Analytical and Quality Control Report

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Report Date: January 9, 2007

Work Order: 6122120

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
112451	HLSF-0085-HMW-129-1206	water	2006-12-20	10:25	2006-12-20
112452	HLSF-0085-TB-795-1206	water	2006-12-20	10:25	2006-12-20

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: 112451 - HLSF-0085-HMW-129-1206

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		**218**	mg/L as CaCo3	1	4.00
Total Alkalinity		**218**	mg/L as CaCo3	1	4.00

Sample: 112451 - HLSF-0085-HMW-129-1206

Analysis:	Conductivity	Analytical Method:	SM 2510B	Prep Method:	N/A
QC Batch:	33069	Date Analyzed:	2006-12-21	Analyzed By:	DR
Prep Batch:	28744	Sample Preparation:	2006-12-21	Prepared By:	JR

Parameter	Flag	RL Result	Units	Dilution	RL
Specific Conductance		**12700**	μMHOS/cm	1	0.00

Sample: 112451 - HLSF-0085-HMW-129-1206

Analysis:	Ion Chromatography	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	33102	Date Analyzed:	2006-12-21	Analyzed By:	WB
Prep Batch:	28774	Sample Preparation:	2006-12-21	Prepared By:	WB
QC Batch:	33103	Date Analyzed:	2006-12-22	Analyzed By:	WB
Prep Batch:	28775	Sample Preparation:	2006-12-21	Prepared By:	WB

Parameter	Flag	RL Result	Units	Dilution	RL
Bromide		<1.00	mg/L	5	0.200
Chloride		**1160**	mg/L	50	0.500
Fluoride		**1.76**	mg/L	5	0.200
Nitrite-N		<1.00	mg/L	5	0.200
Nitrate-N		**39.0**	mg/L	5	0.200
Sulfate		**7610**	mg/L	500	0.500

Sample: 112451 - HLSF-0085-HMW-129-1206

Analysis:	pH	Analytical Method:	SM 4500-H+	Prep Method:	N/A
QC Batch:	33064	Date Analyzed:	2006-12-21	Analyzed By:	DR
Prep Batch:	28740	Sample Preparation:	2006-12-21	Prepared By:	JR

continued . . .

sample 112451 continued . . .

Parameter	Flag	RL Result	Units	Dilution	RL

Parameter	Flag	RL Result	Units	Dilution	RL
pH		**7.41**	s.u.	1	0.00

Sample: 112451 - HLSF-0085-HMW-129-1206

Analysis:	RCRA 7 Metals (Dissolved)	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	33149	Date Analyzed:	2006-12-27	Analyzed By:	RR
Prep Batch:	28730	Sample Preparation:	2006-12-22	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		<0.0100	mg/L	1	0.0100

Sample: 112451 - HLSF-0085-HMW-129-1206

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	33264	Date Analyzed:	2006-12-26	Analyzed By:	JG
Prep Batch:	28911	Sample Preparation:	2006-12-26	Prepared By:	JR

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		**12200**	mg/L	1	5.00

Sample: 112451 - HLSF-0085-HMW-129-1206

Analysis:	Total 8 Metals	Analytical Method:	S 7470A	Prep Method:	N/A
QC Batch:	33144	Date Analyzed:	2006-12-27	Analyzed By:	TS
Prep Batch:	28815	Sample Preparation:	2006-12-26	Prepared By:	TS
Analysis:	Total 8 Metals	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	33219	Date Analyzed:	2006-12-29	Analyzed By:	RR
Prep Batch:	28854	Sample Preparation:	2006-12-28	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		**0.00200**	mg/L	1	0.00100

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sample 112451 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		<0.0100	mg/L	1	0.0100

Sample: 112451 - HLSF-0085-HMW-129-1206

Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	33057	Date Analyzed:	2006-12-22	Analyzed By:	SP
Prep Batch:	28733	Sample Preparation:	2006-12-22	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		14.6	mg/L	1	15.0	97	57 - 132.3

Sample: 112451 - HLSF-0085-HMW-129-1206

Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5030B
QC Batch:	33120	Date Analyzed:	2006-12-26	Analyzed By:	MT
Prep Batch:	28790	Sample Preparation:	2006-12-26	Prepared By:	MT

