Analytical and Quality Control Report

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Report Date: January 9, 2007

Work Order: 6122913

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
112846	HLSF-0085-HMW-035-1206	water	2006-12-27	10:15	2006-12-27
112847	HLSF-0085-TB-801-1206	water	2006-12-27	10:15	2006-12-27

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

This report consists of a total of 28 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: 112846 - HLSF-0085-HMW-035-1206

Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	33301	Date Analyzed:	2007-01-02	Analyzed By:	JG
Prep Batch:	28948	Sample Preparation:	2007-01-02	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		**174**	mg/L as CaCo3	1	4.00
Total Alkalinity		**174**	mg/L as CaCo3	1	4.00

Sample: 112846 - HLSF-0085-HMW-035-1206

Analysis:	Conductivity	Analytical Method:	SM 2510B	Prep Method:	N/A
QC Batch:	33252	Date Analyzed:	2006-12-29	Analyzed By:	DR
Prep Batch:	28902	Sample Preparation:	2006-12-29	Prepared By:	JR

Parameter	Flag	RL Result	Units	Dilution	RL
Specific Conductance		**11600**	μMHOS/cm	1	0.00

Sample: 112846 - HLSF-0085-HMW-035-1206

Analysis:	Ion Chromatography	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	33244	Date Analyzed:	2006-12-29	Analyzed By:	WB
Prep Batch:	28868	Sample Preparation:	2006-12-29	Prepared By:	WB
QC Batch:	33285	Date Analyzed:	2006-12-30	Analyzed By:	WB
Prep Batch:	28899	Sample Preparation:	2006-12-29	Prepared By:	WB

Parameter	Flag	RL Result	Units	Dilution	RL
Bromide		<1.00	mg/L	5	0.200
Chloride		**1020**	mg/L	50	0.500
Fluoride		**2.97**	mg/L	5	0.200
Nitrite-N		<1.00	mg/L	5	0.200
Nitrate-N		**25.4**	mg/L	5	0.200
Sulfate		**6700**	mg/L	500	0.500

Sample: 112846 - HLSF-0085-HMW-035-1206

Analysis:	pH	Analytical Method:	SM 4500-H+	Prep Method:	N/A
QC Batch:	33255	Date Analyzed:	2006-12-28	Analyzed By:	JG
Prep Batch:	28904	Sample Preparation:	2006-12-28	Prepared By:	JR

continued . . .

sample 112846 continued . . .

Parameter	Flag	RL Result	Units	Dilution	RL

Parameter	Flag	RL Result	Units	Dilution	RL
pH		**7.53**	s.u.	1	0.00

Sample: 112846 - HLSF-0085-HMW-035-1206

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		<0.0100	mg/L	1	0.0100
Dissolved Cadmium		<0.00100	mg/L	1	0.00100
Dissolved Chromium		<0.00500	mg/L	1	0.00500
Dissolved Lead		<0.00500	mg/L	1	0.00500
Dissolved Selenium		**0.147**	mg/L	1	0.0100

Sample: 112846 - HLSF-0085-HMW-035-1206

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	33413	Date Analyzed:	2006-12-28	Analyzed By:	JG
Prep Batch:	29033	Sample Preparation:	2006-12-28	Prepared By:	JR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**10000**	mg/L	1	5.00

Sample: 112846 - HLSF-0085-HMW-035-1206

Analysis:	Total 8 Metals	Analytical Method:	S 7470A	Prep Method:	N/A
QC Batch:	33251	Date Analyzed:	2006-12-29	Analyzed By:	TP
Prep Batch:	28900	Sample Preparation:	2006-12-29	Prepared By:	TP
Analysis:	Total 8 Metals	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	33357	Date Analyzed:	2007-01-04	Analyzed By:	RR
Prep Batch:	28943	Sample Preparation:	2007-01-02	Prepared By:	TS

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		<0.0100	mg/L	1	0.0100
Total Cadmium		<0.00100	mg/L	1	0.00100

continued . . .

sample 112846 continued . . .

