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Certifications

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

NELAP Certifications

Lubbock: T104704219-08-TX
LELAP-02003
Kansas E-10317

El Paso: T104704221-08-TX
LELAP-02002

Midland: T104704392-08-TX

Analytical and Quality Control Report

Brad Davis
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Report Date: September 18, 2009

Work Order: 9090212

Project Name: HELSTF Diesel Spill Groundwater

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
208955	HLSF-0154-RB-001-0809	water	2009-08-31	14:15	2009-08-31

Comment(s)

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

This report consists of a total of 80 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Notes:

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

Standard Flags

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

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

Case Narrative

Samples for project HELSTF Diesel Spill Groundwater were received by TraceAnalysis, Inc. on 2009-08-31 and assigned to work order 9090212. Samples for work order 9090212 were received intact without headspace and at a temperature of 17.0 deg. C, just sampled, on ice.

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

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
Ag, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Alkalinity	SM 2320B	54231	2009-09-10 at 11:00	63527	2009-09-10 at 11:00
Al, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Ammonia	SM 4500-NH3 B,C	54092	2009-09-05 at 16:00	63370	2009-09-05 at 17:00
As, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Ba, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Be, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Bromide (IC)	E 300.0	54356	2009-09-01 at 23:46	63668	2009-09-01 at 23:46
Ca, Total	S 6010B	53951	2009-09-03 at 08:16	63355	2009-09-09 at 08:18
Cd, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Chloride (IC)	E 300.0	54356	2009-09-01 at 23:46	63668	2009-09-01 at 23:46
Chromium, Hexavalent	SM 3500-Cr B	54055	2009-09-01 at 10:12	63327	2009-09-01 at 10:12
Co, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Cr, Dissolved	S 6010B	54153	2009-09-11 at 08:25	63461	2009-09-11 at 11:54
Cr, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Cu, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Explosives (8330)	S 8330-C18	54137	2009-09-04 at 15:00	63425	2009-09-10 at 15:30
Fe, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Fluoride (IC)	E 300.0	54356	2009-09-01 at 23:46	63668	2009-09-01 at 23:46
Hg, Total	S 7470A	53960	2009-09-03 at 12:02	63227	2009-09-03 at 13:18
K, Total	S 6010B	53951	2009-09-03 at 08:16	63355	2009-09-09 at 08:18
Mg, Total	S 6010B	53951	2009-09-03 at 08:16	63355	2009-09-09 at 08:18
Mn, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Mo, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Na, Total	S 6010B	53951	2009-09-03 at 08:16	63355	2009-09-09 at 08:18
Ni, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Nitrate and Nitrite as N	SM 4500-NO3 E	54188	2009-09-11 at 10:24	63485	2009-09-11 at 16:25
O/G	E 1664	54391	2009-09-17 at 11:00	63699	2009-09-17 at 14:30
Pb, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
pH	SM 4500-H+	54063	2009-09-01 at 11:30	63339	2009-09-01 at 11:30
P, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Sb, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Semivolatiles	S 8270C	53996	2009-09-02 at 15:00	63261	2009-09-04 at 10:45
Se, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
SO4 (IC)	E 300.0	54356	2009-09-01 at 23:46	63668	2009-09-01 at 23:46
TDS	SM 2540C	54173	2009-09-03 at 14:20	63473	2009-09-03 at 14:20
TKN	E 351.3	54150	2009-09-09 at 11:15	63441	2009-09-09 at 15:00
Tl, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
TOC	SM 5310C	54065	2009-09-08 at 13:26	63340	2009-09-08 at 13:29
Total Cyanide	SM 4500-CN C,E	54106	2009-09-07 at 16:00	63391	2009-09-07 at 17:45
TPH DRO	Mod. 8015B	54035	2009-09-04 at 15:00	63307	2009-09-07 at 18:00

Test	Method	Prep Batch	Prep Date	QC Batch	Analysis Date
TPH GRO	S 8015B	53976	2009-09-03 at 14:48	63239	2009-09-03 at 14:48
V, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42
Zn, Total	S 6010B	53951	2009-09-03 at 08:16	63221	2009-09-03 at 10:42

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 9090212 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

Analytical Report

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Ag, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Silver	U	<0.00111	<0.00500	<0.00111	mg/L	1	0.00111	0.005	0.00111

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Al, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Aluminum	U	<0.00301	<0.0500	<0.00301	mg/L	1	0.00301	0.05	0.00301

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	El Paso				
Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	63527	Date Analyzed:	2009-09-10	Analyzed By:	JG
Prep Batch:	54231	Sample Preparation:		Prepared By:	JG

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Hydroxide Alkalinity	U	<1.00	<1.00	<1.00	mg/L as CaCo3	1	1.00	1	1
Carbonate Alkalinity	U	<1.00	<1.00	<1.00	mg/L as CaCo3	1	1.00	1	1
Bicarbonate Alkalinity	U	<4.00	<4.00	<4.00	mg/L as CaCo3	1	4.00	4	4
Total Alkalinity	U	<4.00	<4.00	<4.00	mg/L as CaCo3	1	4.00	4	4

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Ammonia	Analytical Method:	SM 4500-NH3 B,C	Prep Method:	N/A
QC Batch:	63370	Date Analyzed:	2009-09-05	Analyzed By:	AH
Prep Batch:	54092	Sample Preparation:	2009-09-05	Prepared By:	AH

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Ammonia-N	J	**0.448**	<1.00	<0.353	mg/L	1	0.353	1	0.353

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	As, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Arsenic	U	<0.00448	<0.0100	<0.00448	mg/L	1	0.00448	0.01	0.00448

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Ba, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Barium	U	<0.00105	<0.00500	<0.00105	mg/L	1	0.00105	0.005	0.00105

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Be, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Beryllium	U	<0.000450	<0.00200	<0.000450	mg/L	1	0.000450	0.002	0.00045

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	El Paso				
Analysis:	Bromide (IC)	Analytical Method:	E 300.0	Prep Method:	N/A

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 Sample Preparation: 2009-09-01 Prepared By: JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Bromide	U	<0.0394	<0.270	<0.0394	mg/L	1	0.0394	0.27	0.0394

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock
Analysis: Ca, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 Sample Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Calcium	U	<0.117	<1.00	<0.117	mg/L	1	0.117	1	0.117

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock
Analysis: Cd, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 Sample Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Cadmium	U	<0.000303	<0.00200	<0.000303	mg/L	1	0.000303	0.002	0.000303

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: El Paso
Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A
QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 Sample Preparation: 2009-09-01 Prepared By: JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Chloride		**6.00**	**6.00**	<0.640	mg/L	1	0.640	1.22	0.6404

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: El Paso
Analysis: Chromium, Hexavalent Analytical Method: SM 3500-Cr B Prep Method: N/A
QC Batch: 63327 Date Analyzed: 2009-09-01 Analyzed By: MD
Prep Batch: 54055 Sample Preparation: 2009-09-01 Prepared By: JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Hexavalent Chromium	U	<0.00594	<0.0100	<0.00594	mg/L	1	0.00594	0.01	0.00594

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock
Analysis: Co, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 Sample Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Cobalt	U	<0.000822	<0.00200	<0.000822	mg/L	1	0.000822	0.002	0.000822

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock
Analysis: Cr, Dissolved Analytical Method: S 6010B Prep Method: S 3005A
QC Batch: 63461 Date Analyzed: 2009-09-11 Analyzed By: RR
Prep Batch: 54153 Sample Preparation: 2009-09-11 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Dissolved Chromium	U	<0.000583	<0.00100	<0.000583	mg/L	1	0.000583	0.001	0.000583

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock
Analysis: Cr, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 Sample Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Chromium	U	<0.000583	<0.00500	<0.000583	mg/L	1	0.000583	0.005	0.000583

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Cu, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Copper	U	<0.000843	<0.00500	<0.000843	mg/L	1	0.000843	0.005	0.000843

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Explosives (8330)	Analytical Method:	S 8330-C18	Prep Method:	S 3535A
QC Batch:	63425	Date Analyzed:	2009-09-10	Analyzed By:	DS
Prep Batch:	54137	Sample Preparation:	2009-09-04	Prepared By:	DS

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
HMX	U	<0.123	<0.500	<0.123	μg/L	1	0.123	0.5	0.123
RDX	U	<0.298	<0.500	<0.298	μg/L	1	0.298	0.5	0.298
1,3,5-Trinitrobenzene	U	<0.339	<0.500	<0.339	μg/L	1	0.339	0.5	0.339
1,3-Dinitrobenzene	U	<0.389	<0.500	<0.389	μg/L	1	0.389	0.5	0.389
Nitrobenzene	U	<0.379	<0.500	<0.379	μg/L	1	0.379	0.5	0.379
Tetryl	U	<0.413	<0.500	<0.413	μg/L	1	0.413	0.5	0.413
TNT	U	<0.464	<0.500	<0.464	μg/L	1	0.464	0.5	0.464
4-Amino-DNT	U	<0.319	<0.500	<0.319	μg/L	1	0.319	0.5	0.319
2-Amino-DNT	U	<0.391	<0.500	<0.391	μg/L	1	0.391	0.5	0.391
2,6-DNT	U	<0.323	<0.500	<0.323	μg/L	1	0.323	0.5	0.323
2,4-DNT	U	<0.366	<0.500	<0.366	μg/L	1	0.366	0.5	0.366
2-NT	U	<0.379	<0.500	<0.379	μg/L	1	0.379	0.5	0.379
4-NT	U	<0.398	<0.500	<0.398	μg/L	1	0.398	0.5	0.398
3-NT	U	<0.346	<0.500	<0.346	μg/L	1	0.346	0.5	0.346

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
1,2-Dinitrobenzene		1.61	μg/L	1	2.50	64	19.8 - 160

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Fe, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Iron	J	**0.00700**	<0.0100	<0.000872	mg/L	1	0.000872	0.01	0.000872

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	El Paso				
Analysis:	Fluoride (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	63668	Date Analyzed:	2009-09-01	Analyzed By:	JR
Prep Batch:	54356	Sample Preparation:	2009-09-01	Prepared By:	JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Fluoride	U	<0.0434	<0.170	<0.0434	mg/L	1	0.0434	0.17	0.0434

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Hg, Total	Analytical Method:	S 7470A	Prep Method:	N/A
QC Batch:	63227	Date Analyzed:	2009-09-03	Analyzed By:	TP
Prep Batch:	53960	Sample Preparation:	2009-09-03	Prepared By:	TP

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Mercury	U	<0.0000329	<0.000200	<0.0000329	mg/L	1	0.0000329	0.0002	3.29e-05

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	K, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63355	Date Analyzed:	2009-09-09	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Potassium	U	<0.172	<1.00	<0.172	mg/L	1	0.172	1	0.172

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Mg, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 Sample Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Magnesium	U	<0.160	<1.00	<0.160	mg/L	1	0.160	1	0.16

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock
Analysis: Mn, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 Sample Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Manganese	J	**0.000900**	<0.00250	<0.000305	mg/L	1	0.000305	0.0025	0.000305

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock
Analysis: Mo, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 Sample Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Molybdenum	U	<0.00119	<0.0100	<0.00119	mg/L	1	0.00119	0.01	0.00119

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock
Analysis: Na, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 Sample Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Sodium	U	<0.0500	<1.00	<0.0500	mg/L	1	0.0500	1	0.05

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock
Analysis: Ni, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 Sample Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Nickel	J	**0.00200**	<0.00500	<0.00121	mg/L	1	0.00121	0.005	0.00121

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock
Analysis: Nitrate and Nitrite as N Analytical Method: SM 4500-NO3 E Prep Method: N/A
QC Batch: 63485 Date Analyzed: 2009-09-11 Analyzed By: KV
Prep Batch: 54188 Sample Preparation: 2009-09-11 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Nitrate and Nitrite as N	U	<3.50	<10.0	<3.50	mg/L	100	3.50	0.1	0.035

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: El Paso
Analysis: O/G Analytical Method: E 1664 Prep Method: N/A
QC Batch: 63699 Date Analyzed: 2009-09-17 Analyzed By: JR
Prep Batch: 54391 Sample Preparation: 2009-09-17 Prepared By: JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Oil and Grease	U	<3.60	<5.00	<3.60	mg/L	1	3.60	5	3.6