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)		0.105	mg/L	1	0.100	105	58.5 - 135
4-Bromofluorobenzene (4-BFB)		0.0940	mg/L	1	0.100	94	66.8 - 115

Sample: 112451 - HLSF-0085-HMW-129-1206

Analysis:	Volatiles WTS	Analytical Method:	S 8260B	Prep Method:	S 3510C
QC Batch:	33281	Date Analyzed:	2006-12-29	Analyzed By:	JG
Prep Batch:	28923	Sample Preparation:	2006-12-29	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 112451 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 112451 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		55.5	µg/L	1	50.0	111	82.4 - 115
Toluene-d8		50.4	µg/L	1	50.0	101	89.7 - 108
4-Bromofluorobenzene (4-BFB)		46.9	µg/L	1	50.0	94	84.6 - 114

Sample: 112451 - HLSF-0085-HMW-129-1206

Analysis:	Zn, Dissolved	Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	33149	Date Analyzed:	2006-12-27	Analyzed By:	RR
Prep Batch:	28730	Sample Preparation:	2006-12-22	Prepared By:	TS

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

Sample: 112451 - HLSF-0085-HMW-129-1206

Analysis:	Zn, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	33219	Date Analyzed:	2006-12-29	Analyzed By:	RR
Prep Batch:	28854	Sample Preparation:	2006-12-28	Prepared By:	TS

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

Sample: 112452 - HLSF-0085-TB-795-1206

Analysis:	Volatiles WTS	Analytical Method:	S 8260B	Prep Method:	S 3510C
QC Batch:	33281	Date Analyzed:	2006-12-29	Analyzed By:	JG
Prep Batch:	28923	Sample Preparation:	2006-12-29	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		<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

continued . . .

sample 112452 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		<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		56.3	µg/L	1	50.0	113	82.4 - 115
Toluene-d8		50.6	µg/L	1	50.0	101	89.7 - 108
4-Bromofluorobenzene (4-BFB)		47.2	µg/L	1	50.0	94	84.6 - 114

Method Blank (1) QC Batch: 33057

QC Batch:	33057	Date Analyzed:	2006-12-22	Analyzed By:	SP
Prep Batch:	28733	QC Preparation:	2006-12-22	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		14.4	mg/L	1	15.0	96	57 - 132.3

Method Blank (1) QC Batch: 33069

QC Batch: 33069 Date Analyzed: 2006-12-21 Analyzed By: DR
Prep Batch: 28744 QC Preparation: 2006-12-21 Prepared By: DR

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

Method Blank (1) QC Batch: 33102

QC Batch: 33102 Date Analyzed: 2006-12-21 Analyzed By: WB
Prep Batch: 28774 QC Preparation: 2006-12-21 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: 33103

QC Batch: 33103 Date Analyzed: 2006-12-22 Analyzed By: WB
Prep Batch: 28775 QC Preparation: 2006-12-21 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: 33120

QC Batch: 33120 Date Analyzed: 2006-12-26 Analyzed By: MT
Prep Batch: 28790 QC Preparation: 2006-12-26 Prepared By: MT

Parameter	Flag	MDL Result	Units	RL
GRO		<0.0272	mg/L	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0998	mg/L	1	0.100	100	77.2 - 124
4-Bromofluorobenzene (4-BFB)		0.0890	mg/L	1	0.100	89	58 - 111

Method Blank (1) QC Batch: 33144

QC Batch: 33144 Date Analyzed: 2006-12-27 Analyzed By: TS
Prep Batch: 28815 QC Preparation: 2006-12-27 Prepared By: TS

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

Method Blank (1) QC Batch: 33149

QC Batch: 33149 Date Analyzed: 2006-12-27 Analyzed By: RR
Prep Batch: 28730 QC Preparation: 2006-12-22 Prepared By: TS

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

Method Blank (1) QC Batch: 33149

QC Batch: 33149 Date Analyzed: 2006-12-27 Analyzed By: RR
Prep Batch: 28730 QC Preparation: 2006-12-22 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: 33219

QC Batch: 33219 Date Analyzed: 2006-12-29 Analyzed By: RR
Prep Batch: 28854 QC Preparation: 2006-12-28 Prepared By: TS