Parameter	Flag	RL Result	Units	Dilution	RL
Total Chromium		<0.00500	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		**0.158**	mg/L	1	0.0100

Sample: 112846 - HLSF-0085-HMW-035-1206

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	33225	Date Analyzed:	2006-12-29	Analyzed By:	SP
Prep Batch:	28893	Sample Preparation:	2006-12-29	Prepared By:	SP

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		16.1	mg/L	1	15.0	107	57 - 132.3

Sample: 112846 - HLSF-0085-HMW-035-1206

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5030B
QC Batch:	33298	Date Analyzed:	2007-01-02	Analyzed By:	KB
Prep Batch:	28945	Sample Preparation:	2007-01-02	Prepared By:	KB

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

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0922	mg/L	1	0.100	92	72.5 - 108
4-Bromofluorobenzene (4-BFB)		0.0922	mg/L	1	0.100	92	68.5 - 114

Sample: 112846 - HLSF-0085-HMW-035-1206

Analysis:	Volatiles WTS	Analytical Method:	S 8260B	Prep Method:	S 3510C
QC Batch:	33443	Date Analyzed:	2007-01-05	Analyzed By:	JG
Prep Batch:	29062	Sample Preparation:	2007-01-05	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

continued . . .

sample 112846 continued . . .

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

continued . . .

sample 112846 continued . . .

Parameter	Flag	RL Result	Units	Dilution	RL
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		<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		56.6	µg/L	1	50.0	113	82.4 - 115
Toluene-d8	[1]	57.3	µg/L	1	50.0	115	89.7 - 108
4-Bromofluorobenzene (4-BFB)		49.7	µg/L	1	50.0	99	84.6 - 114

Sample: 112846 - HLSF-0085-HMW-035-1206

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: 112846 - HLSF-0085-HMW-035-1206

Analysis:	Zn, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	33357	Date Analyzed:	2007-01-04	Analyzed By:	RR
Prep Batch:	28943	Sample Preparation:	2007-01-02	Prepared By:	TS

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

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

Sample: 112847 - HLSF-0085-TB-801-1206

Analysis:	Volatiles WTS	Analytical Method:	S 8260B	Prep Method:	S 3510C
QC Batch:	33443	Date Analyzed:	2007-01-05	Analyzed By:	JG
Prep Batch:	29062	Sample Preparation:	2007-01-05	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		<1.00	µg/L	1	1.00
Acetone		**20.2**	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	*B*	**8.01**	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

continued . . .

sample 112847 continued . . .

Parameter	Flag	RL Result	Units	Dilution	RL
Styrene		<1.00	µg/L	1	1.00
o-Xylene		<1.00	µg/L	1	1.00
1,1,2,2-Tetrachloroethane		<1.00	µg/L	1	1.00
2-Chlorotoluene		<1.00	µg/L	1	1.00
1,2,3-Trichloropropane		<1.00	µg/L	1	1.00
Isopropylbenzene		<1.00	µg/L	1	1.00
Bromobenzene		<1.00	µg/L	1	1.00
n-Propylbenzene		<1.00	µg/L	1	1.00
1,3,5-Trimethylbenzene		<1.00	µg/L	1	1.00
tert-Butylbenzene		<1.00	µg/L	1	1.00
1,2,4-Trimethylbenzene		<1.00	µg/L	1	1.00
1,4-Dichlorobenzene (para)		<1.00	µg/L	1	1.00
sec-Butylbenzene		<1.00	µg/L	1	1.00
1,3-Dichlorobenzene (meta)		<1.00	µg/L	1	1.00
p-Isopropyltoluene		<1.00	µg/L	1	1.00
4-Chlorotoluene		<1.00	µg/L	1	1.00
1,2-Dichlorobenzene (ortho)		<1.00	µg/L	1	1.00
n-Butylbenzene		<1.00	µg/L	1	1.00
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]	**234**	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		56.5	µg/L	1	50.0	113	82.4 - 115
Toluene-d8	[3]	57.3	µg/L	1	50.0	115	89.7 - 108
4-Bromofluorobenzene (4-BFB)		49.7	µg/L	1	50.0	99	84.6 - 114