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock
Analysis: P, Total Analytical Method: S 6010B Prep Method: S 3010A
QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 Sample Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Phosphorous	U	<0.00289	<0.0250	<0.00289	mg/L	1	0.00289	0.025	0.00289

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Pb, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Lead	U	<0.00326	<0.00500	<0.00326	mg/L	1	0.00326	0.005	0.00326

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	El Paso				
Analysis:	pH	Analytical Method:	SM 4500-H+	Prep Method:	N/A
QC Batch:	63339	Date Analyzed:	2009-09-01	Analyzed By:	JG
Prep Batch:	54063	Sample Preparation:	2009-09-01	Prepared By:	JR

Parameter	Flag	RL Result	Units	Dilution	RL
pH		5.58	s.u.	1	

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Sb, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Antimony	U	<0.00440	<0.0200	<0.00440	mg/L	1	0.00440	0.02	0.0044

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Se, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Selenium	U	<0.00508	<0.0200	<0.00508	mg/L	1	0.00508	0.02	0.00508

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Semivolatiles	Analytical Method:	S 8270C	Prep Method:	S 3510C
QC Batch:	63261	Date Analyzed:	2009-09-04	Analyzed By:	MN
Prep Batch:	53996	Sample Preparation:	2009-09-02	Prepared By:	MN

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Pyridine	U	<0.000599	<0.00492	<0.000599	mg/L	0.985	0.000599	0.005	0.000608
N-Nitrosodimethylamine	U	<0.000544	<0.00492	<0.000544	mg/L	0.985	0.000544	0.005	0.000552
2-Picoline	U	<0.000402	<0.00492	<0.000402	mg/L	0.985	0.000402	0.005	0.000408
Methyl methanesulfonate	U	<0.000345	<0.00492	<0.000345	mg/L	0.985	0.000345	0.005	0.00035
Ethyl methanesulfonate	U	<0.000441	<0.00492	<0.000441	mg/L	0.985	0.000441	0.005	0.000448
Phenol	U	<0.000501	<0.00492	<0.000501	mg/L	0.985	0.000501	0.005	0.000509
Aniline	U	<0.000681	<0.00492	<0.000681	mg/L	0.985	0.000681	0.005	0.000691
bis(2-chloroethyl)ether	U	<0.000433	<0.00492	<0.000433	mg/L	0.985	0.000433	0.005	0.00044
2-Chlorophenol	U	<0.000529	<0.00492	<0.000529	mg/L	0.985	0.000529	0.005	0.000537
1,3-Dichlorobenzene (meta)	U	<0.000434	<0.00492	<0.000434	mg/L	0.985	0.000434	0.005	0.000441
1,4-Dichlorobenzene (para)	U	<0.000433	<0.00492	<0.000433	mg/L	0.985	0.000433	0.005	0.00044
Benzyl alcohol	U	<0.000530	<0.00492	<0.000530	mg/L	0.985	0.000530	0.005	0.000538
1,2-Dichlorobenzene (ortho)	U	<0.000436	<0.00492	<0.000436	mg/L	0.985	0.000436	0.005	0.000443
2-Methylphenol	U	<0.000715	<0.00492	<0.000715	mg/L	0.985	0.000715	0.005	0.000726
bis(2-chloroisopropyl)ether	U	<0.000495	<0.00492	<0.000495	mg/L	0.985	0.000495	0.005	0.000503
4-Methylphenol / 3-Methylphenol	U	<0.000504	<0.00492	<0.000504	mg/L	0.985	0.000504	0.005	0.000512
N-Nitrosodi-n-propylamine	U	<0.000721	<0.00492	<0.000721	mg/L	0.985	0.000721	0.005	0.000732
Hexachloroethane	U	<0.000499	<0.00492	<0.000499	mg/L	0.985	0.000499	0.005	0.000507
Acetophenone	U	<0.000418	<0.00492	<0.000418	mg/L	0.985	0.000418	0.005	0.000424
Nitrobenzene	U	<0.000458	<0.00492	<0.000458	mg/L	0.985	0.000458	0.005	0.000465
N-Nitrosopiperidine	U	<0.000436	<0.00492	<0.000436	mg/L	0.985	0.000436	0.005	0.000443
Isophorone	U	<0.000610	<0.00492	<0.000610	mg/L	0.985	0.000610	0.005	0.000619
2-Nitrophenol	U	<0.000400	<0.00492	<0.000400	mg/L	0.985	0.000400	0.005	0.000406
2,4-Dimethylphenol	U	<0.000470	<0.00492	<0.000470	mg/L	0.985	0.000470	0.005	0.000477
bis(2-chloroethoxy)methane	U	<0.000426	<0.00492	<0.000426	mg/L	0.985	0.000426	0.005	0.000432
2,4-Dichlorophenol	U	<0.000394	<0.00492	<0.000394	mg/L	0.985	0.000394	0.005	0.0004
1,2,4-Trichlorobenzene	U	<0.000398	<0.00492	<0.000398	mg/L	0.985	0.000398	0.005	0.000404
Benzoic acid	U	<0.00160	<0.00492	<0.00160	mg/L	0.985	0.00160	0.005	0.00163
Naphthalene	U	<0.000482	<0.00492	<0.000482	mg/L	0.985	0.000482	0.005	0.000489
a,a-Dimethylphenethylamine	U	<0.00127	<0.00492	<0.00127	mg/L	0.985	0.00127	0.005	0.00129
4-Chloroaniline	U	<0.000372	<0.00492	<0.000372	mg/L	0.985	0.000372	0.005	0.000378
2,6-Dichlorophenol	U	<0.000477	<0.00985	<0.000477	mg/L	0.985	0.000477	0.01	0.000484
Hexachlorobutadiene	U	<0.000509	<0.00492	<0.000509	mg/L	0.985	0.000509	0.005	0.000517
N-Nitroso-di-n-butylamine	U	<0.000646	<0.00492	<0.000646	mg/L	0.985	0.000646	0.005	0.000656
4-Chloro-3-methylphenol	U	<0.000514	<0.00492	<0.000514	mg/L	0.985	0.000514	0.005	0.000522
2-Methylnaphthalene	U	<0.000417	<0.00492	<0.000417	mg/L	0.985	0.000417	0.005	0.000423
1-Methylnaphthalene	U	<0.000488	<0.00492	<0.000488	mg/L	0.985	0.000488	0.005	0.000495
1,2,4,5-Tetrachlorobenzene	U	<0.000603	<0.00492	<0.000603	mg/L	0.985	0.000603	0.005	0.000612
Hexachlorocyclopentadiene	U	<0.000550	<0.00492	<0.000550	mg/L	0.985	0.000550	0.005	0.000558
2,4,6-Trichlorophenol	U	<0.000782	<0.00985	<0.000782	mg/L	0.985	0.000782	0.01	0.000794

continued . . .

sample 208955 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
2,4,5-Trichlorophenol	U	<0.000821	<0.00492	<0.000821	mg/L	0.985	0.000821	0.005	0.000834
2-Chloronaphthalene	U	<0.000410	<0.00492	<0.000410	mg/L	0.985	0.000410	0.005	0.000416
1-Chloronaphthalene	U	<0.000469	<0.00492	<0.000469	mg/L	0.985	0.000469	0.005	0.000476
2-Nitroaniline	U	<0.000749	<0.00492	<0.000749	mg/L	0.985	0.000749	0.005	0.00076
Dimethylphthalate	U	<0.000633	<0.00492	<0.000633	mg/L	0.985	0.000633	0.005	0.000643
Acenaphthylene	U	<0.000577	<0.00492	<0.000577	mg/L	0.985	0.000577	0.005	0.000586
2,6-Dinitrotoluene	U	<0.000630	<0.00492	<0.000630	mg/L	0.985	0.000630	0.005	0.00064
3-Nitroaniline	U	<0.000710	<0.00492	<0.000710	mg/L	0.985	0.000710	0.005	0.000721
Acenaphthene	U	<0.000417	<0.00492	<0.000417	mg/L	0.985	0.000417	0.005	0.000423
2,4-Dinitrophenol	U	<0.000217	<0.00492	<0.000217	mg/L	0.985	0.000217	0.005	0.00022
Dibenzofuran	U	<0.000402	<0.00492	<0.000402	mg/L	0.985	0.000402	0.005	0.000408
Pentachlorobenzene	U	<0.000562	<0.00492	<0.000562	mg/L	0.985	0.000562	0.005	0.000571
4-Nitrophenol	U	<0.00182	<0.0246	<0.00182	mg/L	0.985	0.00182	0.025	0.00185
2,4-Dinitrotoluene	U	<0.000897	<0.00492	<0.000897	mg/L	0.985	0.000897	0.005	0.000911
1-Naphthylamine	U	<0.000678	<0.00492	<0.000678	mg/L	0.985	0.000678	0.005	0.000688
2,3,4,6-Tetrachlorophenol	U	<0.000556	<0.00985	<0.000556	mg/L	0.985	0.000556	0.01	0.000565
2-Naphthylamine	U	<0.000688	<0.00492	<0.000688	mg/L	0.985	0.000688	0.005	0.000699
Fluorene	U	<0.000638	<0.00492	<0.000638	mg/L	0.985	0.000638	0.005	0.000648
4-Chlorophenyl-phenylether	U	<0.000610	<0.00492	<0.000610	mg/L	0.985	0.000610	0.005	0.000619
Diethylphthalate	U	<0.000816	<0.00492	<0.000816	mg/L	0.985	0.000816	0.005	0.000828
4-Nitroaniline	U	<0.000691	<0.00492	<0.000691	mg/L	0.985	0.000691	0.005	0.000702
Diphenylhydrazine	U	<0.000647	<0.00492	<0.000647	mg/L	0.985	0.000647	0.005	0.000657
4,6-Dinitro-2-methylphenol	U	<0.00195	<0.00492	<0.00195	mg/L	0.985	0.00195	0.005	0.00198
Diphenylamine	U	<0.000433	<0.00492	<0.000433	mg/L	0.985	0.000433	0.005	0.00044
4-Bromophenyl-phenylether	U	<0.000542	<0.00492	<0.000542	mg/L	0.985	0.000542	0.005	0.00055
Phenacetin	U	<0.000596	<0.00492	<0.000596	mg/L	0.985	0.000596	0.005	0.000605
Hexachlorobenzene	U	<0.000498	<0.00492	<0.000498	mg/L	0.985	0.000498	0.005	0.000506
4-Aminobiphenyl	U	<0.000519	<0.00492	<0.000519	mg/L	0.985	0.000519	0.005	0.000527
Pentachlorophenol	U	<0.000428	<0.00985	<0.000428	mg/L	0.985	0.000428	0.01	0.000435
Anthracene	U	<0.000422	<0.00492	<0.000422	mg/L	0.985	0.000422	0.005	0.000428
Pentachloronitrobenzene	U	<0.000402	<0.00492	<0.000402	mg/L	0.985	0.000402	0.005	0.000408
Pronamide	U	<0.000469	<0.00492	<0.000469	mg/L	0.985	0.000469	0.005	0.000476
Phenanthrene	U	<0.000540	<0.00492	<0.000540	mg/L	0.985	0.000540	0.005	0.000548
Di-n-butylphthalate	U	<0.000476	<0.00492	<0.000476	mg/L	0.985	0.000476	0.005	0.000483
Fluoranthene	U	<0.000622	<0.00492	<0.000622	mg/L	0.985	0.000622	0.005	0.000632
Benzidine	U	<0.00234	<0.0246	<0.00234	mg/L	0.985	0.00234	0.025	0.00238
Pyrene	U	<0.000712	<0.00492	<0.000712	mg/L	0.985	0.000712	0.005	0.000723
p-Dimethylaminoazobenzene	U	<0.000888	<0.00492	<0.000888	mg/L	0.985	0.000888	0.005	0.000902
Butylbenzylphthalate	U	<0.000438	<0.00492	<0.000438	mg/L	0.985	0.000438	0.005	0.000445
Benzo(a)anthracene	U	<0.000519	<0.00492	<0.000519	mg/L	0.985	0.000519	0.005	0.000527
3,3-Dichlorobenzidine	U	<0.00116	<0.00492	<0.00116	mg/L	0.985	0.00116	0.005	0.00118
Chrysene	U	<0.000628	<0.00492	<0.000628	mg/L	0.985	0.000628	0.005	0.000638
bis(2-ethylhexyl)phthalate	U	<0.000552	<0.00492	<0.000552	mg/L	0.985	0.000552	0.005	0.000561
Di-n-octylphthalate	U	<0.00114	<0.00492	<0.00114	mg/L	0.985	0.00114	0.005	0.00116
Benzo(b)fluoranthene	U	<0.000866	<0.00492	<0.000866	mg/L	0.985	0.000866	0.005	0.000879

continued ...

