	1	0.500	<0.00360	108	78.7 - 116	6	20
Dissolved Barium	1.01	mg/L	1	1.00	<0.000450	101	85 - 114	1	20
Dissolved Cadmium	0.249	mg/L	1	0.250	<0.000577	100	83.3 - 113	0	20
Dissolved Chromium	0.109	mg/L	1	0.100	<0.00357	109	83 - 112	1	20
Dissolved Lead	0.526	mg/L	1	0.500	<0.00398	105	81.1 - 111	2	20
Dissolved Selenium	0.436	mg/L	1	0.500	<0.00556	87	69.6 - 111	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: 33458 | Date Analyzed: 2007-01-08 | Analyzed By: RR
Prep Batch: 29040 | QC Preparation: 2007-01-05 | Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Phosphorous	0.496	mg/L	1	0.500	<0.0229	99	87.3 - 114

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 Phosphorous	0.524	mg/L	1	0.500	<0.0229	105	87.3 - 114	6	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: 33458 | Date Analyzed: 2007-01-08 | Analyzed By: RR
Prep Batch: 29040 | QC Preparation: 2007-01-05 | Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Zinc	0.234	mg/L	1	0.250	<0.000666	94	82.9 - 109

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Zinc	0.249	mg/L	1	0.250	<0.000666	100	82.9 - 109	6	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: 33458 | Date Analyzed: 2007-01-08 | Analyzed By: RR
Prep Batch: 29040 | QC Preparation: 2007-01-05 | Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Silver	0.121	mg/L	1	0.125	<0.000274	97	87.9 - 111
Total Arsenic	0.498	mg/L	1	0.500	<0.00489	100	86.8 - 108
Total Barium	0.961	mg/L	1	1.00	<0.000450	96	88.8 - 110
Total Cadmium	0.244	mg/L	1	0.250	<0.000268	98	86.8 - 110
Total Chromium	0.106	mg/L	1	0.100	<0.00357	106	86.5 - 115
Total Lead	0.501	mg/L	1	0.500	<0.00310	100	83 - 109
Total Selenium	0.494	mg/L	1	0.500	<0.00556	99	75 - 112

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	0.126	mg/L	1	0.125	<0.000274	101	87.9 - 111	4	20

continued . . .

control spikes continued . . .

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Arsenic	0.529	mg/L	1	0.500	<0.00489	106	86.8 - 108	6	20
Total Barium	1.03	mg/L	1	1.00	<0.000450	103	88.8 - 110	7	20
Total Cadmium	0.258	mg/L	1	0.250	<0.000268	103	86.8 - 110	6	20
Total Chromium	0.111	mg/L	1	0.100	<0.00357	111	86.5 - 115	5	20
Total Lead	0.492	mg/L	1	0.500	<0.00310	98	83 - 109	2	20
Total Selenium	0.488	mg/L	1	0.500	<0.00556	98	75 - 112	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: 33459 Date Analyzed: 2007-01-08 Analyzed By: KV
Prep Batch: 29072 QC Preparation: 2007-01-08 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Organic Carbon	5.62	mg/L	1	5.00	<0.382	112	75.1 - 117.4

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Organic Carbon	5.21	mg/L	1	5.00	<0.382	104	75.1 - 117.4	8	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: 33492 Date Analyzed: 2007-01-09 Analyzed By: TP
Prep Batch: 29094 QC Preparation: 2007-01-09 Prepared By: TP

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Mercury	0.000930	mg/L	1	0.00100	<0.0000217	93	89.4 - 108

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	<0.0000217	100	89.4 - 108	7	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: 33546 Date Analyzed: 2007-01-10 Analyzed By: TP
Prep Batch: 29040 QC Preparation: 2007-01-05 Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Sodium	53.1	mg/L	1	50.0	<0.0309	106	87.3 - 124

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 Sodium	52.6	mg/L	1	50.0	<0.0309	105	87.3 - 124	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: 33556 Date Analyzed: 2007-01-10 Analyzed By: JG
Prep Batch: 29145 QC Preparation: 2007-01-10 Prepared By: JG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,1-Dichloroethene	48.0	µg/L	1	50.0	<0.0736	96	83.4 - 114
Benzene	50.9	µg/L	1	50.0	<0.0495	102	83.5 - 115
Trichloroethene (TCE)	49.4	µg/L	1	50.0	<0.0495	99	91.3 - 111
Toluene	47.9	µg/L	1	50.0	<0.0736	96	82 - 110
Chlorobenzene	51.3	µg/L	1	50.0	<0.0217	103	87.9 - 109