Method Blank (1) QC Batch: 33225

QC Batch:	33225	Date Analyzed:	2006-12-29	Analyzed By:	SP
Prep Batch:	28893	QC Preparation:	2006-12-29	Prepared By:	SP

Parameter	Flag	MDL Result	Units	RL
DRO		<1.19	mg/L	5

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		14.0	mg/L	1	15.0	93	57 - 132.3

[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.

Method Blank (1) QC Batch: 33244

QC Batch: 33244 Date Analyzed: 2006-12-29 Analyzed By: WB
Prep Batch: 28868 QC Preparation: 2006-12-28 Prepared By: WB

Parameter	Flag	MDL Result	Units	RL
Bromide		<0.0429	mg/L	0.2
Fluoride		<0.0119	mg/L	0.2
Nitrite-N		<0.0128	mg/L	0.2
Nitrate-N		<0.0106	mg/L	0.2

Method Blank (1) QC Batch: 33251

QC Batch: 33251 Date Analyzed: 2006-12-29 Analyzed By: TP
Prep Batch: 28900 QC Preparation: 2006-12-29 Prepared By: TP

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

Method Blank (1) QC Batch: 33252

QC Batch: 33252 Date Analyzed: 2006-12-29 Analyzed By: DR
Prep Batch: 28902 QC Preparation: 2006-12-29 Prepared By: DR

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

Method Blank (1) QC Batch: 33285

QC Batch: 33285 Date Analyzed: 2006-12-30 Analyzed By: WB
Prep Batch: 28899 QC Preparation: 2006-12-29 Prepared By: WB

Parameter	Flag	MDL Result	Units	RL
Chloride		<0.0181	mg/L	0.5
Sulfate		<0.0485	mg/L	0.5

Method Blank (1) QC Batch: 33298

QC Batch: 33298 Date Analyzed: 2007-01-02 Analyzed By: KB
Prep Batch: 28945 QC Preparation: 2007-01-02 Prepared By: KB

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0288	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0993	mg/L	1	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)		0.0996	mg/L	1	0.100	100	70 - 130

Method Blank (1) QC Batch: 33301

QC Batch: 33301 Date Analyzed: 2007-01-02 Analyzed By: JG
Prep Batch: 28948 QC Preparation: 2007-01-02 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: 33357

QC Batch: 33357 Date Analyzed: 2007-01-04 Analyzed By: RR
Prep Batch: 28943 QC Preparation: 2007-01-02 Prepared By: TS

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

Method Blank (1) QC Batch: 33357

QC Batch: 33357 Date Analyzed: 2007-01-04 Analyzed By: RR
Prep Batch: 28943 QC Preparation: 2007-01-02 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: 33413

QC Batch: 33413 Date Analyzed: 2006-12-28 Analyzed By: JG
Prep Batch: 29033 QC Preparation: 2006-12-28 Prepared By: JG

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

Method Blank (1) QC Batch: 33443

QC Batch:	33443	Date Analyzed:	2007-01-05	Analyzed By:	JG
Prep Batch:	29062	QC Preparation:	2007-01-05	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		1.71	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		0.210	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)		0.320	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		0.0700	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		1.18	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		54.1	µg/L	1	50.0	108	82.4 - 115
Toluene-d8	[4]	56.7	µg/L	1	50.0	113	89.7 - 108
4-Bromofluorobenzene (4-BFB)		49.8	µg/L	1	50.0	100	84.6 - 114

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

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

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

Duplicates (1)

QC Batch: 33252 Date Analyzed: 2006-12-29 Analyzed By: DR
Prep Batch: 28902 QC Preparation: 2006-12-29 Prepared By: DR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance	31400	31400	μMHOS/cm	1	0	6.7