sample 208955 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Benzo(k)fluoranthene	U	<0.000832	<0.00492	<0.000832	mg/L	0.985	0.000832	0.005	0.000845
7,12-Dimethylbenz(a)anthracene	U	<0.00100	<0.00492	<0.00100	mg/L	0.985	0.00100	0.005	0.00102
Benzo(a)pyrene	U	<0.00164	<0.00492	<0.00164	mg/L	0.985	0.00164	0.005	0.00167
3-Methylcholanthrene	U	<0.000894	<0.00492	<0.000894	mg/L	0.985	0.000894	0.005	0.000908
Dibenzo(a,j)acridine	U	<0.00127	<0.00492	<0.00127	mg/L	0.985	0.00127	0.005	0.00129
Indeno(1,2,3-cd)pyrene	U	<0.000849	<0.00492	<0.000849	mg/L	0.985	0.000849	0.005	0.000862
Dibenzo(a,h)anthracene	U	<0.000797	<0.00492	<0.000797	mg/L	0.985	0.000797	0.005	0.000809
Benzo(g,h,i)perylene	U	<0.000935	<0.00492	<0.000935	mg/L	0.985	0.000935	0.005	0.000949

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		0.0295	mg/L	0.985	0.0800	37	10 - 53.1
Phenol-d5		0.0201	mg/L	0.985	0.0800	25	10 - 36.9
Nitrobenzene-d5		0.0550	mg/L	0.985	0.0800	69	23.8 - 108
2-Fluorobiphenyl		0.0559	mg/L	0.985	0.0800	70	15.9 - 127
2,4,6-Tribromophenol		0.0640	mg/L	0.985	0.0800	80	10 - 123
Terphenyl-d14		0.0596	mg/L	0.985	0.0800	74	17.2 - 160

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	El Paso				
Analysis:	SO4 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	63668	Date Analyzed:	2009-09-01	Analyzed By:	JR
Prep Batch:	54356	Sample Preparation:	2009-09-01	Prepared By:	JR

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Sulfate	U	<0.504	<1.33	<0.504	mg/L	1	0.504	1.33	0.5038

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	El Paso				
Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	63473	Date Analyzed:	2009-09-03	Analyzed By:	MD
Prep Batch:	54173	Sample Preparation:	2009-09-03	Prepared By:	MD

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Dissolved Solids		**56.0**	**56.0**	<5.00	mg/L	1	5.00		5

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	TKN	Analytical Method:	E 351.3	Prep Method:	N/A
QC Batch:	63441	Date Analyzed:	2009-09-09	Analyzed By:	AH
Prep Batch:	54150	Sample Preparation:	2009-09-09	Prepared By:	AH

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Kjeldahl Nitrogen - N	U	<2.45	<10.0	<2.45	mg/L	1	2.45	10	2.45

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Tl, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Thallium	U	<0.00488	<0.0500	<0.00488	mg/L	1	0.00488	0.05	0.00488

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	TOC	Analytical Method:	SM 5310C	Prep Method:	N/A
QC Batch:	63340	Date Analyzed:	2009-09-08	Analyzed By:	KV
Prep Batch:	54065	Sample Preparation:	2009-09-08	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Organic Carbon	J	**0.742**	<1.00	<0.401	mg/L	1	0.401	1	0.401

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Total Cyanide	Analytical Method:	SM 4500-CN C,E	Prep Method:	N/A
QC Batch:	63391	Date Analyzed:	2009-09-07	Analyzed By:	AH
Prep Batch:	54106	Sample Preparation:	2009-09-07	Prepared By:	AH

continued . . .

sample 208955 continued ...

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Cyanide	U	<0.0110	<0.0150	<0.0110	mg/L	1	0.0110	0.015	0.011

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	TPH DRO	Analytical Method:	Mod. 8015B	Prep Method:	N/A
QC Batch:	63307	Date Analyzed:	2009-09-07	Analyzed By:	
Prep Batch:	54035	Sample Preparation:	2009-09-04	Prepared By:	

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
DRO	U	<0.876	<5.00	<0.876	mg/L	1	0.876	5	0.876

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		11.2	mg/L	1	10.0	112	57.3 - 151

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	TPH GRO	Analytical Method:	S 8015B	Prep Method:	S 5030B
QC Batch:	63239	Date Analyzed:	2009-09-03	Analyzed By:	ER
Prep Batch:	53976	Sample Preparation:	2009-09-03	Prepared By:	ER

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
GRO	U	<0.152	<0.200	<0.152	mg/L	1	0.152	0.2	0.152

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.107	mg/L	1	0.100	107	70.8 - 112
4-Bromofluorobenzene (4-BFB)		0.105	mg/L	1	0.100	105	80 - 109

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory: Lubbock

Analysis:	V, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Vanadium	U	<0.000426	<0.00500	<0.000426	mg/L	1	0.000426	0.005	0.000426

Sample: 208955 - HLSF-0154-RB-001-0809

Laboratory:	Lubbock				
Analysis:	Zn, Total	Analytical Method:	S 6010B	Prep Method:	S 3010A
QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	Sample Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	SDL Based Result	MQL Based Result	Method Blank Result	Units	Dilution	SDL	MQL (Unadjusted)	MDL (Unadjusted)
Total Zinc	U	<0.000465	<0.00500	<0.000465	mg/L	1	0.000465	0.005	0.000465

Method Blank (1)

QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	QC Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	Result	Units	Reporting Limits
Total Silver		<0.00111	mg/L	0.00111

Method Blank (1)

QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	QC Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	Result	Units	Reporting Limits
Total Aluminum		<0.00301	mg/L	0.00301

Method Blank (1)

QC Batch:	63221	Date Analyzed:	2009-09-03	Analyzed By:	RR
Prep Batch:	53951	QC Preparation:	2009-09-03	Prepared By:	KV

Parameter	Flag	Result	Units	Reporting Limits
Total Arsenic		<0.00448	mg/L	0.00448

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Barium		<0.00105	mg/L	0.00105

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Beryllium		<0.000450	mg/L	0.00045

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Cadmium		<0.000303	mg/L	0.000303

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Cobalt		<0.000822	mg/L	0.000822

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Chromium		<0.000583	mg/L	0.000583

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Copper		<0.000843	mg/L	0.000843

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Iron		<0.000872	mg/L	0.000872

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Manganese		<0.000305	mg/L	0.000305

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Molybdenum		<0.00119	mg/L	0.00119

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Nickel		<0.00121	mg/L	0.00121

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Phosphorous		<0.00289	mg/L	0.00289

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Lead		<0.00326	mg/L	0.00326

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Antimony		<0.00440	mg/L	0.0044

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Selenium		<0.00508	mg/L	0.00508

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Thallium		<0.00488	mg/L	0.00488

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Vanadium		<0.000426	mg/L	0.000426

Method Blank (1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Zinc		<0.000465	mg/L	0.000465

Method Blank (1)

QC Batch: 63227 Date Analyzed: 2009-09-03 Analyzed By: TP
Prep Batch: 53960 QC Preparation: 2009-09-03 Prepared By: TP

Parameter	Flag	Result	Units	Reporting Limits
Total Mercury		<0.0000329	mg/L	3.29e-05

Method Blank (1)

QC Batch: 63239 Date Analyzed: 2009-09-03 Analyzed By: ER
Prep Batch: 53976 QC Preparation: 2009-09-03 Prepared By: ER

Parameter	Flag	Result	Units	Reporting Limits
GRO		<0.152	mg/L	0.152

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	70.8 - 112
4-Bromofluorobenzene (4-BFB)		0.100	mg/L	1	0.100	100	80 - 109

Method Blank (1)

QC Batch: 63261 Date Analyzed: 2009-09-04 Analyzed By: MN
Prep Batch: 53996 QC Preparation: 2009-09-02 Prepared By: MN

Parameter	Flag	Result	Units	Reporting Limits
Pyridine		<0.000608	mg/L	0.000608
N-Nitrosodimethylamine		<0.000552	mg/L	0.000552
2-Picoline		<0.000408	mg/L	0.000408
Methyl methanesulfonate		<0.000350	mg/L	0.00035
Ethyl methanesulfonate		<0.000448	mg/L	0.000448
Phenol		<0.000509	mg/L	0.000509
Aniline		<0.000691	mg/L	0.000691
bis(2-chloroethyl)ether		<0.000440	mg/L	0.00044
2-Chlorophenol		<0.000537	mg/L	0.000537
1,3-Dichlorobenzene (meta)		<0.000441	mg/L	0.000441
1,4-Dichlorobenzene (para)		<0.000440	mg/L	0.00044
Benzyl alcohol		<0.000538	mg/L	0.000538
1,2-Dichlorobenzene (ortho)		<0.000443	mg/L	0.000443
2-Methylphenol		<0.000726	mg/L	0.000726
bis(2-chloroisopropyl)ether		<0.000503	mg/L	0.000503
4-Methylphenol / 3-Methylphenol		<0.000512	mg/L	0.000512
N-Nitrosodi-n-propylamine		<0.000732	mg/L	0.000732
Hexachloroethane		<0.000507	mg/L	0.000507
Acetophenone		<0.000424	mg/L	0.000424
Nitrobenzene		<0.000465	mg/L	0.000465
N-Nitrosopiperidine		<0.000443	mg/L	0.000443
Isophorone		<0.000619	mg/L	0.000619

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Parameter	Flag	Result	Units	Reporting Limits
2-Nitrophenol		<0.000406	mg/L	0.000406
2,4-Dimethylphenol		<0.000477	mg/L	0.000477
bis(2-chloroethoxy)methane		<0.000432	mg/L	0.000432
2,4-Dichlorophenol		<0.000400	mg/L	0.0004
1,2,4-Trichlorobenzene		<0.000404	mg/L	0.000404
Benzoic acid		<0.00163	mg/L	0.00163
Naphthalene		<0.000489	mg/L	0.000489
a,a-Dimethylphenethylamine		<0.00129	mg/L	0.00129
4-Chloroaniline		<0.000378	mg/L	0.000378
2,6-Dichlorophenol		<0.000484	mg/L	0.000484
Hexachlorobutadiene		<0.000517	mg/L	0.000517
N-Nitroso-di-n-butylamine		<0.000656	mg/L	0.000656
4-Chloro-3-methylphenol		<0.000522	mg/L	0.000522
2-Methylnaphthalene		<0.000423	mg/L	0.000423
1-Methylnaphthalene		<0.000495	mg/L	0.000495
1,2,4,5-Tetrachlorobenzene		<0.000612	mg/L	0.000612
Hexachlorocyclopentadiene		<0.000558	mg/L	0.000558
2,4,6-Trichlorophenol		<0.000794	mg/L	0.000794
2,4,5-Trichlorophenol		<0.000834	mg/L	0.000834
2-Chloronaphthalene		<0.000416	mg/L	0.000416
1-Chloronaphthalene		<0.000476	mg/L	0.000476
2-Nitroaniline		<0.000760	mg/L	0.00076
Dimethylphthalate		<0.000643	mg/L	0.000643
Acenaphthylene		<0.000586	mg/L	0.000586
2,6-Dinitrotoluene		<0.000640	mg/L	0.00064
3-Nitroaniline		<0.000721	mg/L	0.000721
Acenaphthene		<0.000423	mg/L	0.000423
2,4-Dinitrophenol		<0.000220	mg/L	0.00022
Dibenzofuran		<0.000408	mg/L	0.000408
Pentachlorobenzene		<0.000571	mg/L	0.000571
4-Nitrophenol		<0.00185	mg/L	0.00185
2,4-Dinitrotoluene		<0.000911	mg/L	0.000911
1-Naphthylamine		<0.000688	mg/L	0.000688
2,3,4,6-Tetrachlorophenol		<0.000565	mg/L	0.000565
2-Naphthylamine		<0.000699	mg/L	0.000699
Fluorene		<0.000648	mg/L	0.000648
4-Chlorophenyl-phenylether		<0.000619	mg/L	0.000619
Diethylphthalate		<0.000828	mg/L	0.000828
4-Nitroaniline		<0.000702	mg/L	0.000702
Diphenylhydrazine		<0.000657	mg/L	0.000657
4,6-Dinitro-2-methylphenol		<0.00198	mg/L	0.00198
Diphenylamine		<0.000440	mg/L	0.00044
4-Bromophenyl-phenylether		<0.000550	mg/L	0.00055
Phenacetin		<0.000605	mg/L	0.000605
Hexachlorobenzene		<0.000506	mg/L	0.000506
4-Aminobiphenyl		<0.000527	mg/L	0.000527
Pentachlorophenol		<0.000435	mg/L	0.000435