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

Method Blank (1) QC Batch: 33219

QC Batch: 33219 Date Analyzed: 2006-12-29 Analyzed By: RR
Prep Batch: 28854 QC Preparation: 2006-12-28 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

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Parameter	Flag	MDL Result	Units	RL
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: 33264

QC Batch:	33264	Date Analyzed:	2006-12-26	Analyzed By:	JG
Prep Batch:	28911	QC Preparation:	2006-12-26	Prepared By:	JG

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

Method Blank (1) QC Batch: 33281

QC Batch:	33281	Date Analyzed:	2006-12-29	Analyzed By:	JG
Prep Batch:	28923	QC Preparation:	2006-12-29	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		0.830	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

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Parameter	Flag	MDL Result	Units	RL
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		0.270	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
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		1.10	µg/L	5
Hexachlorobutadiene		1.67	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		53.3	µg/L	1	50.0	107	82.4 - 115
Toluene-d8		51.8	µg/L	1	50.0	104	89.7 - 108
4-Bromofluorobenzene (4-BFB)		53.2	µg/L	1	50.0	106	84.6 - 114

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

Duplicates (1)

QC Batch: 33064 Date Analyzed: 2006-12-21 Analyzed By: DR
Prep Batch: 28740 QC Preparation: 2006-12-21 Prepared By: DR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH	7.42	7.41	s.u.	1	0	20

Duplicates (1)

QC Batch: 33069 Date Analyzed: 2006-12-21 Analyzed By: DR
Prep Batch: 28744 QC Preparation: 2006-12-21 Prepared By: DR

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Specific Conductance	12800	12700	μMHOS/cm	1	1	6.7

Duplicates (1)

QC Batch: 33264 Date Analyzed: 2006-12-26 Analyzed By: JG
Prep Batch: 28911 QC Preparation: 2006-12-26 Prepared By: JG

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	12400	12200	mg/L	1	2	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

continued . . .

duplicate continued . . .

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Bicarbonate Alkalinity	188	188	mg/L as CaCo3	1	0	6.3
Total Alkalinity	188	188	mg/L as CaCo3	1	0	6.3

Laboratory Control Spike (LCS-1)

QC Batch: 33057 Date Analyzed: 2006-12-22 Analyzed By: SP
Prep Batch: 28733 QC Preparation: 2006-12-22 Prepared By: SP

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	27.4	mg/L	1	25.0	<1.19	110	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	25.8	mg/L	1	25.0	<1.19	103	73.2 - 123	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
n-Triacontane	14.7	14.2	mg/L	1	15.0	98	95	57 - 132.3

Laboratory Control Spike (LCS-1)

QC Batch: 33102 Date Analyzed: 2006-12-21 Analyzed By: WB
Prep Batch: 28774 QC Preparation: 2006-12-21 Prepared By: WB

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromide	2.57	mg/L	1	2.50	<0.0429	103	90 - 110
Fluoride	2.42	mg/L	1	2.50	<0.0119	97	90 - 110
Nitrite-N	2.42	mg/L	1	2.50	<0.0128	97	90 - 110
Nitrate-N	2.37	mg/L	1	2.50	<0.0106	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
Bromide	2.60	mg/L	1	2.50	<0.0429	104	90 - 110	1	20
Fluoride	2.44	mg/L	1	2.50	<0.0119	98	90 - 110	1	20
Nitrite-N	2.42	mg/L	1	2.50	<0.0128	97	90 - 110	0	20
Nitrate-N	2.38	mg/L	1	2.50	<0.0106	95	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: 33103 Date Analyzed: 2006-12-22 Analyzed By: WB
Prep Batch: 28775 QC Preparation: 2006-12-21 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	11.4	mg/L	1	12.5	<0.0181	91	90 - 110	3	20
Sulfate	11.9	mg/L	1	12.5	<0.0485	95	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: 33120 Date Analyzed: 2006-12-26 Analyzed By: MT
Prep Batch: 28790 QC Preparation: 2006-12-26 Prepared By: MT

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.869	mg/L	1	1.00	<0.0272	87	71.4 - 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
GRO	0.918	mg/L	1	1.00	<0.0272	92	71.4 - 123	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
Trifluorotoluene (TFT)	0.0935	0.0922	mg/L	1	0.100	94	92	73.8 - 122
4-Bromofluorobenzene (4-BFB)	0.0955	0.0941	mg/L	1	0.100	96	94	82.6 - 112