Duplicates (1)

QC Batch: 33255 Date Analyzed: 2006-12-28 Analyzed By: JG
Prep Batch: 28904 QC Preparation: 2006-12-28 Prepared By: JG

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH	7.54	7.53	s.u.	1	0	20

Duplicates (1)

QC Batch: 33301 Date Analyzed: 2007-01-02 Analyzed By: JG
Prep Batch: 28948 QC Preparation: 2007-01-02 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	188	188	mg/L as CaCo3	1	0	6.3
Total Alkalinity	188	188	mg/L as CaCo3	1	0	6.3

Duplicates (1)

QC Batch: 33413 Date Analyzed: 2006-12-28 Analyzed By: JG
Prep Batch: 29033 QC Preparation: 2006-12-28 Prepared By: JG

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	11400	11500	mg/L	1	1	20

Laboratory Control Spike (LCS-1)

QC Batch: 33225 Date Analyzed: 2006-12-29 Analyzed By: SP
Prep Batch: 28893 QC Preparation: 2006-12-29 Prepared By: SP

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	26.9	mg/L	1	25.0	<1.19	108	73.2 - 123

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	27.5	mg/L	1	25.0	<1.19	110	73.2 - 123	2	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	15.4	16.0	mg/L	1	15.0	103	107	57 - 132.3

Laboratory Control Spike (LCS-1)

QC Batch: 33244 Date Analyzed: 2006-12-29 Analyzed By: WB
Prep Batch: 28868 QC Preparation: 2006-12-28 Prepared By: WB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromide	2.55	mg/L	1	2.50	<0.0429	102	90 - 110
Fluoride	2.54	mg/L	1	2.50	<0.0119	102	90 - 110
Nitrite-N	2.59	mg/L	1	2.50	<0.0128	104	90 - 110
Nitrate-N	2.40	mg/L	1	2.50	<0.0106	96	90 - 110

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromide	2.55	mg/L	1	2.50	<0.0429	102	90 - 110	0	20
Fluoride	2.50	mg/L	1	2.50	<0.0119	100	90 - 110	2	20
Nitrite-N	2.55	mg/L	1	2.50	<0.0128	102	90 - 110	2	20
Nitrate-N	2.39	mg/L	1	2.50	<0.0106	96	90 - 110	0	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: 33251 Date Analyzed: 2006-12-29 Analyzed By: TP
Prep Batch: 28900 QC Preparation: 2006-12-29 Prepared By: TP

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Mercury	0.00100	mg/L	1	0.00100	<0.0000217	100	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	0.00102	mg/L	1	0.00100	<0.0000217	102	89.4 - 108	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 33285 Date Analyzed: 2006-12-30 Analyzed By: WB
Prep Batch: 28899 QC Preparation: 2006-12-29 Prepared By: WB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11.7	mg/L	1	12.5	<0.0181	94	90 - 110
Sulfate	11.9	mg/L	1	12.5	<0.0485	95	90 - 110

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	11.8	mg/L	1	12.5	<0.0181	94	90 - 110	1	20
Sulfate	12.2	mg/L	1	12.5	<0.0485	98	90 - 110	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 33298 Date Analyzed: 2007-01-02 Analyzed By: KB
Prep Batch: 28945 QC Preparation: 2007-01-02 Prepared By: KB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	1.01	mg/L	1	1.00	<0.0288	101	69.7 - 132

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.990	mg/L	1	1.00	<0.0288	99	69.7 - 132	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
Trifluorotoluene (TFT)	0.113	0.112	mg/L	1	0.100	113	112	74.4 - 114
4-Bromofluorobenzene (4-BFB)	0.107	0.108	mg/L	1	0.100	107	108	81.1 - 112

Laboratory Control Spike (LCS-1)