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Parameter	Flag	Result	Units	Reporting Limits
Anthracene		<0.000428	mg/L	0.000428
Pentachloronitrobenzene		<0.000408	mg/L	0.000408
Pronamide		<0.000476	mg/L	0.000476
Phenanthrene		<0.000548	mg/L	0.000548
Di-n-butylphthalate		<0.000483	mg/L	0.000483
Fluoranthene		<0.000632	mg/L	0.000632
Benzidine		<0.00238	mg/L	0.00238
Pyrene		<0.000723	mg/L	0.000723
p-Dimethylaminoazobenzene		<0.000902	mg/L	0.000902
Butylbenzylphthalate		<0.000445	mg/L	0.000445
Benzo(a)anthracene		<0.000527	mg/L	0.000527
3,3-Dichlorobenzidine		<0.00118	mg/L	0.00118
Chrysene		<0.000638	mg/L	0.000638
bis(2-ethylhexyl)phthalate		<0.000561	mg/L	0.000561
Di-n-octylphthalate		<0.00116	mg/L	0.00116
Benzo(b)fluoranthene		<0.000879	mg/L	0.000879
Benzo(k)fluoranthene		<0.000845	mg/L	0.000845
7,12-Dimethylbenz(a)anthracene		<0.00102	mg/L	0.00102
Benzo(a)pyrene		<0.00167	mg/L	0.00167
3-Methylcholanthrene		<0.000908	mg/L	0.000908
Dibenzo(a,j)acridine		<0.00129	mg/L	0.00129
Indeno(1,2,3-cd)pyrene		<0.000862	mg/L	0.000862
Dibenzo(a,h)anthracene		<0.000809	mg/L	0.000809
Benzo(g,h,i)perylene		<0.000949	mg/L	0.000949

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
2-Fluorophenol		0.0250	mg/L	1	0.0800	31	10 - 53.1
Phenol-d5		0.0158	mg/L	1	0.0800	20	10 - 36.9
Nitrobenzene-d5		0.0378	mg/L	1	0.0800	47	23.8 - 108
2-Fluorobiphenyl		0.0396	mg/L	1	0.0800	50	15.9 - 127
2,4,6-Tribromophenol		0.0493	mg/L	1	0.0800	62	10 - 123
Terphenyl-d14		0.0437	mg/L	1	0.0800	55	17.2 - 160

Method Blank (1)

QC Batch: 63307 Date Analyzed: 2009-09-07 Analyzed By:
Prep Batch: 54035 QC Preparation: 2009-09-04 Prepared By:

Parameter	Flag	Result	Units	Reporting Limits
DRO		<0.876	mg/L	0.876

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		8.25	mg/L	1	10.0	82	57.3 - 151

Method Blank (1)

QC Batch: 63327 Date Analyzed: 2009-09-01 Analyzed By: MD
Prep Batch: 54055 QC Preparation: 2009-09-01 Prepared By: MD

Parameter	Flag	Result	Units	Reporting Limits
Hexavalent Chromium		<0.00594	mg/L	0.00594

Method Blank (1)

QC Batch: 63340 Date Analyzed: 2009-09-08 Analyzed By: KV
Prep Batch: 54065 QC Preparation: 2009-09-08 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Organic Carbon		0.848	mg/L	0.401

Method Blank (1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Calcium		<0.117	mg/L	0.117

Method Blank (1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Potassium		<0.172	mg/L	0.172

Method Blank (1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Magnesium		<0.160	mg/L	0.16

Method Blank (1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Total Sodium		<0.0500	mg/L	0.05

Method Blank (1)

QC Batch: 63370 Date Analyzed: 2009-09-05 Analyzed By: AH
Prep Batch: 54092 QC Preparation: 2009-09-05 Prepared By: AH

Parameter	Flag	Result	Units	Reporting Limits
Ammonia-N		<0.353	mg/L	0.353

Method Blank (1)

QC Batch: 63391 Date Analyzed: 2009-09-07 Analyzed By: AH
Prep Batch: 54106 QC Preparation: 2009-09-07 Prepared By: AH

Parameter	Flag	Result	Units	Reporting Limits
Total Cyanide		<0.0110	mg/L	0.011

Method Blank (1)

QC Batch: 63425 Date Analyzed: 2009-09-10 Analyzed By: DS
Prep Batch: 54137 QC Preparation: 2009-09-04 Prepared By: DS

Parameter	Flag	Result	Units	Reporting Limits
HMX		<0.123	µg/L	0.123
RDX		<0.298	µg/L	0.298
1,3,5-Trinitrobenzene		<0.339	µg/L	0.339
1,3-Dinitrobenzene		<0.389	µg/L	0.389
Nitrobenzene		<0.379	µg/L	0.379
Tetryl		<0.413	µg/L	0.413
TNT		<0.464	µg/L	0.464
4-Amino-DNT		<0.319	µg/L	0.319
2-Amino-DNT		<0.391	µg/L	0.391
2,6-DNT		<0.323	µg/L	0.323
2,4-DNT		<0.366	µg/L	0.366
2-NT		<0.379	µg/L	0.379

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Parameter	Flag	Result	Units	Reporting Limits
4-NT		<0.398	μg/L	0.398
3-NT		<0.346	μg/L	0.346

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
1,2-Dinitrobenzene		2.40	μg/L	1	2.50	96	19.8 - 160

Method Blank (1)

QC Batch: 63441 Date Analyzed: 2009-09-09 Analyzed By: AH
Prep Batch: 54150 QC Preparation: 2009-09-09 Prepared By: AH

Parameter	Flag	Result	Units	Reporting Limits
Total Kjeldahl Nitrogen - N		<2.45	mg/L	2.45

Method Blank (1)

QC Batch: 63461 Date Analyzed: 2009-09-11 Analyzed By: RR
Prep Batch: 54153 QC Preparation: 2009-09-11 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Dissolved Chromium		<0.000583	mg/L	0.000583

Method Blank (1)

QC Batch: 63473 Date Analyzed: 2009-09-03 Analyzed By: MD
Prep Batch: 54173 QC Preparation: 2009-09-03 Prepared By: MD

Parameter	Flag	Result	Units	Reporting Limits
Total Dissolved Solids		<5.00	mg/L	5

Method Blank (1)

QC Batch: 63485 Date Analyzed: 2009-09-11 Analyzed By: KV
Prep Batch: 54188 QC Preparation: 2009-09-11 Prepared By: KV

Parameter	Flag	Result	Units	Reporting Limits
Nitrate and Nitrite as N		<0.0350	mg/L	0.035

Method Blank (1)

QC Batch: 63527 Date Analyzed: 2009-09-10 Analyzed By: JG
Prep Batch: 54231 QC Preparation: 2009-09-10 Prepared By: JG

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

Method Blank (1)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Parameter	Flag	Result	Units	Reporting Limits
Bromide		<0.0394	mg/L	0.0394

Method Blank (1)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Parameter	Flag	Result	Units	Reporting Limits
Chloride		<0.640	mg/L	0.6404

Method Blank (1)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Parameter	Flag	Result	Units	Reporting Limits
Fluoride		<0.0434	mg/L	0.0434

Method Blank (1)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Parameter	Flag	Result	Units	Reporting Limits
Sulfate		<0.504	mg/L	0.5038

Method Blank (1)

QC Batch: 63699 Date Analyzed: 2009-09-17 Analyzed By: JR
Prep Batch: 54391 QC Preparation: 2009-09-17 Prepared By: MD

Parameter	Flag	Result	Units	Reporting Limits
Oil and Grease		<3.60	mg/L	3.6

Duplicate (1) Duplicated Sample: 208955

QC Batch: 63339 Date Analyzed: 2009-09-01 Analyzed By: JG
Prep Batch: 54063 QC Preparation: 2009-09-01 Prepared By: JG

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
pH	5.56	5.58	s.u.	1	0	1.1

Duplicate (1) Duplicated Sample: 208953

QC Batch: 63473 Date Analyzed: 2009-09-03 Analyzed By: MD
Prep Batch: 54173 QC Preparation: 2009-09-03 Prepared By: MD

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	28800	29500	mg/L	1	2	10

Duplicate (1) Duplicated Sample: 208953

QC Batch: 63527 Date Analyzed: 2009-09-10 Analyzed By: JG
Prep Batch: 54231 QC Preparation: 2009-09-10 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	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Bicarbonate Alkalinity	262	260	mg/L as CaCo3	1	1	20
Total Alkalinity	262	260	mg/L as CaCo3	1	1	20

Laboratory Control Spike (LCS-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Silver	0.124	mg/L	1	0.125	<0.00111	99	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Silver	0.124	mg/L	1	0.125	<0.00111	99	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Aluminum	0.953	mg/L	1	1.00	<0.00301	95	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Aluminum	0.951	mg/L	1	1.00	<0.00301	95	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Arsenic	0.478	mg/L	1	0.500	<0.00448	96	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Arsenic	0.476	mg/L	1	0.500	<0.00448	95	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Barium	1.03	mg/L	1	1.00	<0.00105	103	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Barium	1.03	mg/L	1	1.00	<0.00105	103	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Beryllium	0.0248	mg/L	1	0.0250	<0.000450	99	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Beryllium	0.0256	mg/L	1	0.0250	<0.000450	102	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Cadmium	0.250	mg/L	1	0.250	<0.000303	100	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Cadmium	0.250	mg/L	1	0.250	<0.000303	100	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Cobalt	0.246	mg/L	1	0.250	<0.000822	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Cobalt	0.246	mg/L	1	0.250	<0.000822	98	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Chromium	0.0985	mg/L	1	0.100	<0.000583	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Chromium	0.0980	mg/L	1	0.100	<0.000583	98	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Copper	0.131	mg/L	1	0.125	<0.000843	105	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Copper	0.133	mg/L	1	0.125	<0.000843	106	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Iron	0.570	mg/L	1	0.500	<0.000872	114	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Iron	0.516	mg/L	1	0.500	<0.000872	103	85 - 115	10	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Manganese	0.253	mg/L	1	0.250	<0.000305	101	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Manganese	0.254	mg/L	1	0.250	<0.000305	102	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Molybdenum	0.544	mg/L	1	0.500	<0.00119	109	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Molybdenum	0.543	mg/L	1	0.500	<0.00119	109	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Nickel	0.252	mg/L	1	0.250	<0.00121	101	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Nickel	0.251	mg/L	1	0.250	<0.00121	100	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Phosphorous	0.473	mg/L	1	0.500	<0.00289	95	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Phosphorous	0.470	mg/L	1	0.500	<0.00289	94	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Lead	0.468	mg/L	1	0.500	<0.00326	94	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Lead	0.464	mg/L	1	0.500	<0.00326	93	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Antimony	0.249	mg/L	1	0.250	<0.00440	100	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Antimony	0.248	mg/L	1	0.250	<0.00440	99	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Selenium	0.442	mg/L	1	0.500	<0.00508	88	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Selenium	0.443	mg/L	1	0.500	<0.00508	89	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Thallium	0.503	mg/L	1	0.500	<0.00488	101	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Thallium	0.503	mg/L	1	0.500	<0.00488	101	85 - 115	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: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Vanadium	0.246	mg/L	1	0.250	<0.000426	98	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Vanadium	0.248	mg/L	1	0.250	<0.000426	99	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Zinc	0.251	mg/L	1	0.250	<0.000465	100	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Zinc	0.253	mg/L	1	0.250	<0.000465	101	85 - 115	1	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63227 Date Analyzed: 2009-09-03 Analyzed By: TP
Prep Batch: 53960 QC Preparation: 2009-09-03 Prepared By: TP