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
1,1-Dichloroethene	48.5	µg/L	1	50.0	<0.0736	97	83.4 - 114	1	20
Benzene	51.2	µg/L	1	50.0	<0.0495	102	83.5 - 115	1	20
Trichloroethene (TCE)	51.1	µg/L	1	50.0	<0.0495	102	91.3 - 111	3	20
Toluene	48.0	µg/L	1	50.0	<0.0736	96	82 - 110	0	20
Chlorobenzene	52.2	µg/L	1	50.0	<0.0217	104	87.9 - 109	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	52.4	52.4	µg/L	1	50.0	105	105	82.4 - 115
Toluene-d8 [5]	54.2	56.0	µg/L	1	50.0	108	112	89.7 - 108
4-Bromofluorobenzene (4-BFB)	53.8	54.6	µg/L	1	50.0	108	109	84.6 - 114

Matrix Spike (MS-1) Spiked Sample: 112838

QC Batch: 33433 Date Analyzed: 2007-01-08 Analyzed By: TP
Prep Batch: 29032 QC Preparation: 2007-01-05 Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Sodium [6]	2770	mg/L	1	50.0	2850	-160	75 - 125

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

continued . . .

[5] 8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preperation was performed properly.
[6] Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

matrix spikes continued . . .

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Sodium [7]	2870	mg/L	1	50.0	2850	40	75 - 125	4	20

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

Matrix Spike (MS-1) Spiked Sample: 112838

QC Batch: 33455 Date Analyzed: 2007-01-08 Analyzed By: RR
Prep Batch: 29032 QC Preparation: 2007-01-05 Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Zinc	0.214	mg/L	1	0.250	<0.00300	86	80.4 - 120

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 Zinc	0.220	mg/L	1	0.250	<0.00300	88	80.4 - 120	3	20

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

Matrix Spike (MS-1) Spiked Sample: 112838

QC Batch: 33455 Date Analyzed: 2007-01-08 Analyzed By: RR
Prep Batch: 29032 QC Preparation: 2007-01-05 Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Silver	0.119	mg/L	1	0.125	<0.000199	95	90.1 - 120
Dissolved Arsenic	0.504	mg/L	1	0.500	<0.00360	101	75 - 114
Dissolved Barium	0.857	mg/L	1	1.00	0.003	85	75 - 125
Dissolved Cadmium	0.219	mg/L	1	0.250	<0.000577	88	75 - 112
Dissolved Chromium	0.0910	mg/L	1	0.100	<0.00357	91	75 - 121
Dissolved Lead	0.452	mg/L	1	0.500	<0.00398	90	75 - 111
Dissolved Selenium	0.502	mg/L	1	0.500	<0.00556	100	75 - 118

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 Silver	0.120	mg/L	1	0.125	<0.000199	96	90.1 - 120	1	20
Dissolved Arsenic	0.519	mg/L	1	0.500	<0.00360	104	75 - 114	3	20
Dissolved Barium	0.889	mg/L	1	1.00	0.003	89	75 - 125	4	20
Dissolved Cadmium	0.216	mg/L	1	0.250	<0.000577	86	75 - 112	1	20
Dissolved Chromium	0.0940	mg/L	1	0.100	<0.00357	94	75 - 121	3	20
Dissolved Lead	0.484	mg/L	1	0.500	<0.00398	97	75 - 111	7	20
Dissolved Selenium	0.520	mg/L	1	0.500	<0.00556	104	75 - 118	4	20

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

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

Matrix Spike (MS-1) Spiked Sample: 113087

QC Batch: 33458 Date Analyzed: 2007-01-08 Analyzed By: RR
Prep Batch: 29040 QC Preparation: 2007-01-05 Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Phosphorous	0.428	mg/L	1	0.500	<0.0229	86	70.1 - 115

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 Phosphorous	0.517	mg/L	1	0.500	<0.0229	103	70.1 - 115	19	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: 113087