QC Batch: 33357 Date Analyzed: 2007-01-04 Analyzed By: RR
Prep Batch: 28943 QC Preparation: 2007-01-02 Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Zinc	0.247	mg/L	1	0.250	<0.000666	99	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	0.242	mg/L	1	0.250	<0.000666	97	82.9 - 109	2	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 33357 Date Analyzed: 2007-01-04 Analyzed By: RR
Prep Batch: 28943 QC Preparation: 2007-01-02 Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Silver	0.126	mg/L	1	0.125	<0.000274	101	87.9 - 111
Total Arsenic	0.467	mg/L	1	0.500	<0.00489	93	86.8 - 108
Total Barium	1.02	mg/L	1	1.00	<0.000450	102	88.8 - 110
Total Cadmium	0.259	mg/L	1	0.250	<0.000268	104	86.8 - 110
Total Chromium	0.111	mg/L	1	0.100	<0.00357	111	86.5 - 115
Total Lead	0.498	mg/L	1	0.500	<0.00310	100	83 - 109
Total Selenium	0.529	mg/L	1	0.500	<0.00556	106	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	0.122	mg/L	1	0.125	<0.000274	98	87.9 - 111	3	20
Total Arsenic	0.486	mg/L	1	0.500	<0.00489	97	86.8 - 108	4	20
Total Barium	0.999	mg/L	1	1.00	<0.000450	100	88.8 - 110	2	20
Total Cadmium	0.251	mg/L	1	0.250	<0.000268	100	86.8 - 110	3	20
Total Chromium	0.109	mg/L	1	0.100	<0.00357	109	86.5 - 115	2	20
Total Lead	0.484	mg/L	1	0.500	<0.00310	97	83 - 109	3	20
Total Selenium	0.546	mg/L	1	0.500	<0.00556	109	75 - 112	3	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: 33443 Date Analyzed: 2007-01-05 Analyzed By: JG
Prep Batch: 29062 QC Preparation: 2007-01-05 Prepared By: JG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,1-Dichloroethene	47.4	µg/L	1	50.0	<0.0736	95	83.4 - 114

continued . . .

control spikes continued . . .

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	48.7	µg/L	1	50.0	<0.0495	97	83.5 - 115
Trichloroethene (TCE)	47.8	µg/L	1	50.0	<0.0495	96	91.3 - 111
Toluene	45.9	µg/L	1	50.0	<0.0736	92	82 - 110
Chlorobenzene	48.6	µg/L	1	50.0	<0.0217	97	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	49.1	µg/L	1	50.0	<0.0736	98	83.4 - 114	4	20
Benzene	51.5	µg/L	1	50.0	<0.0495	103	83.5 - 115	6	20
Trichloroethene (TCE)	50.5	µg/L	1	50.0	<0.0495	101	91.3 - 111	6	20
Toluene	48.3	µg/L	1	50.0	<0.0736	97	82 - 110	5	20
Chlorobenzene	51.8	µg/L	1	50.0	<0.0217	104	87.9 - 109	6	20

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

Surrogate		LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane		53.5	53.3	µg/L	1	50.0	107	107	82.4 - 115
Toluene-d8	[5][6]	56.0	55.1	µg/L	1	50.0	112	110	89.7 - 108
4-Bromofluorobenzene (4-BFB)		54.9	54.2	µg/L	1	50.0	110	108	84.6 - 114

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

continued . . .

[5]8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preperation was performed properly.
[6]8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preperation was performed properly.

control spikes continued . . .

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

Matrix Spike (MS-1) Spiked Sample: 112844

QC Batch: 33225 Date Analyzed: 2006-12-29 Analyzed By: SP
Prep Batch: 28893 QC Preparation: 2006-12-29 Prepared By: SP

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	23.0	mg/L	1	25.0	<1.19	92	77.8 - 112

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO [7]	18.4	mg/L	1	25.0	<1.19	74	77.8 - 112	22	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	16.0	14.9	mg/L	1	15	107	99	57 - 132.3

Matrix Spike (MS-1) Spiked Sample: 112789

QC Batch: 33244 Date Analyzed: 2006-12-29 Analyzed By: WB
Prep Batch: 28868 QC Preparation: 2006-12-28 Prepared By: WB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromide	26.9	mg/L	10	25.0	<0.429	108	95.4 - 114
Fluoride	25.3	mg/L	10	25.0	1.31	96	73.4 - 119

continued . . .