Laboratory Control Spike (LCS-1)

QC Batch: 33144 Date Analyzed: 2006-12-27 Analyzed By: TS
Prep Batch: 28815 QC Preparation: 2006-12-27 Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Mercury	0.000960	mg/L	1	0.00100	<0.0000217	96	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	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: 33149 | Date Analyzed: 2006-12-27 | Analyzed By: RR
Prep Batch: 28730 | QC Preparation: 2006-12-22 | Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Zinc	0.215	mg/L	1	0.250	<0.00300	86	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	0.229	mg/L	1	0.250	<0.00300	92	84.7 - 113	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: 33149 | Date Analyzed: 2006-12-27 | Analyzed By: RR
Prep Batch: 28730 | QC Preparation: 2006-12-22 | Prepared By: TS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Silver	0.118	mg/L	1	0.125	<0.000199	94	86.2 - 116
Dissolved Arsenic	0.478	mg/L	1	0.500	<0.00360	96	78.7 - 116
Dissolved Barium	0.966	mg/L	1	1.00	<0.000450	97	85 - 114
Dissolved Cadmium	0.224	mg/L	1	0.250	<0.000577	90	83.3 - 113
Dissolved Chromium	0.101	mg/L	1	0.100	<0.00357	101	83 - 112
Dissolved Lead	0.501	mg/L	1	0.500	<0.00398	100	81.1 - 111
Dissolved Selenium	0.449	mg/L	1	0.500	<0.00556	90	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	0.118	mg/L	1	0.125	<0.000199	94	86.2 - 116	0	20
Dissolved Arsenic	0.480	mg/L	1	0.500	<0.00360	96	78.7 - 116	0	20
Dissolved Barium	0.966	mg/L	1	1.00	<0.000450	97	85 - 114	0	20
Dissolved Cadmium	0.224	mg/L	1	0.250	<0.000577	90	83.3 - 113	0	20
Dissolved Chromium	0.0970	mg/L	1	0.100	<0.00357	97	83 - 112	4	20
Dissolved Lead	0.492	mg/L	1	0.500	<0.00398	98	81.1 - 111	2	20
Dissolved Selenium	0.415	mg/L	1	0.500	<0.00556	83	69.6 - 111	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: 33219 | Date Analyzed: 2006-12-29 | Analyzed By: RR
Prep Batch: 28854 | QC Preparation: 2006-12-28 | 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	0.262	mg/L	1	0.250	<0.000666	105	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: 33219 Date Analyzed: 2006-12-29 Analyzed By: RR
Prep Batch: 28854 QC Preparation: 2006-12-28 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	0.485	mg/L	1	0.500	<0.00489	97	86.8 - 108
Total Barium	1.03	mg/L	1	1.00	<0.000450	103	88.8 - 110
Total Cadmium	0.256	mg/L	1	0.250	<0.000268	102	86.8 - 110
Total Chromium	0.109	mg/L	1	0.100	<0.00357	109	86.5 - 115
Total Lead	0.523	mg/L	1	0.500	<0.00310	105	83 - 109
Total Selenium	0.460	mg/L	1	0.500	<0.00556	92	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	0.501	mg/L	1	0.500	<0.00489	100	86.8 - 108	3	20
Total Barium	1.03	mg/L	1	1.00	<0.000450	103	88.8 - 110	0	20
Total Cadmium	0.251	mg/L	1	0.250	<0.000268	100	86.8 - 110	2	20
Total Chromium	0.107	mg/L	1	0.100	<0.00357	107	86.5 - 115	2	20
Total Lead	0.515	mg/L	1	0.500	<0.00310	103	83 - 109	2	20
Total Selenium	0.481	mg/L	1	0.500	<0.00556	96	75 - 112	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: 33281 Date Analyzed: 2006-12-29 Analyzed By: JG
Prep Batch: 28923 QC Preparation: 2006-12-29 Prepared By: JG

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,1-Dichloroethene	55.6	µg/L	1	50.0	<0.0736	111	83.4 - 114
Benzene	56.3	µg/L	1	50.0	<0.0495	113	83.5 - 115
Trichloroethene (TCE) [1]	56.4	µg/L	1	50.0	<0.0495	113	91.3 - 111
Toluene	51.0	µg/L	1	50.0	<0.0736	102	82 - 110
Chlorobenzene	53.1	µg/L	1	50.0	<0.0217	106	87.9 - 109