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Mercury	0.000960	mg/L	1	0.00100	<0.0000329	96	90.3 - 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	0.000960	mg/L	1	0.00100	<0.0000329	96	90.3 - 108	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: 63239 Date Analyzed: 2009-09-03 Analyzed By: ER
Prep Batch: 53976 QC Preparation: 2009-09-03 Prepared By: ER

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	1.08	mg/L	1	1.00	<0.152	108	75.5 - 118

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	1.05	mg/L	1	1.00	<0.152	105	75.5 - 118	3	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)	0.109	0.104	mg/L	1	0.100	109	104	78.2 - 121
4-Bromofluorobenzene (4-BFB)	0.106	0.104	mg/L	1	0.100	106	104	82.2 - 118

Laboratory Control Spike (LCS-1)

QC Batch: 63261 Date Analyzed: 2009-09-04 Analyzed By: MN
Prep Batch: 53996 QC Preparation: 2009-09-02 Prepared By: MN

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Phenol	0.0205	mg/L	1	0.0800	<0.000509	26	10 - 66.5
2-Chlorophenol	0.0411	mg/L	1	0.0800	<0.000537	51	11.2 - 108
1,4-Dichlorobenzene (para)	0.0378	mg/L	1	0.0800	<0.000440	47	16 - 101
N-Nitrosodi-n-propylamine	0.0474	mg/L	1	0.0800	<0.000732	59	10 - 142
1,2,4-Trichlorobenzene	0.0389	mg/L	1	0.0800	<0.000404	49	18 - 118
Naphthalene	0.0410	mg/L	1	0.0800	<0.000489	51	20.2 - 114
4-Chloro-3-methylphenol	0.0507	mg/L	1	0.0800	<0.000522	63	21.5 - 125
Acenaphthylene	0.0474	mg/L	1	0.0800	<0.000586	59	25.8 - 121
Acenaphthene	0.0474	mg/L	1	0.0800	<0.000423	59	33.5 - 122
4-Nitrophenol	0.0191	mg/L	1	0.0800	<0.00185	24	10 - 125
2,4-Dinitrotoluene	0.0543	mg/L	1	0.0800	<0.000911	68	53 - 130
Fluorene	0.0494	mg/L	1	0.0800	<0.000648	62	44.6 - 117
Pentachlorophenol	0.0373	mg/L	1	0.0800	<0.000435	47	10 - 139
Anthracene	0.0511	mg/L	1	0.0800	<0.000428	64	57.5 - 115
Phenanthrene	0.0509	mg/L	1	0.0800	<0.000548	64	55.5 - 118
Fluoranthene	0.0545	mg/L	1	0.0800	<0.000632	68	57 - 122
Pyrene	0.0468	mg/L	1	0.0800	<0.000723	58	58.5 - 130
Benzo(a)anthracene [1]	0.0463	mg/L	1	0.0800	<0.000527	58	63.4 - 109
Chrysene	0.0508	mg/L	1	0.0800	<0.000638	64	54.7 - 114

continued ...

[1] Spike analyte out of control limits. Results biased low. •

control spikes continued ...

Param		LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Benzo(b)fluoranthene	[2]	0.0477	mg/L	1	0.0800	<0.000879	60	64.8 - 120
Benzo(k)fluoranthene		0.0619	mg/L	1	0.0800	<0.000845	77	70.3 - 114
Benzo(a)pyrene		0.0575	mg/L	1	0.0800	<0.00167	72	63.7 - 120
Indeno(1,2,3-cd)pyrene		0.0568	mg/L	1	0.0800	<0.000862	71	65.4 - 119
Dibenzo(a,h)anthracene		0.0572	mg/L	1	0.0800	<0.000809	72	68.7 - 117
Benzo(g,h,i)perylene		0.0598	mg/L	1	0.0800	<0.000949	75	57.2 - 125

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

Param		LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Phenol		0.0210	mg/L	1	0.0800	<0.000509	26	10 - 66.5	2	20
2-Chlorophenol		0.0432	mg/L	1	0.0800	<0.000537	54	11.2 - 108	5	20
1,4-Dichlorobenzene (para)		0.0398	mg/L	1	0.0800	<0.000440	50	16 - 101	5	20
N-Nitrosodi-n-propylamine		0.0506	mg/L	1	0.0800	<0.000732	63	10 - 142	6	20
1,2,4-Trichlorobenzene		0.0413	mg/L	1	0.0800	<0.000404	52	18 - 118	6	20
Naphthalene		0.0436	mg/L	1	0.0800	<0.000489	54	20.2 - 114	6	20
4-Chloro-3-methylphenol		0.0534	mg/L	1	0.0800	<0.000522	67	21.5 - 125	5	20
Acenaphthylene		0.0515	mg/L	1	0.0800	<0.000586	64	25.8 - 121	8	20
Acenaphthene		0.0505	mg/L	1	0.0800	<0.000423	63	33.5 - 122	6	20
4-Nitrophenol		0.0220	mg/L	1	0.0800	<0.00185	28	10 - 125	14	20
2,4-Dinitrotoluene		0.0577	mg/L	1	0.0800	<0.000911	72	53 - 130	6	20
Fluorene		0.0533	mg/L	1	0.0800	<0.000648	67	44.6 - 117	8	20
Pentachlorophenol		0.0388	mg/L	1	0.0800	<0.000435	48	10 - 139	4	20
Anthracene		0.0530	mg/L	1	0.0800	<0.000428	66	57.5 - 115	4	20
Phenanthrene		0.0521	mg/L	1	0.0800	<0.000548	65	55.5 - 118	2	20
Fluoranthene		0.0564	mg/L	1	0.0800	<0.000632	70	57 - 122	3	20
Pyrene		0.0495	mg/L	1	0.0800	<0.000723	62	58.5 - 130	6	20
Benzo(a)anthracene	[3]	0.0486	mg/L	1	0.0800	<0.000527	61	63.4 - 109	5	20
Chrysene		0.0541	mg/L	1	0.0800	<0.000638	68	54.7 - 114	6	20
Benzo(b)fluoranthene		0.0533	mg/L	1	0.0800	<0.000879	67	64.8 - 120	11	20
Benzo(k)fluoranthene		0.0696	mg/L	1	0.0800	<0.000845	87	70.3 - 114	12	20
Benzo(a)pyrene		0.0630	mg/L	1	0.0800	<0.00167	79	63.7 - 120	9	20
Indeno(1,2,3-cd)pyrene		0.0615	mg/L	1	0.0800	<0.000862	77	65.4 - 119	8	20
Dibenzo(a,h)anthracene		0.0630	mg/L	1	0.0800	<0.000809	79	68.7 - 117	10	20
Benzo(g,h,i)perylene		0.0643	mg/L	1	0.0800	<0.000949	80	57.2 - 125	7	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
2-Fluorophenol	0.0260	0.0278	mg/L	1	0.0800	32	35	10 - 53.1
Phenol-d5	0.0198	0.0210	mg/L	1	0.0800	25	26	10 - 36.9
Nitrobenzene-d5	0.0419	0.0439	mg/L	1	0.0800	52	55	23.8 - 108
2-Fluorobiphenyl	0.0429	0.0466	mg/L	1	0.0800	54	58	15.9 - 127
2,4,6-Tribromophenol	0.0565	0.0609	mg/L	1	0.0800	71	76	10 - 123
Terphenyl-d14	0.0461	0.0494	mg/L	1	0.0800	58	62	17.2 - 160

[2] Spike analyte out of control limits. Results biased low. •
[3] Spike analyte out of control limits. Results biased low. •

Laboratory Control Spike (LCS-1)

QC Batch: 63307 Date Analyzed: 2009-09-07 Analyzed By:
Prep Batch: 54035 QC Preparation: 2009-09-04 Prepared By:

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	27.0	mg/L	1	25.0	<0.876	108	78.6 - 154

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	28.3	mg/L	1	25.0	<0.876	113	78.6 - 154	5	20

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

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	8.66	8.90	mg/L	1	10.0	87	89	57.3 - 151

Laboratory Control Spike (LCS-1)

QC Batch: 63327 Date Analyzed: 2009-09-01 Analyzed By: MD
Prep Batch: 54055 QC Preparation: 2009-09-01 Prepared By: MD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Hexavalent Chromium	0.489	mg/L	1	0.500	<0.00594	98	95.4 - 105

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
Hexavalent Chromium	0.497	mg/L	1	0.500	<0.00594	99	95.4 - 105	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: 63340 Date Analyzed: 2009-09-08 Analyzed By: KV
Prep Batch: 54065 QC Preparation: 2009-09-08 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Organic Carbon	48.4	mg/L	1	50.0	<0.401	97	89.5 - 114

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

continued ...

control spikes continued ...

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Organic Carbon	49.4	mg/L	1	50.0	<0.401	99	89.5 - 114	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: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Calcium	54.2	mg/L	1	50.0	<0.117	108	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Calcium	50.5	mg/L	1	50.0	<0.117	101	85 - 115	7	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Potassium	53.3	mg/L	1	50.0	<0.172	107	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Potassium	50.2	mg/L	1	50.0	<0.172	100	85 - 115	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: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Magnesium	52.2	mg/L	1	50.0	<0.160	104	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Magnesium	50.1	mg/L	1	50.0	<0.160	100	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Sodium	53.2	mg/L	1	50.0	<0.0500	106	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Sodium	50.6	mg/L	1	50.0	<0.0500	101	85 - 115	5	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: 63425 Date Analyzed: 2009-09-10 Analyzed By: DS
Prep Batch: 54137 QC Preparation: 2009-09-04 Prepared By: DS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
HMX	2.41	μg/L	1	2.50	<0.123	96	63.5 - 125
RDX	2.37	μg/L	1	2.50	<0.298	95	74.5 - 124
1,3,5-Trinitrobenzene	2.38	μg/L	1	2.50	<0.339	95	54.1 - 131
1,3-Dinitrobenzene	2.45	μg/L	1	2.50	<0.389	98	72 - 112
Nitrobenzene	2.50	μg/L	1	2.50	<0.379	100	72.5 - 126
Tetryl	2.31	μg/L	1	2.50	<0.413	92	35.9 - 149
TNT	2.37	μg/L	1	2.50	<0.464	95	40.7 - 129
4-Amino-DNT	2.31	μg/L	1	2.50	<0.319	92	80 - 120
2-Amino-DNT	2.51	μg/L	1	2.50	<0.391	100	80 - 120
2,6-DNT	2.19	μg/L	1	2.50	<0.323	88	80 - 120
2,4-DNT	2.52	μg/L	1	2.50	<0.366	101	80 - 120
2-NT	2.47	μg/L	1	2.50	<0.379	99	49.8 - 139
4-NT	2.07	μg/L	1	2.50	<0.398	83	56.3 - 141
3-NT	2.37	μg/L	1	2.50	<0.346	95	66.2 - 129

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
HMX	2.43	μg/L	1	2.50	<0.123	97	63.5 - 125	1	20
RDX	2.33	μg/L	1	2.50	<0.298	93	74.5 - 124	2	20
1,3,5-Trinitrobenzene	2.38	μg/L	1	2.50	<0.339	95	54.1 - 131	0	20
1,3-Dinitrobenzene	2.41	μg/L	1	2.50	<0.389	96	72 - 112	2	20
Nitrobenzene	2.46	μg/L	1	2.50	<0.379	98	72.5 - 126	2	20
Tetryl	2.26	μg/L	1	2.50	<0.413	90	35.9 - 149	2	20
TNT	2.33	μg/L	1	2.50	<0.464	93	40.7 - 129	2	20
4-Amino-DNT	2.37	μg/L	1	2.50	<0.319	95	80 - 120	3	20
2-Amino-DNT	2.64	μg/L	1	2.50	<0.391	106	80 - 120	5	20
2,6-DNT	2.29	μg/L	1	2.50	<0.323	92	80 - 120	4	20
2,4-DNT	2.60	μg/L	1	2.50	<0.366	104	80 - 120	3	20
2-NT	2.34	μg/L	1	2.50	<0.379	94	49.8 - 139	5	20
4-NT	2.26	μg/L	1	2.50	<0.398	90	56.3 - 141	9	20
3-NT	2.43	μg/L	1	2.50	<0.346	97	66.2 - 129	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
1,2-Dinitrobenzene	2.29	2.15	μg/L	1	2.50	92	86	53 - 134

Laboratory Control Spike (LCS-1)