[7]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
Nitrite-N	25.8	mg/L	10	25.0	<0.128	103	58.3 - 151
Nitrate-N	25.6	mg/L	10	25.0	<0.106	102	85.7 - 123

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
Bromide	26.0	mg/L	10	25.0	<0.429	104	95.4 - 114	3	20
Fluoride	25.1	mg/L	10	25.0	1.31	95	73.4 - 119	1	20
Nitrite-N	25.3	mg/L	10	25.0	<0.128	101	58.3 - 151	2	20
Nitrate-N	24.7	mg/L	10	25.0	<0.106	99	85.7 - 123	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: 112842

QC Batch: 33251 Date Analyzed: 2006-12-29 Analyzed By: TP
Prep Batch: 28900 QC Preparation: 2006-12-29 Prepared By: TP

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Mercury	0.000920	mg/L	1	0.00100	<0.0000217	92	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	0.000930	mg/L	1	0.00100	<0.0000217	93	49.1 - 137	1	20

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

Matrix Spike (MS-1) Spiked Sample: 112846

QC Batch: 33285 Date Analyzed: 2006-12-30 Analyzed By: WB
Prep Batch: 28899 QC Preparation: 2006-12-29 Prepared By: WB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	5600	mg/L	500	6250	1020	73	10 - 6384
Sulfate	12900	mg/L	500	6250	6700	99	86.2 - 117

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	5660	mg/L	500	6250	1020	74	10 - 6384	1	20
Sulfate	12900	mg/L	500	6250	6700	99	86.2 - 117	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: 112846

QC Batch: 33357 Date Analyzed: 2007-01-04 Analyzed By: RR
Prep Batch: 28943 QC Preparation: 2007-01-02 Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Zinc	0.223	mg/L	1	0.250	<0.000666	89	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	0.221	mg/L	1	0.250	<0.000666	88	75.5 - 113	1	20

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

Matrix Spike (MS-1) Spiked Sample: 112846

QC Batch: 33357 Date Analyzed: 2007-01-04 Analyzed By: RR
Prep Batch: 28943 QC Preparation: 2007-01-02 Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Silver	0.118	mg/L	1	0.125	<0.000274	94	88.2 - 114
Total Arsenic	0.453	mg/L	1	0.500	<0.00489	91	75.9 - 116
Total Barium	0.856	mg/L	1	1.00	0.009	85	64.9 - 129
Total Cadmium	0.201	mg/L	1	0.250	<0.000268	80	66.5 - 121
Total Chromium	0.0870	mg/L	1	0.100	<0.00357	87	69.2 - 129
Total Lead	0.451	mg/L	1	0.500	<0.00310	90	71.9 - 115
Total Selenium	0.599	mg/L	1	0.500	0.158	88	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	0.119	mg/L	1	0.125	<0.000274	95	88.2 - 114	1	20
Total Arsenic	0.449	mg/L	1	0.500	<0.00489	90	75.9 - 116	1	20
Total Barium	0.826	mg/L	1	1.00	0.009	82	64.9 - 129	4	20
Total Cadmium	0.210	mg/L	1	0.250	<0.000268	84	66.5 - 121	4	20
Total Chromium	0.0910	mg/L	1	0.100	<0.00357	91	69.2 - 129	4	20
Total Lead	0.427	mg/L	1	0.500	<0.00310	85	71.9 - 115	6	20
Total Selenium	0.559	mg/L	1	0.500	0.158	80	66.8 - 116	7	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: 33443 Date Analyzed: 2007-01-05 Analyzed By: JG
Prep Batch: 29062 QC Preparation: 2007-01-05 Prepared By: JG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,1-Dichloroethene	45.5	µg/L	1	50.0	<0.0736	91	78.7 - 119

continued . . .

matrix spikes continued . . .