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

[1] Spike recovery out of control limits. Concentration biased high. •

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
1,1-Dichloroethene	55.1	µg/L	1	50.0	<0.0736	110	83.4 - 114	1	20
Benzene	56.5	µg/L	1	50.0	<0.0495	113	83.5 - 115	0	20
Trichloroethene (TCE) [2]	56.6	µg/L	1	50.0	<0.0495	113	91.3 - 111	0	20
Toluene	50.8	µg/L	1	50.0	<0.0736	102	82 - 110	0	20
Chlorobenzene	52.6	µg/L	1	50.0	<0.0217	105	87.9 - 109	1	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Dibromofluoromethane	51.9	52.2	µg/L	1	50.0	104	104	82.4 - 115
Toluene-d8	49.7	49.9	µg/L	1	50.0	99	100	89.7 - 108
4-Bromofluorobenzene (4-BFB)	48.0	48.3	µg/L	1	50.0	96	97	84.6 - 114

Matrix Spike (MS-1) Spiked Sample: 112408

QC Batch: 33057 Date Analyzed: 2006-12-22 Analyzed By: SP
Prep Batch: 28733 QC Preparation: 2006-12-22 Prepared By: SP

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	22.6	mg/L	1	25.0	<1.19	90	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	23.4	mg/L	1	25.0	<1.19	94	77.8 - 112	4	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	14.0	14.4	mg/L	1	15	93	96	57 - 132.3

Matrix Spike (MS-1) Spiked Sample: 112535

QC Batch: 33102 Date Analyzed: 2006-12-21 Analyzed By: WB
Prep Batch: 28774 QC Preparation: 2006-12-21 Prepared By: WB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromide	13.7	mg/L	5	12.5	<0.214	110	95.4 - 114
Fluoride	12.7	mg/L	5	12.5	1.16	92	73.4 - 119
Nitrite-N	12.6	mg/L	5	12.5	<0.0640	101	58.3 - 151
Nitrate-N	13.1	mg/L	5	12.5	<0.0530	105	85.7 - 123

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

[2] Spike recovery out of control limits. Concentration biased high. •

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromide	13.0	mg/L	5	12.5	<0.214	104	95.4 - 114	5	20
Fluoride	12.4	mg/L	5	12.5	1.16	90	73.4 - 119	2	20
Nitrite-N	12.5	mg/L	5	12.5	<0.0640	100	58.3 - 151	1	20
Nitrate-N	12.9	mg/L	5	12.5	<0.0530	103	85.7 - 123	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: 112537

QC Batch: 33103 Date Analyzed: 2006-12-22 Analyzed By: WB
Prep Batch: 28775 QC Preparation: 2006-12-21 Prepared By: WB

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	7220	mg/L	500	6250	1160	97	10 - 6384
Sulfate	13400	mg/L	500	6250	7610	93	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	7160	mg/L	500	6250	1160	96	10 - 6384	1	20
Sulfate	13600	mg/L	500	6250	7610	96	86.2 - 117	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: 112404

QC Batch: 33120 Date Analyzed: 2006-12-26 Analyzed By: MT
Prep Batch: 28790 QC Preparation: 2006-12-26 Prepared By: MT

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	0.947	mg/L	1	1.00	<0.0272	95	53.7 - 136

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
GRO	0.948	mg/L	1	1.00	<0.0272	95	53.7 - 136	0	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0905	0.0965	mg/L	1	0.1	90	96	58.8 - 134
4-Bromofluorobenzene (4-BFB)	0.0945	0.0977	mg/L	1	0.1	94	98	68.5 - 128

Matrix Spike (MS-1) Spiked Sample: 112449

QC Batch: 33144 Date Analyzed: 2006-12-27 Analyzed By: TS
Prep Batch: 28815 QC Preparation: 2006-12-27 Prepared By: TS

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	0.000950	mg/L	1	0.00100	<0.0000217	95	49.1 - 137	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: 112445