QC Batch: 33458 Date Analyzed: 2007-01-08 Analyzed By: RR
Prep Batch: 29040 QC Preparation: 2007-01-05 Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Zinc	0.236	mg/L	1	0.250	<0.000666	94	75.5 - 113

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Zinc	0.231	mg/L	1	0.250	<0.000666	92	75.5 - 113	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: 113087

QC Batch: 33458 Date Analyzed: 2007-01-08 Analyzed By: RR
Prep Batch: 29040 QC Preparation: 2007-01-05 Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Silver	0.116	mg/L	1	0.125	<0.000274	93	88.2 - 114
Total Arsenic	0.414	mg/L	1	0.500	<0.00489	83	75.9 - 116
Total Barium	0.884	mg/L	1	1.00	<0.000450	88	64.9 - 129
Total Cadmium	0.224	mg/L	1	0.250	0.002	89	66.5 - 121
Total Chromium	0.0870	mg/L	1	0.100	0.006	81	69.2 - 129
Total Lead	0.435	mg/L	1	0.500	<0.00310	87	71.9 - 115
Total Selenium	0.580	mg/L	1	0.500	0.169	82	66.8 - 116

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	0.116	mg/L	1	0.125	<0.000274	93	88.2 - 114	0	20
Total Arsenic	0.494	mg/L	1	0.500	<0.00489	99	75.9 - 116	18	20
Total Barium	0.844	mg/L	1	1.00	<0.000450	84	64.9 - 129	5	20
Total Cadmium	0.217	mg/L	1	0.250	0.002	86	66.5 - 121	3	20
Total Chromium	0.0880	mg/L	1	0.100	0.006	82	69.2 - 129	1	20
Total Lead	0.488	mg/L	1	0.500	<0.00310	98	71.9 - 115	12	20
Total Selenium	0.671	mg/L	1	0.500	0.169	100	66.8 - 116	14	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: 113153

QC Batch: 33459 Date Analyzed: 2007-01-08 Analyzed By: KV
Prep Batch: 29072 QC Preparation: 2007-01-08 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Organic Carbon	9.89	mg/L	1	5.00	3.75	123	0 - 484.4

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
Total Organic Carbon	11.6	mg/L	1	5.00	3.75	157	0 - 484.4	16	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: 113085

QC Batch: 33492 Date Analyzed: 2007-01-09 Analyzed By: TP
Prep Batch: 29094 QC Preparation: 2007-01-09 Prepared By: TP

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Mercury	0.00101	mg/L	1	0.00100	<0.0000217	101	49.1 - 137

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	0.00101	mg/L	1	0.00100	<0.0000217	101	49.1 - 137	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: 113087

QC Batch: 33546 Date Analyzed: 2007-01-10 Analyzed By: TP
Prep Batch: 29040 QC Preparation: 2007-01-05 Prepared By: TS

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
Total Sodium [8]	4310	mg/L	1	50.0	4129	362	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 Sodium [9]	4330	mg/L	1	50.0	4129	402	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: 113087

QC Batch: 33556 Date Analyzed: 2007-01-10 Analyzed By: JG
Prep Batch: 29145 QC Preparation: 2007-01-10 Prepared By: JG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,1-Dichloroethene	46.7	µg/L	1	50.0	<0.0736	93	78.7 - 119
Benzene	50.2	µg/L	1	50.0	<0.0495	100	75.8 - 125
Trichloroethene (TCE)	51.6	µg/L	1	50.0	3.13	103	83.6 - 112
Toluene	46.0	µg/L	1	50.0	<0.0736	92	81.6 - 115
Chlorobenzene	49.9	µg/L	1	50.0	<0.0217	100	83.9 - 113

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
1,1-Dichloroethene	46.7	µg/L	1	50.0	<0.0736	93	78.7 - 119	0	20
Benzene	50.1	µg/L	1	50.0	<0.0495	100	75.8 - 125	0	20
Trichloroethene (TCE)	51.7	µg/L	1	50.0	3.13	103	83.6 - 112	0	20
Toluene	46.4	µg/L	1	50.0	<0.0736	93	81.6 - 115	1	20
Chlorobenzene	50.8	µg/L	1	50.0	<0.0217	102	83.9 - 113	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
Dibromofluoromethane	52.4	51.7	µg/L	1	50	105	103	86.6 - 114
Toluene-d8 [10]	55.2	55.3	µg/L	1	50	110	111	91 - 109
4-Bromofluorobenzene (4-BFB)	53.8	52.9	µg/L	1	50	108	106	87.2 - 113

Standard (ICV-1)

QC Batch: 33430 Date Analyzed: 2007-01-05 Analyzed By: DR

[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] 8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preperation was performed properly.