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzene	49.3	µg/L	1	50.0	<0.0495	99	75.8 - 125
Trichloroethene (TCE)	85.6	µg/L	1	50.0	35.1	101	83.6 - 112
Toluene	46.1	µg/L	1	50.0	<0.0736	92	81.6 - 115
Chlorobenzene	49.3	µg/L	1	50.0	<0.0217	99	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	46.8	µg/L	1	50.0	<0.0736	94	78.7 - 119	3	20
Benzene	50.7	µg/L	1	50.0	<0.0495	101	75.8 - 125	3	20
Trichloroethene (TCE)	87.0	µg/L	1	50.0	35.1	104	83.6 - 112	2	20
Toluene	46.9	µg/L	1	50.0	<0.0736	94	81.6 - 115	2	20
Chlorobenzene	50.0	µg/L	1	50.0	<0.0217	100	83.9 - 113	1	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		54.2	53.5	µg/L	1	50	108	107	86.6 - 114
Toluene-d8	[8]	54.9	55.3	µg/L	1	50	110	111	91 - 109
4-Bromofluorobenzene (4-BFB)		54.5	54.4	µg/L	1	50	109	109	87.2 - 113

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

continued . . .

[8] 8260 Only - One surrogate is out of control limits. The other two surrogates show the sample preperation was performed properly.

matrix spikes continued . . .

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

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

Standard (ICV-1)

QC Batch: 33225 Date Analyzed: 2006-12-29 Analyzed By: SP

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	273	109	85 - 115	2006-12-29

Standard (CCV-1)

QC Batch: 33225 Date Analyzed: 2006-12-29 Analyzed By: SP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	264	106	85 - 115	2006-12-29

Standard (ICV-1)

QC Batch: 33244 Date Analyzed: 2006-12-29 Analyzed By: WB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.52	101	90 - 110	2006-12-29
Fluoride		mg/L	2.50	2.61	104	90 - 110	2006-12-29
Nitrite-N		mg/L	2.50	2.61	104	90 - 110	2006-12-29
Nitrate-N		mg/L	2.50	2.40	96	90 - 110	2006-12-29

Standard (CCV-1)

QC Batch: 33244 Date Analyzed: 2006-12-29 Analyzed By: WB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	2.50	2.55	102	90 - 110	2006-12-29
Fluoride		mg/L	2.50	2.51	100	90 - 110	2006-12-29
Nitrite-N		mg/L	2.50	2.56	102	90 - 110	2006-12-29
Nitrate-N		mg/L	2.50	2.40	96	90 - 110	2006-12-29

Standard (ICV-1)

QC Batch: 33251 Date Analyzed: 2006-12-29 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	0.00105	105	80 - 120	2006-12-29

Standard (CCV-1)

QC Batch: 33251 Date Analyzed: 2006-12-29 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	0.000990	99	80 - 120	2006-12-29

Standard (ICV-1)

QC Batch: 33252 Date Analyzed: 2006-12-29 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	2006-12-29

Standard (CCV-1)

QC Batch: 33252 Date Analyzed: 2006-12-29 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	1420	101	96.7 - 108	2006-12-29

Standard (ICV-1)

QC Batch: 33255 Date Analyzed: 2006-12-28 Analyzed By: JG

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7.00	6.99	100	98.8 - 101	2006-12-28

Standard (CCV-1)

QC Batch: 33255 Date Analyzed: 2006-12-28 Analyzed By: JG

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7.00	6.96	99	98.8 - 101	2006-12-28

Standard (ICV-1)

QC Batch: 33285 Date Analyzed: 2006-12-30 Analyzed By: WB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.7	94	90 - 110	2006-12-30
Sulfate		mg/L	12.5	12.2	98	90 - 110	2006-12-30

Standard (CCV-1)