QC Batch: 63461 Date Analyzed: 2009-09-11 Analyzed By: RR
Prep Batch: 54153 QC Preparation: 2009-09-11 Prepared By: KV

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Chromium	0.0990	mg/L	1	0.100	<0.000583	99	85 - 115

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Chromium	0.0950	mg/L	1	0.100	<0.000583	95	85 - 115	4	20

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

Laboratory Control Spike (LCS-1)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromide	4.58	mg/L	1	5.00	<0.0394	92	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	4.54	mg/L	1	5.00	<0.0394	91	90 - 110	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: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	23.1	mg/L	1	25.0	<0.640	92	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	23.0	mg/L	1	25.0	<0.640	92	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: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Fluoride	4.57	mg/L	1	5.00	<0.0434	91	90 - 110

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Fluoride	4.53	mg/L	1	5.00	<0.0434	91	90 - 110	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: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	22.8	mg/L	1	25.0	<0.504	91	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
Sulfate	22.6	mg/L	1	25.0	<0.504	90	90 - 110	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: 63699 Date Analyzed: 2009-09-17 Analyzed By: JR
Prep Batch: 54391 QC Preparation: 2009-09-17 Prepared By: MD

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Oil and Grease	39.5	mg/L	1	40.0	<3.60	99	78 - 114

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

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Oil and Grease	35.2	mg/L	1	40.0	<3.60	88	78 - 114	12	18

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

Matrix Spike (MS-1) Spiked Sample: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Silver	0.137	mg/L	1	0.125	<0.00111	110	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Silver	0.135	mg/L	1	0.125	<0.00111	108	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Aluminum	1.26	mg/L	1	1.00	0.065	120	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Aluminum	1.24	mg/L	1	1.00	0.065	118	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Arsenic	0.506	mg/L	1	0.500	<0.00448	101	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Arsenic	0.496	mg/L	1	0.500	<0.00448	99	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Barium	1.00	mg/L	1	1.00	0.008	99	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Barium	0.988	mg/L	1	1.00	0.008	98	75 - 125	1	20

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

Matrix Spike (MS-1) Spiked Sample: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Beryllium	0.0254	mg/L	1	0.0250	<0.000450	102	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Beryllium	0.0247	mg/L	1	0.0250	<0.000450	99	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Cadmium	0.227	mg/L	1	0.250	<0.000303	91	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Cadmium	0.222	mg/L	1	0.250	<0.000303	89	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Cobalt	0.230	mg/L	1	0.250	<0.000822	92	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Cobalt	0.226	mg/L	1	0.250	<0.000822	90	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Chromium	0.111	mg/L	1	0.100	0.015	96	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Chromium	0.108	mg/L	1	0.100	0.015	93	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Copper	0.144	mg/L	1	0.125	<0.000843	115	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Copper	0.140	mg/L	1	0.125	<0.000843	112	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Iron	0.488	mg/L	1	0.500	<0.000872	98	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Iron	0.462	mg/L	1	0.500	<0.000872	92	75 - 125	6	20

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

Matrix Spike (MS-1) Spiked Sample: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Manganese	0.235	mg/L	1	0.250	<0.000305	94	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Manganese	0.231	mg/L	1	0.250	<0.000305	92	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Molybdenum	0.771	mg/L	1	0.500	0.211	112	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Molybdenum	0.758	mg/L	1	0.500	0.211	109	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Nickel	0.230	mg/L	1	0.250	<0.00121	92	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Nickel	0.225	mg/L	1	0.250	<0.00121	90	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Phosphorous	0.493	mg/L	1	0.500	0.004	98	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Phosphorous	0.485	mg/L	1	0.500	0.004	96	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Lead	0.412	mg/L	1	0.500	<0.00326	82	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Lead	0.403	mg/L	1	0.500	<0.00326	81	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Antimony	0.246	mg/L	1	0.250	<0.00440	98	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Antimony	0.242	mg/L	1	0.250	<0.00440	97	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Selenium	0.502	mg/L	1	0.500	<0.00508	100	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Selenium	0.487	mg/L	1	0.500	<0.00508	97	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Thallium	0.439	mg/L	1	0.500	<0.00488	88	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Thallium	0.437	mg/L	1	0.500	<0.00488	87	75 - 125	0	20

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

Matrix Spike (MS-1) Spiked Sample: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Vanadium	0.265	mg/L	1	0.250	0.017	99	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Vanadium	0.260	mg/L	1	0.250	0.017	97	75 - 125	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: 208408

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Zinc	0.258	mg/L	1	0.250	<0.000465	103	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Zinc	0.253	mg/L	1	0.250	<0.000465	101	75 - 125	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: 209000

QC Batch: 63227 Date Analyzed: 2009-09-03 Analyzed By: TP
Prep Batch: 53960 QC Preparation: 2009-09-03 Prepared By: TP

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Mercury [4]	0.000850	mg/L	1	0.00100	6e-05	79	80 - 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 Mercury	0.000860	mg/L	1	0.00100	6e-05	80	80 - 116	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: 209098

QC Batch: 63239 Date Analyzed: 2009-09-03 Analyzed By: ER
Prep Batch: 53976 QC Preparation: 2009-09-03 Prepared By: ER

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
GRO	1.11	mg/L	1	1.00	<0.152	111	48.4 - 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 [5]	0.768	mg/L	1	1.00	<0.152	77	48.4 - 136	36	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) [6]	0.112	0.0584	mg/L	1	0.1	112	58	70.3 - 129
4-Bromofluorobenzene (4-BFB) [7]	0.111	0.0576	mg/L	1	0.1	111	58	82.5 - 118

[4] Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.
[5] MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control.
[6] Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.
[7] Matrix spike recovery out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

Matrix Spike (MS-1) Spiked Sample: 208408

QC Batch: 63261 Date Analyzed: 2009-09-04 Analyzed By: MN
Prep Batch: 53996 QC Preparation: 2009-09-02 Prepared By: MN

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Phenol	0.0194	mg/L	1.02	0.0800	<0.000519	24	10 - 66.5
2-Chlorophenol	0.0437	mg/L	1.02	0.0800	<0.000548	55	11.2 - 108
1,4-Dichlorobenzene (para)	0.0354	mg/L	1.02	0.0800	<0.000449	44	16 - 101
N-Nitrosodi-n-propylamine	0.0490	mg/L	1.02	0.0800	<0.000747	61	10 - 142
1,2,4-Trichlorobenzene	0.0389	mg/L	1.02	0.0800	<0.000412	49	18 - 108
Naphthalene	0.0420	mg/L	1.02	0.0800	<0.000499	52	20.2 - 114
4-Chloro-3-methylphenol	0.0558	mg/L	1.02	0.0800	<0.000532	70	21.5 - 125
Acenaphthylene	0.0543	mg/L	1.02	0.0800	<0.000598	68	25.8 - 121
Acenaphthene	0.0538	mg/L	1.02	0.0800	<0.000431	67	33.5 - 122
4-Nitrophenol	0.0218	mg/L	1.02	0.0800	<0.00189	27	10 - 125
2,4-Dinitrotoluene	0.0604	mg/L	1.02	0.0800	<0.000929	76	53 - 130
Fluorene	0.0572	mg/L	1.02	0.0800	<0.000661	72	44.6 - 117
Pentachlorophenol	0.0394	mg/L	1.02	0.0800	<0.000444	49	10 - 139
Anthracene	0.0557	mg/L	1.02	0.0800	<0.000436	70	57.5 - 115
Phenanthrene	0.0558	mg/L	1.02	0.0800	<0.000559	70	55.5 - 118
Fluoranthene	0.0588	mg/L	1.02	0.0800	<0.000645	74	57 - 122
Pyrene	0.0524	mg/L	1.02	0.0800	<0.000737	66	58.5 - 130
Benzo(a)anthracene	0.0508	mg/L	1.02	0.0800	<0.000538	64	63.4 - 109
Chrysene	0.0568	mg/L	1.02	0.0800	<0.000651	71	54.7 - 114
Benzo(b)fluoranthene	0.0546	mg/L	1.02	0.0800	<0.000896	68	64.8 - 120
Benzo(k)fluoranthene	0.0721	mg/L	1.02	0.0800	<0.000862	90	70.3 - 114
Benzo(a)pyrene	0.0675	mg/L	1.02	0.0800	<0.00170	84	63.7 - 120
Indeno(1,2,3-cd)pyrene	0.0643	mg/L	1.02	0.0800	<0.000879	80	65.4 - 119
Dibenzo(a,h)anthracene	0.0634	mg/L	1.02	0.0800	<0.000825	79	68.7 - 117
Benzo(g,h,i)perylene	0.0664	mg/L	1.02	0.0800	<0.000968	83	57.2 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Phenol	0.0182	mg/L	1.02	0.0800	<0.000519	23	10 - 66.5	6	20
2-Chlorophenol	0.0398	mg/L	1.02	0.0800	<0.000548	50	11.2 - 108	9	20
1,4-Dichlorobenzene (para)	0.0317	mg/L	1.02	0.0800	<0.000449	40	16 - 101	11	20
N-Nitrosodi-n-propylamine	0.0465	mg/L	1.02	0.0800	<0.000747	58	10 - 142	5	20
1,2,4-Trichlorobenzene	0.0344	mg/L	1.02	0.0800	<0.000412	43	18 - 108	12	20
Naphthalene	0.0363	mg/L	1.02	0.0800	<0.000499	45	20.2 - 114	15	20
4-Chloro-3-methylphenol	0.0496	mg/L	1.02	0.0800	<0.000532	62	21.5 - 125	12	20
Acenaphthylene	0.0479	mg/L	1.02	0.0800	<0.000598	60	25.8 - 121	12	20
Acenaphthene	0.0468	mg/L	1.02	0.0800	<0.000431	58	33.5 - 122	14	20
4-Nitrophenol	0.0200	mg/L	1.02	0.0800	<0.00189	25	10 - 125	9	20
2,4-Dinitrotoluene	0.0526	mg/L	1.02	0.0800	<0.000929	66	53 - 130	14	20
Fluorene	0.0497	mg/L	1.02	0.0800	<0.000661	62	44.6 - 117	14	20
Pentachlorophenol	0.0358	mg/L	1.02	0.0800	<0.000444	45	10 - 139	10	20

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matrix spikes continued . . .

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Anthracene		0.0503	mg/L	1.02	0.0800	<0.000436	63	57.5 - 115	10	20
Phenanthrene		0.0492	mg/L	1.02	0.0800	<0.000559	62	55.5 - 118	13	20
Fluoranthene		0.0537	mg/L	1.02	0.0800	<0.000645	67	57 - 122	9	20
Pyrene	[8]	0.0457	mg/L	1.02	0.0800	<0.000737	57	58.5 - 130	14	20
Benzo(a)anthracene	[9]	0.0446	mg/L	1.02	0.0800	<0.000538	56	63.4 - 109	13	20
Chrysene		0.0485	mg/L	1.02	0.0800	<0.000651	61	54.7 - 114	16	20
Benzo(b)fluoranthene		0.0528	mg/L	1.02	0.0800	<0.000896	66	64.8 - 120	3	20
Benzo(k)fluoranthene	[10]	0.0573	mg/L	1.02	0.0800	<0.000862	72	70.3 - 114	23	20
Benzo(a)pyrene		0.0589	mg/L	1.02	0.0800	<0.00170	74	63.7 - 120	14	20
Indeno(1,2,3-cd)pyrene		0.0540	mg/L	1.02	0.0800	<0.000879	68	65.4 - 119	17	20
Dibenzo(a,h)anthracene	[11]	0.0536	mg/L	1.02	0.0800	<0.000825	67	68.7 - 117	17	20
Benzo(g,h,i)perylene		0.0557	mg/L	1.02	0.0800	<0.000968	70	57.2 - 125	18	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
2-Fluorophenol	0.0262	0.0254	mg/L	1.02	0.08	33	32	10 - 53.1
Phenol-d5	0.0194	0.0183	mg/L	1.02	0.08	24	23	10 - 36.9
Nitrobenzene-d5	0.0450	0.0403	mg/L	1.02	0.08	56	50	23.8 - 108
2-Fluorobiphenyl	0.0445	0.0387	mg/L	1.02	0.08	56	48	15.9 - 127
2,4,6-Tribromophenol	0.0653	0.0583	mg/L	1.02	0.08	82	73	10 - 123
Terphenyl-d14	0.0522	0.0450	mg/L	1.02	0.08	65	56	17.2 - 160