QC Batch: 33149 Date Analyzed: 2006-12-27 Analyzed By: RR
Prep Batch: 28730 QC Preparation: 2006-12-22 Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Zinc	0.218	mg/L	1	0.250	<0.00300	87	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	0.221	mg/L	1	0.250	<0.00300	88	80.4 - 120	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: 112445

QC Batch: 33149 Date Analyzed: 2006-12-27 Analyzed By: RR
Prep Batch: 28730 QC Preparation: 2006-12-22 Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Silver	0.114	mg/L	1	0.125	<0.000199	91	90.1 - 120
Dissolved Arsenic	0.456	mg/L	1	0.500	<0.00360	91	75 - 114
Dissolved Barium	0.843	mg/L	1	1.00	<0.000450	84	75 - 125
Dissolved Cadmium	0.212	mg/L	1	0.250	<0.000577	85	75 - 112
Dissolved Chromium	0.0840	mg/L	1	0.100	<0.00357	84	75 - 121
Dissolved Lead	0.464	mg/L	1	0.500	<0.00398	93	75 - 111
Dissolved Selenium	0.416	mg/L	1	0.500	<0.00556	83	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	5	20
Dissolved Arsenic	0.462	mg/L	1	0.500	<0.00360	92	75 - 114	1	20
Dissolved Barium	0.858	mg/L	1	1.00	<0.000450	86	75 - 125	2	20
Dissolved Cadmium	0.211	mg/L	1	0.250	<0.000577	84	75 - 112	0	20
Dissolved Chromium	0.0920	mg/L	1	0.100	<0.00357	92	75 - 121	9	20
Dissolved Lead	0.495	mg/L	1	0.500	<0.00398	99	75 - 111	6	20
Dissolved Selenium	0.423	mg/L	1	0.500	<0.00556	85	75 - 118	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: 112408

QC Batch: 33219 Date Analyzed: 2006-12-29 Analyzed By: RR
Prep Batch: 28854 QC Preparation: 2006-12-28 Prepared By: TS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Zinc	0.239	mg/L	1	0.250	<0.000666	96	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	0.239	mg/L	1	0.250	<0.000666	96	75.5 - 113	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: 112408

QC Batch: 33219 Date Analyzed: 2006-12-29 Analyzed By: RR
Prep Batch: 28854 QC Preparation: 2006-12-28 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	0.416	mg/L	1	0.500	<0.00489	83	75.9 - 116
Total Barium	0.814	mg/L	1	1.00	<0.000450	81	64.9 - 129
Total Cadmium	0.235	mg/L	1	0.250	0.003	93	66.5 - 121
Total Chromium	0.196	mg/L	1	0.100	0.121	75	69.2 - 129
Total Lead	0.480	mg/L	1	0.500	<0.00310	96	71.9 - 115
Total Selenium	0.496	mg/L	1	0.500	0.103	79	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	0.115	mg/L	1	0.125	<0.000274	92	88.2 - 114	1	20
Total Arsenic	0.425	mg/L	1	0.500	<0.00489	85	75.9 - 116	2	20
Total Barium	0.882	mg/L	1	1.00	<0.000450	88	64.9 - 129	8	20
Total Cadmium	0.232	mg/L	1	0.250	0.003	92	66.5 - 121	1	20
Total Chromium	0.210	mg/L	1	0.100	0.121	89	69.2 - 129	7	20
Total Lead	0.470	mg/L	1	0.500	<0.00310	94	71.9 - 115	2	20
Total Selenium	0.486	mg/L	1	0.500	0.103	77	66.8 - 116	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: 112452

QC Batch: 33281 Date Analyzed: 2006-12-29 Analyzed By: JG
Prep Batch: 28923 QC Preparation: 2006-12-29 Prepared By: JG