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7.00	6.97	100	98.8 - 101	2007-01-05

Standard (CCV-1)

QC Batch: 33430 Date Analyzed: 2007-01-05 Analyzed By: DR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7.00	7.00	100	98.8 - 101	2007-01-05

Standard (ICV-1)

QC Batch: 33431 Date Analyzed: 2007-01-05 Analyzed By: DR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/cm	1410	1400	99	96.7 - 108	2007-01-05

Standard (CCV-1)

QC Batch: 33431 Date Analyzed: 2007-01-05 Analyzed By: DR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Specific Conductance		µMHOS/cm	1410	1400	99	96.7 - 108	2007-01-05

Standard (ICV-1)

QC Batch: 33433 Date Analyzed: 2007-01-08 Analyzed By: TP

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Sodium		mg/L	50.0	52.6	105	90 - 110	2007-01-08

Standard (CCV-1)

QC Batch: 33433 Date Analyzed: 2007-01-08 Analyzed By: TP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Sodium		mg/L	50.0	51.8	104	90 - 110	2007-01-08

Standard (ICV-1)

QC Batch: 33455 Date Analyzed: 2007-01-08 Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Zinc		mg/L	1.00	1.04	104	90 - 110	2007-01-08

Standard (ICV-1)

QC Batch: 33455 Date Analyzed: 2007-01-08 Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Silver		mg/L	0.125	0.126	101	90 - 110	2007-01-08
Dissolved Arsenic		mg/L	1.00	1.00	100	90 - 110	2007-01-08
Dissolved Barium		mg/L	1.00	0.999	100	90 - 110	2007-01-08
Dissolved Cadmium		mg/L	1.00	0.979	98	95 - 105	2007-01-08
Dissolved Chromium		mg/L	1.00	0.974	97	90 - 110	2007-01-08
Dissolved Lead		mg/L	1.00	0.976	98	90 - 110	2007-01-08
Dissolved Selenium		mg/L	1.00	0.988	99	90 - 110	2007-01-08

Standard (CCV-1)

QC Batch: 33455 Date Analyzed: 2007-01-08 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Zinc		mg/L	1.00	1.08	108	90 - 110	2007-01-08

Standard (CCV-1)

QC Batch: 33455 Date Analyzed: 2007-01-08 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Silver		mg/L	0.125	0.133	106	90 - 110	2007-01-08
Dissolved Arsenic		mg/L	1.00	1.04	104	90 - 110	2007-01-08
Dissolved Barium		mg/L	1.00	1.05	105	90 - 110	2007-01-08
Dissolved Cadmium		mg/L	1.00	1.03	103	90 - 110	2007-01-08
Dissolved Chromium		mg/L	1.00	1.03	103	90 - 110	2007-01-08
Dissolved Lead		mg/L	1.00	1.03	103	90 - 110	2007-01-08
Dissolved Selenium		mg/L	1.00	1.07	107	90 - 110	2007-01-08

Standard (ICV-1)

QC Batch: 33458 Date Analyzed: 2007-01-08 Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Phosphorous		mg/L	5.00	4.99	100	90 - 110	2007-01-08

Standard (ICV-1)

QC Batch: 33458 Date Analyzed: 2007-01-08 Analyzed By: RR

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Zinc		mg/L	1.00	1.06	106	90 - 110	2007-01-08

Standard (ICV-1)

QC Batch: 33458 Date Analyzed: 2007-01-08 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	0.128	102	90 - 110	2007-01-08
Total Arsenic		mg/L	1.00	1.06	106	90 - 110	2007-01-08
Total Barium		mg/L	1.00	1.01	101	90 - 110	2007-01-08
Total Cadmium		mg/L	1.00	1.01	101	90 - 110	2007-01-08
Total Chromium		mg/L	1.00	1.01	101	90 - 110	2007-01-08
Total Lead		mg/L	1.00	0.994	99	90 - 110	2007-01-08
Total Selenium		mg/L	1.00	1.04	104	90 - 110	2007-01-08