Matrix Spike (MS-1) Spiked Sample: 208666

QC Batch: 63307 Date Analyzed: 2009-09-07 Analyzed By:
Prep Batch: 54035 QC Preparation: 2009-09-04 Prepared By:

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
DRO	24.3	mg/L	1	25.0	<0.876	97	54 - 144

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
DRO	23.5	mg/L	1	25.0	<0.876	94	54 - 144	3	20

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

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	10.9	10.9	mg/L	1	10	109	109	57.3 - 151

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

Matrix Spike (MS-1) Spiked Sample: 208955

QC Batch: 63327 Date Analyzed: 2009-09-01 Analyzed By: MD
Prep Batch: 54055 QC Preparation: 2009-09-01 Prepared By: MD

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Hexavalent Chromium	0.561	mg/L	1.11	0.556	<0.00659	101	80.1 - 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
Hexavalent Chromium	0.573	mg/L	1.11	0.556	<0.00659	103	80.1 - 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: 208408

QC Batch: 63340 Date Analyzed: 2009-09-08 Analyzed By: KV
Prep Batch: 54065 QC Preparation: 2009-09-08 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Organic Carbon	51.2	mg/L	1	50.0	1.66	99	66.9 - 121

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Organic Carbon	48.4	mg/L	1	50.0	1.66	93	66.9 - 121	6	20

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

Matrix Spike (MS-1) Spiked Sample: 208408

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Calcium	574	mg/L	1	50.0	531	86	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Calcium	576	mg/L	1	50.0	531	90	75 - 125	0	20

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

Matrix Spike (MS-1) Spiked Sample: 208408

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Potassium	150	mg/L	1	50.0	99.9	100	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Potassium	148	mg/L	1	50.0	99.9	96	75 - 125	1	20

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

Matrix Spike (MS-1) Spiked Sample: 208408

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Magnesium	471	mg/L	1	50.0	425	92	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Magnesium	472	mg/L	1	50.0	425	94	75 - 125	0	20

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

Matrix Spike (MS-1) Spiked Sample: 208408

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR
Prep Batch: 53951 QC Preparation: 2009-09-03 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Sodium	768	mg/L	1	50.0	717	102	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Sodium	776	mg/L	1	50.0	717	118	75 - 125	1	20

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

Matrix Spike (MS-1) Spiked Sample: 209099

QC Batch: 63370 Date Analyzed: 2009-09-05 Analyzed By: AH
Prep Batch: 54092 QC Preparation: 2009-09-05 Prepared By: AH

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Ammonia-N	5.38	mg/L	1	5.00	0.504	98	57.2 - 133

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
Ammonia-N	5.26	mg/L	1	5.00	0.504	95	57.2 - 133	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: 209099

QC Batch: 63391 Date Analyzed: 2009-09-07 Analyzed By: AH
Prep Batch: 54106 QC Preparation: 2009-09-07 Prepared By: AH

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Cyanide	0.121	mg/L	1	0.120	<0.0110	101	62.6 - 132

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 Cyanide	0.125	mg/L	1	0.120	<0.0110	104	62.6 - 132	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: 209098

QC Batch: 63425 Date Analyzed: 2009-09-10 Analyzed By: DS
Prep Batch: 54137 QC Preparation: 2009-09-04 Prepared By: DS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
HMX	1.41	μg/L	1	2.50	<0.123	56	10 - 164
RDX	1.63	μg/L	1	2.50	<0.298	65	10 - 147
1,3,5-Trinitrobenzene	1.76	μg/L	1	2.50	<0.339	70	10 - 187
1,3-Dinitrobenzene	1.87	μg/L	1	2.50	<0.389	75	10 - 155
Nitrobenzene	1.87	μg/L	1	2.50	<0.379	75	10 - 156
Tetryl	1.80	μg/L	1	2.50	<0.413	72	10 - 158
TNT	1.93	μg/L	1	2.50	<0.464	77	21 - 114
4-Amino-DNT	2.19	μg/L	1	2.50	<0.319	88	80 - 120

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matrix spikes continued . . .

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
2-Amino-DNT	[12]	1.96	μg/L	1	2.50	<0.391	78	80 - 120
2,6-DNT	[13]	1.64	μg/L	1	2.50	<0.323	66	80 - 120
2,4-DNT	[14]	1.96	μg/L	1	2.50	<0.366	78	80 - 120
2-NT		1.99	μg/L	1	2.50	<0.379	80	10 - 147
4-NT		1.81	μg/L	1	2.50	<0.398	72	10 - 161
3-NT		2.08	μg/L	1	2.50	<0.346	83	10 - 167

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
HMX		1.56	μg/L	1	2.50	<0.123	62	10 - 164	10	20
RDX		1.68	μg/L	1	2.50	<0.298	67	10 - 147	3	20
1,3,5-Trinitrobenzene		1.95	μg/L	1	2.50	<0.339	78	10 - 187	10	20
1,3-Dinitrobenzene		1.94	μg/L	1	2.50	<0.389	78	10 - 155	4	20
Nitrobenzene		2.03	μg/L	1	2.50	<0.379	81	10 - 156	8	20
Tetryl		2.02	μg/L	1	2.50	<0.413	81	10 - 158	12	20
TNT		1.89	μg/L	1	2.50	<0.464	76	21 - 114	2	20
4-Amino-DNT		2.40	μg/L	1	2.50	<0.319	96	80 - 120	9	20
2-Amino-DNT		2.26	μg/L	1	2.50	<0.391	90	80 - 120	14	20
2,6-DNT	[15]	1.90	μg/L	1	2.50	<0.323	76	80 - 120	15	20
2,4-DNT		2.09	μg/L	1	2.50	<0.366	84	80 - 120	6	20
2-NT		1.97	μg/L	1	2.50	<0.379	79	10 - 147	1	20
4-NT		1.92	μg/L	1	2.50	<0.398	77	10 - 161	6	20
3-NT		1.92	μg/L	1	2.50	<0.346	77	10 - 167	8	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
1,2-Dinitrobenzene	3.49	3.68	μg/L	1	2.5	140	147	10 - 222

Matrix Spike (MS-1) Spiked Sample: 209230

QC Batch:	63441	Date Analyzed:	2009-09-09	Analyzed By:	AH
Prep Batch:	54150	QC Preparation:	2009-09-09	Prepared By:	AH

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Total Kjeldahl Nitrogen - N	44.5	mg/L	1	50.0	2.52	84	61.2 - 118

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

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Total Kjeldahl Nitrogen - N	46.2	mg/L	1	50.0	2.52	87	61.2 - 118	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: 208408

QC Batch: 63461 Date Analyzed: 2009-09-11 Analyzed By: RR
Prep Batch: 54153 QC Preparation: 2009-09-11 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Dissolved Chromium	0.110	mg/L	1	0.100	0.014	96	75 - 125

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Dissolved Chromium	0.112	mg/L	1	0.100	0.014	98	75 - 125	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: 208427

QC Batch: 63485 Date Analyzed: 2009-09-11 Analyzed By: KV
Prep Batch: 54188 QC Preparation: 2009-09-11 Prepared By: KV

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Nitrate and Nitrite as N [16]	19.2	mg/L	200	0.200	14.5	2350	80 - 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
Nitrate and Nitrite as N [17]	18.7	mg/L	200	0.200	14.5	9350	80 - 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: 208955

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Bromide	25.5	mg/L	5.56	27.8	<0.219	92	90 - 110

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

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Bromide	25.4	mg/L	5.56	27.8	<0.219	91	90 - 110	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: 208955

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride [18]	129	mg/L	5.56	139	6	88	90 - 110

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride [19]	128	mg/L	5.56	139	6	88	90 - 110	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: 208955

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Fluoride	25.2	mg/L	5.56	27.8	<0.241	91	90 - 110

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Fluoride	25.1	mg/L	5.56	27.8	<0.241	90	90 - 110	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: 208955

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR
Prep Batch: 54356 QC Preparation: 2009-09-01 Prepared By: JR

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Sulfate	127	mg/L	5.56	139	<2.80	91	90 - 110

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

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

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Sulfate	127	mg/L	5.56	139	<2.80	91	90 - 110	0	20

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

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/L	0.250	0.253	101	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	1.00	1.01	101	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	2.00	2.02	101	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Barium		mg/L	1.00	1.02	102	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Beryllium		mg/L	1.00	1.02	102	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cadmium		mg/L	1.00	1.04	104	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cobalt		mg/L	1.00	0.992	99	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Chromium		mg/L	1.00	1.04	104	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Copper		mg/L	1.00	1.05	105	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Iron		mg/L	1.00	1.04	104	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Manganese		mg/L	1.00	1.01	101	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Molybdenum		mg/L	1.00	0.992	99	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Nickel		mg/L	1.00	0.999	100	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Phosphorous		mg/L	5.00	4.93	99	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Lead		mg/L	2.00	2.06	103	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Antimony		mg/L	2.00	2.04	102	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Selenium		mg/L	1.00	1.02	102	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Thallium		mg/L	5.00	5.10	102	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Vanadium		mg/L	1.00	1.04	104	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Zinc		mg/L	1.00	1.08	108	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 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	0.129	103	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Aluminum		mg/L	1.00	0.993	99	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Arsenic		mg/L	1.00	0.981	98	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Barium		mg/L	1.00	1.04	104	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Beryllium		mg/L	1.00	1.00	100	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cadmium		mg/L	1.00	1.01	101	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cobalt		mg/L	1.00	0.989	99	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Chromium		mg/L	1.00	1.02	102	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Copper		mg/L	1.00	1.04	104	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Iron		mg/L	1.00	1.02	102	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Manganese		mg/L	1.00	0.996	100	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Molybdenum		mg/L	1.00	0.985	98	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Nickel		mg/L	1.00	0.973	97	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Phosphorous		mg/L	5.00	4.84	97	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Lead		mg/L	1.00	0.966	97	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Antimony		mg/L	1.00	1.00	100	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Selenium		mg/L	1.00	0.983	98	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Thallium		mg/L	1.00	1.00	100	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Vanadium		mg/L	1.00	1.04	104	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63221 Date Analyzed: 2009-09-03 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	1.03	103	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63227 Date Analyzed: 2009-09-03 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	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63227 Date Analyzed: 2009-09-03 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	0.000960	96	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63239 Date Analyzed: 2009-09-03 Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.07	107	80 - 120	2009-09-03

Standard (CCV-2)

QC Batch: 63239 Date Analyzed: 2009-09-03 Analyzed By: ER

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.02	102	80 - 120	2009-09-03

Standard (CCV-1)

QC Batch: 63261 Date Analyzed: 2009-09-04 Analyzed By: MN

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Phenol		mg/L	60.0	55.1	92	80 - 120	2009-09-04
1,4-Dichlorobenzene (para)		mg/L	60.0	59.4	99	80 - 120	2009-09-04
2-Nitrophenol		mg/L	60.0	65.0	108	80 - 120	2009-09-04
2,4-Dichlorophenol		mg/L	60.0	67.4	112	80 - 120	2009-09-04
Hexachlorobutadiene		mg/L	60.0	61.7	103	80 - 120	2009-09-04
4-Chloro-3-methylphenol	[20]	mg/L	60.0	73.5	122	80 - 120	2009-09-04
2,4,6-Trichlorophenol		mg/L	60.0	63.5	106	80 - 120	2009-09-04
Acenaphthene		mg/L	60.0	60.2	100	80 - 120	2009-09-04
Diphenylamine		mg/L	60.0	60.4	101	80 - 120	2009-09-04
Pentachlorophenol		mg/L	60.0	58.4	97	80 - 120	2009-09-04
Fluoranthene		mg/L	60.0	59.8	100	80 - 120	2009-09-04
Di-n-octylphthalate		mg/L	60.0	63.6	106	80 - 120	2009-09-04
Benzo(a)pyrene		mg/L	60.0	62.7	104	80 - 120	2009-09-04

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
2-Fluorophenol		61.7	mg/L	1	60.0	103	80 - 120
Phenol-d5		56.5	mg/L	1	60.0	94	80 - 120
Nitrobenzene-d5		58.2	mg/L	1	60.0	97	80 - 120
2-Fluorobiphenyl		58.2	mg/L	1	60.0	97	80 - 120
2,4,6-Tribromophenol		70.7	mg/L	1	60.0	118	80 - 120
Terphenyl-d14		57.7	mg/L	1	60.0	96	80 - 120