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
1,1-Dichloroethene	43.3	µg/L	1	50.0	<0.0736	87	78.7 - 119
Benzene	56.6	µg/L	1	50.0	<0.0495	113	75.8 - 125
Trichloroethene (TCE)	55.1	µg/L	1	50.0	<0.0495	110	83.6 - 112
Toluene	50.4	µg/L	1	50.0	<0.0736	101	81.6 - 115
Chlorobenzene	52.0	µg/L	1	50.0	<0.0217	104	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	[3]	n/a	µg/L	1	50.0	<0.0736	0	78.7 - 119	200	20
Benzene	[4]	n/a	µg/L	1	50.0	<0.0495	0	75.8 - 125	200	20
Trichloroethene (TCE)	[5]	n/a	µg/L	1	50.0	<0.0495	0	83.6 - 112	200	20
Toluene	[6]	n/a	µg/L	1	50.0	<0.0736	0	81.6 - 115	200	20
Chlorobenzene	[7]	n/a	µg/L	1	50.0	<0.0217	0	83.9 - 113	200	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	[8]	53.3	n/a	µg/L	1	50	107	0	86.6 - 114
Toluene-d8	[9]	49.5	n/a	µg/L	1	50	99	0	91 - 109
4-Bromofluorobenzene (4-BFB)	[10]	48.5	n/a	µg/L	1	50	97	0	87.2 - 113

Standard (CCV-1)

QC Batch: 33057 Date Analyzed: 2006-12-22 Analyzed By: SP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	283	113	85 - 115	2006-12-22

Standard (CCV-2)

QC Batch: 33057 Date Analyzed: 2006-12-22 Analyzed By: SP

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	260	104	85 - 115	2006-12-22

Standard (ICV-1)

QC Batch: 33064 Date Analyzed: 2006-12-21 Analyzed By: DR

[3]RPD is out of range because a matrix spike duplicate was not prepared.
[4]RPD is out of range because a matrix spike duplicate was not prepared.
[5]RPD is out of range because a matrix spike duplicate was not prepared.
[6]RPD is out of range because a matrix spike duplicate was not prepared.
[7]RPD is out of range because a matrix spike duplicate was not prepared.
[8]RPD is out of range because a matrix spike duplicate was not prepared.
[9]RPD is out of range because a matrix spike duplicate was not prepared.
[10]RPD is out of range because a matrix spike duplicate was not prepared.

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
pH		s.u.	7.00	6.96	99	98.8 - 101	2006-12-21

Standard (CCV-1)

QC Batch: 33064 Date Analyzed: 2006-12-21 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	2006-12-21

Standard (ICV-1)

QC Batch: 33069 Date Analyzed: 2006-12-21 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	1410	100	96.7 - 108	2006-12-21

Standard (CCV-1)

QC Batch: 33069 Date Analyzed: 2006-12-21 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	100	96.7 - 108	2006-12-21

Standard (ICV-1)

QC Batch: 33102 Date Analyzed: 2006-12-21 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	2.60	104	90 - 110	2006-12-21
Fluoride		mg/L	2.50	2.58	103	90 - 110	2006-12-21
Nitrite-N		mg/L	2.50	2.58	103	90 - 110	2006-12-21
Nitrate-N		mg/L	2.50	2.40	96	90 - 110	2006-12-21

Standard (CCV-1)

QC Batch: 33102 Date Analyzed: 2006-12-21 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	2.61	104	90 - 110	2006-12-21
Fluoride		mg/L	2.50	2.44	98	90 - 110	2006-12-21
Nitrite-N		mg/L	2.50	2.38	95	90 - 110	2006-12-21
Nitrate-N		mg/L	2.50	2.38	95	90 - 110	2006-12-21

Standard (ICV-1)

QC Batch: 33103 Date Analyzed: 2006-12-22 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	11.4	91	90 - 110	2006-12-22
Sulfate		mg/L	12.5	12.1	97	90 - 110	2006-12-22

Standard (CCV-1)

QC Batch: 33103 Date Analyzed: 2006-12-22 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	2006-12-22
Sulfate		mg/L	12.5	12.0	96	90 - 110	2006-12-22

Standard (ICV-1)

QC Batch: 33120 Date Analyzed: 2006-12-26 Analyzed By: MT

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.11	111	85 - 115	2006-12-26

Standard (CCV-1)

QC Batch: 33120 Date Analyzed: 2006-12-26 Analyzed By: MT

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.976	98	85 - 115	2006-12-26

Standard (ICV-1)

QC Batch: 33144 Date Analyzed: 2006-12-27 Analyzed By: TS

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.00100	0.00108	108	80 - 120	2006-12-27

Standard (CCV-1)

QC Batch: 33144 Date Analyzed: 2006-12-27 Analyzed By: TS

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	2006-12-27

Standard (ICV-1)