Standard (CCV-1)

QC Batch: 33458 Date Analyzed: 2007-01-08 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Phosphorous		mg/L	5.00	5.18	104	90 - 110	2007-01-08

Standard (CCV-1)

QC Batch: 33458 Date Analyzed: 2007-01-08 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Zinc		mg/L	1.00	1.08	108	90 - 110	2007-01-08

Standard (CCV-1)

QC Batch: 33458 Date Analyzed: 2007-01-08 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	0.131	105	90 - 110	2007-01-08
Total Arsenic		mg/L	1.00	1.07	107	90 - 110	2007-01-08
Total Barium		mg/L	1.00	1.01	101	90 - 110	2007-01-08
Total Cadmium		mg/L	1.00	1.04	104	90 - 110	2007-01-08
Total Chromium		mg/L	1.00	1.01	101	90 - 110	2007-01-08
Total Lead		mg/L	1.00	1.02	102	90 - 110	2007-01-08
Total Selenium		mg/L	1.00	1.06	106	90 - 110	2007-01-08

Standard (ICV-1)

QC Batch: 33459 Date Analyzed: 2007-01-08 Analyzed By: KV

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Organic Carbon		mg/L	5.00	4.44	89	80 - 120	2007-01-08

Standard (CCV-1)

QC Batch: 33459 Date Analyzed: 2007-01-08 Analyzed By: KV

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Organic Carbon		mg/L	5.00	5.09	102	80 - 120	2007-01-08

Standard (ICV-1)

QC Batch: 33492 Date Analyzed: 2007-01-09 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	0.000980	98	80 - 120	2007-01-09

Standard (CCV-1)

QC Batch: 33492 Date Analyzed: 2007-01-09 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	0.000950	95	80 - 120	2007-01-09

Standard (ICV-1)

QC Batch: 33523 Date Analyzed: 2007-01-09 Analyzed By: JG

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 - 105	2007-01-09
Carbonate Alkalinity		mg/L as CaCo3	0.00	236		0 - 105	2007-01-09
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	10.0		0 - 105	2007-01-09
Total Alkalinity		mg/L as CaCo3	250	246	98	93.7 - 99.9	2007-01-09

Standard (CCV-1)

QC Batch: 33523 Date Analyzed: 2007-01-09 Analyzed By: JG

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 - 105	2007-01-09
Carbonate Alkalinity		mg/L as CaCo3	0.00	228		0 - 105	2007-01-09
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	18.0		0 - 105	2007-01-09
Total Alkalinity		mg/L as CaCo3	250	246	98	93.7 - 99.9	2007-01-09

Standard (ICV-1)

QC Batch: 33546 Date Analyzed: 2007-01-10 Analyzed By: TP

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Sodium		mg/L	50.0	50.9	102	90 - 110	2007-01-10

Standard (CCV-1)

QC Batch: 33546 Date Analyzed: 2007-01-10 Analyzed By: TP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Sodium		mg/L	50.0	51.0	102	90 - 110	2007-01-10

Standard (CCV-2)

QC Batch: 33556 Date Analyzed: 2007-01-10 Analyzed By: JG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Vinyl Chloride		µg/L	50.0	41.8	84	80 - 120	2007-01-10
1,1-Dichloroethene		µg/L	50.0	47.1	94	80 - 120	2007-01-10
Chloroform		µg/L	50.0	47.7	95	80 - 120	2007-01-10
1,2-Dichloropropane		µg/L	50.0	49.4	99	80 - 120	2007-01-10
Toluene		µg/L	50.0	46.7	93	80 - 120	2007-01-10
Chlorobenzene		µg/L	50.0	50.8	102	80 - 120	2007-01-10

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		µg/L	50.0	57.8	116	80 - 120	2007-01-10

Standard (ICV-1)

QC Batch: 33650 Date Analyzed: 2007-01-04 Analyzed By: JG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1010	101	94.4 - 106	2007-01-04

Standard (CCV-1)

QC Batch: 33650 Date Analyzed: 2007-01-04 Analyzed By: JG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	992	99	94.4 - 106	2007-01-04