Standard (CCV-1)

QC Batch: 63307 Date Analyzed: 2009-09-07 Analyzed By:

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	286	114	80 - 120	2009-09-07

Standard (CCV-2)

QC Batch: 63307 Date Analyzed: 2009-09-07 Analyzed By:

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/L	250	262	105	80 - 120	2009-09-07

Standard (CCV-1)

QC Batch: 63327 Date Analyzed: 2009-09-01 Analyzed By: MD

[20] Control analyte out of CCV control limits. Results biased high. •

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hexavalent Chromium		mg/L	0.500	0.495	99	90 - 110	2009-09-01

Standard (CCV-2)

QC Batch: 63327 Date Analyzed: 2009-09-01 Analyzed By: MD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hexavalent Chromium		mg/L	0.500	0.483	97	90 - 110	2009-09-01

Standard (ICV-1)

QC Batch: 63339 Date Analyzed: 2009-09-01 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	6.97	100	98 - 102	2009-09-01

Standard (CCV-1)

QC Batch: 63339 Date Analyzed: 2009-09-01 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	6.97	100	98 - 102	2009-09-01

Standard (CCV-2)

QC Batch: 63340 Date Analyzed: 2009-09-08 Analyzed By: KV

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Organic Carbon		mg/L	50.0	49.8	100	80 - 120	2009-09-08

Standard (CCV-3)

QC Batch: 63340 Date Analyzed: 2009-09-08 Analyzed By: KV

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Organic Carbon		mg/L	50.0	49.0	98	80 - 120	2009-09-08

Standard (ICV-1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Calcium		mg/L	50.0	51.5	103	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Potassium		mg/L	50.0	50.8	102	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Magnesium		mg/L	50.0	51.0	102	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Sodium		mg/L	50.0	50.6	101	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Calcium		mg/L	50.0	51.1	102	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Potassium		mg/L	50.0	51.1	102	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Magnesium		mg/L	50.0	50.4	101	90 - 110	2009-09-09

Standard (CCV-1)

QC Batch: 63355 Date Analyzed: 2009-09-09 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Sodium		mg/L	50.0	50.1	100	90 - 110	2009-09-09

Standard (ICV-1)

QC Batch: 63370 Date Analyzed: 2009-09-05 Analyzed By: AH

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ammonia-N		mg/L	5.00	4.93	99	85 - 115	2009-09-05

Standard (CCV-1)

QC Batch: 63370 Date Analyzed: 2009-09-05 Analyzed By: AH

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Ammonia-N		mg/L	5.00	4.98	100	85 - 115	2009-09-05

Standard (ICV-1)

QC Batch: 63391 Date Analyzed: 2009-09-07 Analyzed By: AH

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cyanide		mg/L	0.120	0.118	98	85 - 115	2009-09-07

Standard (CCV-1)

QC Batch: 63391 Date Analyzed: 2009-09-07 Analyzed By: AH

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Cyanide		mg/L	0.120	0.124	103	85 - 115	2009-09-07

Standard (ICV-1)

QC Batch: 63425 Date Analyzed: 2009-09-10 Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
HMX		µg/L	500	505	101	85 - 115	2009-09-10
RDX		µg/L	500	478	96	85 - 115	2009-09-10
1,3,5-Trinitrobenzene		µg/L	500	490	98	85 - 115	2009-09-10
1,3-Dinitrobenzene		µg/L	500	507	101	85 - 115	2009-09-10
Nitrobenzene		µg/L	500	507	101	85 - 115	2009-09-10
Tetryl		µg/L	500	485	97	85 - 115	2009-09-10
TNT		µg/L	500	481	96	85 - 115	2009-09-10
4-Amino-DNT		µg/L	500	518	104	85 - 115	2009-09-10
2-Amino-DNT		µg/L	500	540	108	85 - 115	2009-09-10
2,6-DNT		µg/L	500	466	93	85 - 115	2009-09-10
2,4-DNT		µg/L	500	520	104	85 - 115	2009-09-10
2-NT		µg/L	500	503	101	85 - 115	2009-09-10
4-NT		µg/L	500	433	87	85 - 115	2009-09-10
3-NT		µg/L	500	493	99	85 - 115	2009-09-10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
1,2-Dinitrobenzene		456	µg/L	1	500	91	85 - 115

Standard (CCV-1)

QC Batch: 63425 Date Analyzed: 2009-09-10 Analyzed By: DS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
HMX		µg/L	500	545	109	85 - 115	2009-09-10
RDX		µg/L	500	461	92	85 - 115	2009-09-10
1,3,5-Trinitrobenzene		µg/L	500	483	97	85 - 115	2009-09-10
1,3-Dinitrobenzene		µg/L	500	516	103	85 - 115	2009-09-10
Nitrobenzene		µg/L	500	511	102	85 - 115	2009-09-10
Tetryl		µg/L	500	467	93	85 - 115	2009-09-10
TNT		µg/L	500	486	97	85 - 115	2009-09-10
4-Amino-DNT		µg/L	500	538	108	85 - 115	2009-09-10
2-Amino-DNT		µg/L	500	551	110	85 - 115	2009-09-10
2,6-DNT		µg/L	500	502	100	85 - 115	2009-09-10
2,4-DNT		µg/L	500	552	110	85 - 115	2009-09-10
2-NT		µg/L	500	535	107	85 - 115	2009-09-10
4-NT		µg/L	500	500	100	85 - 115	2009-09-10
3-NT		µg/L	500	507	101	85 - 115	2009-09-10

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
1,2-Dinitrobenzene		491	µg/L	1	500	98	85 - 115

Standard (ICV-1)

QC Batch: 63441 Date Analyzed: 2009-09-09 Analyzed By: AH

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Kjeldahl Nitrogen - N		mg/L	5.00	5.21	104	85 - 115	2009-09-09

Standard (CCV-1)

QC Batch: 63441 Date Analyzed: 2009-09-09 Analyzed By: AH

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Kjeldahl Nitrogen - N		mg/L	5.00	4.93	99	85 - 115	2009-09-09

Standard (ICV-1)

QC Batch: 63461 Date Analyzed: 2009-09-11 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Chromium		mg/L	1.00	1.03	103	90 - 110	2009-09-11

Standard (CCV-1)

QC Batch: 63461 Date Analyzed: 2009-09-11 Analyzed By: RR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Chromium		mg/L	1.00	1.02	102	90 - 110	2009-09-11

Standard (ICV-1)

QC Batch: 63473 Date Analyzed: 2009-09-03 Analyzed By: MD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	994	99	90 - 110	2009-09-03

Standard (CCV-1)

QC Batch: 63473 Date Analyzed: 2009-09-03 Analyzed By: MD

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	989	99	90 - 110	2009-09-03

Standard (ICV-1)

QC Batch: 63485 Date Analyzed: 2009-09-11 Analyzed By: KV

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate and Nitrite as N		mg/L	0.200	0.188	94	85 - 115	2009-09-11

Standard (CCV-1)

QC Batch: 63485 Date Analyzed: 2009-09-11 Analyzed By: KV

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate and Nitrite as N		mg/L	0.200	0.201	100	85 - 115	2009-09-11

Standard (ICV-1)

QC Batch: 63527 Date Analyzed: 2009-09-10 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		90 - 110	2009-09-10
Carbonate Alkalinity		mg/L as CaCo3	0.00	240		90 - 110	2009-09-10
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	10.0		90 - 110	2009-09-10
Total Alkalinity		mg/L as CaCo3	250	250	100	90 - 110	2009-09-10

Standard (CCV-1)

QC Batch: 63527 Date Analyzed: 2009-09-10 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		90 - 110	2009-09-10
Carbonate Alkalinity		mg/L as CaCo3	0.00	240		90 - 110	2009-09-10
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	10.0		90 - 110	2009-09-10
Total Alkalinity		mg/L as CaCo3	250	250	100	90 - 110	2009-09-10

Standard (CCV-1)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	5.00	4.54	91	90 - 110	2009-09-01

Standard (CCV-1)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	22.9	92	90 - 110	2009-09-01

Standard (CCV-1)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Fluoride		mg/L	5.00	4.54	91	90 - 110	2009-09-01

Standard (CCV-1)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	22.6	90	90 - 110	2009-09-01

Standard (CCV-2)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Bromide		mg/L	5.00	4.55	91	90 - 110	2009-09-01

Standard (CCV-2)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	25.0	23.1	92	90 - 110	2009-09-01

Standard (CCV-2)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Fluoride		mg/L	5.00	4.55	91	90 - 110	2009-09-01

Standard (CCV-2)

QC Batch: 63668 Date Analyzed: 2009-09-01 Analyzed By: JR

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Sulfate		mg/L	25.0	22.7	91	90 - 110	2009-09-01

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CHAIN OF CUSTODY RECORD

PAGE 1 OF 2

PROJECT NO.

PROJECT NAME: HELSTF Diesel Spill Groundwater

SAMPLER'S SIGNATURE:

DATE	TIME	SAMPLE ID	MATRIX	LAB NO.	NO. OF CONTAINERS	VOC	DRO	GRO	TOC	SVOC	Explosives	TRPH	Water Quality	Total Cyanide	Nutrients	REMARKS
8-31-09	1415	HLSF-0154-RB-001-0809	WATER	208955	18	X	X	X	X	X	X	X	X	X	X	NOTE: 24 HR. HOLD TIME ON HEX CHROME

PROJECT INFORMATION	SAMPLES RECEIVED	1. RELINQUISHED BY: (SIGNATURE)	2. RELINQUISHED BY: (SIGNATURE)	3. RECEIVED BY LAB: (SIGNATURE)
PROJECT MANAGER: Brad Davis	TOTAL NO. OF CONTAINERS	(PRINTED NAME)	(PRINTED NAME)	(PRINTED NAME) Carol Fox
SHIPPING ID NO.	CHAIN OF CUSTODY SEALS	RECEIVED BY: (SIGNATURE)	RECEIVED BY: (SIGNATURE)	(COMPANY) Trace-Lab
	GOOD CONDITION/CHILLED By ERL	(TIME/DATE) 1600 8/31/09	(TIME/DATE) 1710 8-31-09	(TIME/DATE) 9-2-09 9:35 Am
VIA: Lab Courier	CONFORMS TO RECORD	SPECIAL INSTRUCTIONS / COMMENTS: PLEASE SEE ATTACHED ANALYTE LIST FOR DETAILS LS 43635700, 43635701		2.1/2.3P 2.8/3.0P

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575-532-1587 f

9090212

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CHAIN OF CUSTODY RECORD

PROJECT NO.

PROJECT NAME: HELSTF Diesel Spill Groundwater

SAMPLER'S SIGNATURE:

DATE	TIME	SAMPLE ID	MATRIX	LAB NO.	NO. OF CONTAINERS	Total Metals	Diss. Metals	Diss. Ions								REMARKS
8-31-09	1415	HLSF-0154-RB-001-0009	WATER	208955	18	X	X	X								NOTE: 24 HR. HOLD TIME ON HEX. CHROME

PROJECT INFORMATION	SAMPLES RECEIVED	1. RELINQUISHED BY: (SIGNATURE)	2. RELINQUISHED BY: (SIGNATURE)	3. RECEIVED BY LAB: (SIGNATURE)
PROJECT MANAGER: Brad Davis	TOTAL NO. OF CONTAINERS	(PRINTED NAME) Gabriel Garcia	(PRINTED NAME) James Sativa	(PRINTED NAME) Carol Fox
SHIPPING ID NO.	CHAIN OF CUSTODY SEALS	RECEIVED BY: (SIGNATURE)	RECEIVED BY: (SIGNATURE)	(COMPANY) Trace-LbK
VIA: Lab Courier	GOOD CONDITION/CHILLED - By Ice	(TIME/DATE) 1600 8/31/09	(TIME/DATE) 12:10 8-31-09	(TIME/DATE) 9-2-09 9:35 AM
	CONFORMS TO RECORD	SPECIAL INSTRUCTIONS/COMMENTS: PLEASE SEE ATTACHED ANALYTE LIST FOR DETAILS		2.1/2.3 P 2.8/3.0 P LS 43635700, 43635701

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