QC Batch: 33149 Date Analyzed: 2006-12-27 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	1.01	101	90 - 110	2006-12-27

Standard (ICV-1)

QC Batch: 33149 Date Analyzed: 2006-12-27 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	0.124	99	90 - 110	2006-12-27
Dissolved Arsenic		mg/L	1.00	0.956	96	90 - 110	2006-12-27
Dissolved Barium		mg/L	1.00	0.996	100	90 - 110	2006-12-27
Dissolved Cadmium		mg/L	1.00	0.953	95	95 - 105	2006-12-27
Dissolved Chromium		mg/L	1.00	0.956	96	90 - 110	2006-12-27
Dissolved Lead		mg/L	1.00	1.01	101	90 - 110	2006-12-27
Dissolved Selenium		mg/L	1.00	0.977	98	90 - 110	2006-12-27

Standard (CCV-1)

QC Batch: 33149 Date Analyzed: 2006-12-27 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	1.03	103	90 - 110	2006-12-27

Standard (CCV-1)

QC Batch: 33149 Date Analyzed: 2006-12-27 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	0.128	102	90 - 110	2006-12-27
Dissolved Arsenic		mg/L	1.00	1.01	101	90 - 110	2006-12-27
Dissolved Barium		mg/L	1.00	1.03	103	90 - 110	2006-12-27
Dissolved Cadmium		mg/L	1.00	0.959	96	90 - 110	2006-12-27
Dissolved Chromium		mg/L	1.00	0.969	97	90 - 110	2006-12-27
Dissolved Lead		mg/L	1.00	0.959	96	90 - 110	2006-12-27
Dissolved Selenium		mg/L	1.00	0.987	99	90 - 110	2006-12-27

Standard (ICV-1)

QC Batch: 33219 Date Analyzed: 2006-12-29 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	2006-12-29

Standard (ICV-1)

QC Batch: 33219 Date Analyzed: 2006-12-29 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	0.127	102	90 - 110	2006-12-29
Total Arsenic		mg/L	1.00	1.02	102	90 - 110	2006-12-29
Total Barium		mg/L	1.00	1.02	102	90 - 110	2006-12-29
Total Cadmium		mg/L	1.00	1.00	100	90 - 110	2006-12-29
Total Chromium		mg/L	1.00	1.00	100	90 - 110	2006-12-29
Total Lead		mg/L	1.00	0.995	100	90 - 110	2006-12-29
Total Selenium		mg/L	1.00	1.04	104	90 - 110	2006-12-29

Standard (CCV-1)

QC Batch: 33219 Date Analyzed: 2006-12-29 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	1.02	102	90 - 110	2006-12-29

Standard (CCV-1)

QC Batch: 33219 Date Analyzed: 2006-12-29 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	0.122	98	90 - 110	2006-12-29
Total Arsenic		mg/L	1.00	0.973	97	90 - 110	2006-12-29
Total Barium		mg/L	1.00	0.967	97	90 - 110	2006-12-29
Total Cadmium		mg/L	1.00	0.952	95	90 - 110	2006-12-29
Total Chromium		mg/L	1.00	0.959	96	90 - 110	2006-12-29
Total Lead		mg/L	1.00	0.953	95	90 - 110	2006-12-29
Total Selenium		mg/L	1.00	0.955	96	90 - 110	2006-12-29

Standard (ICV-1)

QC Batch: 33264 Date Analyzed: 2006-12-26 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	989	99	94.4 - 106	2006-12-26

Standard (CCV-1)

QC Batch: 33264 Date Analyzed: 2006-12-26 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	986	99	94.4 - 106	2006-12-26

Standard (CCV-1)

QC Batch: 33281 Date Analyzed: 2006-12-29 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	50.9	102	80 - 120	2006-12-29
1,1-Dichloroethene		µg/L	50.0	52.3	105	80 - 120	2006-12-29
Chloroform		µg/L	50.0	53.8	108	80 - 120	2006-12-29
1,2-Dichloropropane		µg/L	50.0	53.8	108	80 - 120	2006-12-29
Toluene		µg/L	50.0	48.9	98	80 - 120	2006-12-29
Chlorobenzene		µg/L	50.0	51.0	102	80 - 120	2006-12-29
Ethylbenzene		µg/L	50.0	51.6	103	80 - 120	2006-12-29

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