QC Batch: 33285 Date Analyzed: 2006-12-30 Analyzed By: WB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.8	94	90 - 110	2006-12-30
Sulfate		mg/L	12.5	12.1	97	90 - 110	2006-12-30

Standard (ICV-1)

QC Batch: 33298 Date Analyzed: 2007-01-02 Analyzed By: KB

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.05	105	85 - 115	2007-01-02

Standard (CCV-1)

QC Batch: 33298 Date Analyzed: 2007-01-02 Analyzed By: KB

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.971	97	85 - 115	2007-01-02

Standard (ICV-1)

QC Batch: 33301 Date Analyzed: 2007-01-02 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	2007-01-02
Carbonate Alkalinity		mg/L as CaCo3	0.00	236		0 - 105	2007-01-02
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	8.00		0 - 105	2007-01-02
Total Alkalinity		mg/L as CaCo3	250	244	98	93.7 - 99.9	2007-01-02

Standard (CCV-1)

QC Batch: 33301 Date Analyzed: 2007-01-02 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	2007-01-02
Carbonate Alkalinity		mg/L as CaCo3	0.00	236		0 - 105	2007-01-02
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	12.0		0 - 105	2007-01-02
Total Alkalinity		mg/L as CaCo3	250	248	99	93.7 - 99.9	2007-01-02

Standard (ICV-1)

QC Batch: 33357 Date Analyzed: 2007-01-04 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	2007-01-04

Standard (ICV-1)

QC Batch: 33357 Date Analyzed: 2007-01-04 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	0.126	101	90 - 110	2007-01-04
Total Arsenic		mg/L	1.00	1.04	104	90 - 110	2007-01-04
Total Barium		mg/L	1.00	1.00	100	90 - 110	2007-01-04
Total Cadmium		mg/L	1.00	0.999	100	90 - 110	2007-01-04
Total Chromium		mg/L	1.00	1.00	100	90 - 110	2007-01-04
Total Lead		mg/L	1.00	0.990	99	90 - 110	2007-01-04
Total Selenium		mg/L	1.00	0.997	100	90 - 110	2007-01-04

Standard (CCV-1)

QC Batch: 33357 Date Analyzed: 2007-01-04 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	1.07	107	90 - 110	2007-01-04

Standard (CCV-1)

QC Batch: 33357 Date Analyzed: 2007-01-04 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	0.130	104	90 - 110	2007-01-04
Total Arsenic		mg/L	1.00	1.02	102	90 - 110	2007-01-04
Total Barium		mg/L	1.00	1.03	103	90 - 110	2007-01-04
Total Cadmium		mg/L	1.00	1.01	101	90 - 110	2007-01-04
Total Chromium		mg/L	1.00	1.02	102	90 - 110	2007-01-04
Total Lead		mg/L	1.00	1.01	101	90 - 110	2007-01-04
Total Selenium		mg/L	1.00	1.03	103	90 - 110	2007-01-04

Standard (ICV-1)

QC Batch: 33413 Date Analyzed: 2006-12-28 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	1000	100	94.4 - 106	2006-12-28

Standard (CCV-1)

QC Batch: 33413 Date Analyzed: 2006-12-28 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	1000	100	94.4 - 106	2006-12-28

Standard (CCV-2)

QC Batch: 33443 Date Analyzed: 2007-01-05 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	47.4	95	80 - 120	2007-01-05
1,1-Dichloroethene		µg/L	50.0	49.6	99	80 - 120	2007-01-05
Chloroform		µg/L	50.0	50.3	101	80 - 120	2007-01-05
1,2-Dichloropropane		µg/L	50.0	51.5	103	80 - 120	2007-01-05
Toluene		µg/L	50.0	48.9	98	80 - 120	2007-01-05
Chlorobenzene		µg/L	50.0	52.3	105	80 - 120	2007-01-05

continued . . .

standard continued . . .

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ethylbenzene		µg/L	50.0	58.9	118	80 - 120	2007-01-05

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

continued . . .

standard continued . . .

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