



**STL**

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## **ANALYTICAL REPORT**

**Raton Basin Baseline STD, CO  
73407**

**Lot #: D7B260110**

**Tom Melland**

**Petroglyph  
124 N Main  
PO Box 979  
La Veta, CO**

**SEVERN TRENT LABORATORIES, INC.**

  
*for* **Donna Rydberg  
Project Manager**

**March 9, 2007**

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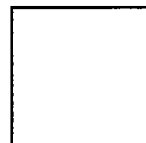
## ***Standard Deliverables***

### Report Contents

### Total Number of Pages

#### ***Standard Deliverables***

*The Cover Letter and the Report Cover page are considered integral parts of this Standard Deliverable package. This report is incomplete unless all pages indicated in this Table of Contents are included.*



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## **CASE NARRATIVE**

### **D7B260110**

The following report contains the analytical results for two water samples submitted to STL Denver by Norwest Corporation for the Raton Basin Baseline site. The sample was received February 24, 2007 according to documented sample acceptance procedures.

Dilution factors and footnotes have been provided on each data sheet to assist in the interpretation of the results. In some cases, due to interference or analytes present above the linear calibration curve, samples must be analyzed at a dilution. For samples analyzed at a dilution, the reporting limits are adjusted relative to the dilution required. Dilutions made for reasons other than the presence of target compound(s) are addressed in the Supplemental Information Section.

STL Denver utilizes USEPA approved methods in all analytical work. The sample presented in this report was analyzed for the parameters listed on the methods summary page in accordance with the methods indicated. A summary of QC data for these analyses is included near the end of the report.

The results included in this report have been reviewed for compliance with the laboratory QA/QC plan and meet all requirements of NELAC. All data have been found to be compliant with laboratory protocol, with the exception of any items noted below.

#### **Supplemental QC Information**

##### **Sample Arrival and Receipt**

The samples presented in this report were received at the laboratory at a temperature of 2.8°C.

One of two 1-liter amber bottles for sample CRAMER, A. WW was received broken. All other sample containers were received intact.

The laboratory received two vials labeled for isotope analyses that were not listed on the accompanying Chain of Custody. At the client's request, the vials were returned as they were shipped by mistake.

##### **Method RSK SOP-175 – GC Volatiles**

Sample "HURLEY, MWW" was analyzed at a dilution to bring target compounds within the linear calibration range of the instrument. Reporting limits were raised accordingly.

Matrix Spike samples were not requested and they could not be performed due to insufficient sample volume. The associated LCS and LCSD were in control and demonstrate that operating procedures were in control. Method precision and accuracy were demonstrated.

No other anomalies were observed.

##### **Method 8015B/DRO**

Matrix Spike samples were not requested and they could not be performed due to insufficient sample volume. The acceptable LCS analyte recoveries provide evidence that the laboratory is performing the method within acceptable guidelines.

No other anomalies were observed.

**Method 200.8/200.7 – Dissolved Metals**

The MS/MSD recoveries for Sodium in prep batch 7058569 were not calculated due to the concentration in the parent sample at a level greater than four times the spiked amount.

The Continuing Calibration Verification (CCV) standards associated with batch 7058569 exhibited a percent recovery value out of range, biased high, for Iron. This is an indicator that data may be biased high. As no detectable concentrations of Iron are present in the associated samples above the reporting limit, corrective action is deemed unnecessary.

No other anomalies were observed.

**General Chemistry – Various**

Due to a laboratory error, the holding time for Nitrate and Nitrite by method 300.0A for samples HURLEY, MWW and CRAMER, A. WW expired prior to analysis. Analyses were performed at the request of the client. Please note that the sample results should be considered estimated.

A low level of Alkalinity is present in the method blank associated with QC batch 7061268. Because the concentration in the method blank is not present at a level greater than the reporting limit, corrective action is deemed unnecessary. Associated results in the analytical report have been flagged with a "J".

No other anomalies were observed.

# EXECUTIVE SUMMARY - Detection Highlights

D7B260110

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
HURLEY, MWW 02/23/07 10:30 001				
Methane	3800	50	ug/L	RSK SOP-175
Boron - DISSOLVED	0.12	0.10	mg/L	MCAWW 200.7
Calcium - DISSOLVED	4.4	0.20	mg/L	MCAWW 200.7
Iron - DISSOLVED	0.037 B	0.10	mg/L	MCAWW 200.7
Magnesium - DISSOLVED	1.9	0.20	mg/L	MCAWW 200.7
Potassium - DISSOLVED	2.1 B	3.0	mg/L	MCAWW 200.7
Sodium - DISSOLVED	290	5.0	mg/L	MCAWW 200.7
Zinc - DISSOLVED	0.0081 B	0.020	mg/L	MCAWW 200.7
Arsenic - DISSOLVED	0.00051 B	0.0050	mg/L	MCAWW 200.8
Barium - DISSOLVED	0.13	0.0010	mg/L	MCAWW 200.8
Copper - DISSOLVED	0.0022	0.0020	mg/L	MCAWW 200.8
Manganese - DISSOLVED	0.0084	0.0010	mg/L	MCAWW 200.8
pH	8.2	0.10	No Units	MCAWW 150.1
Total Dissolved Solids	730	10	mg/L	MCAWW 160.1
Total Suspended Solids	15	4.0	mg/L	MCAWW 160.2
Carbonate, as CaCO3	24	5.0	mg/L	MCAWW 310.1
Chloride	19	3.0	mg/L	MCAWW 300.0A
Sulfate	27	5.0	mg/L	MCAWW 300.0A
Fluoride	2.7	0.50	mg/L	MCAWW 300.0A
Bromide	0.21	0.20	mg/L	MCAWW 300.0A
Total Sulfide	0.87	0.050	mg/L	MCAWW 376.2
Bicarbonate, as CaCO3	570	5.0	mg/L	MCAWW 310.1
Total Alkalinity	600 J	5.0	mg/L	MCAWW 310.1

CRAMER, A. WW 02/23/07 11:00 002

Methane	8.1	5.0	ug/L	RSK SOP-175
Boron - DISSOLVED	0.055 B	0.10	mg/L	MCAWW 200.7
Calcium - DISSOLVED	1.7	0.20	mg/L	MCAWW 200.7
Magnesium - DISSOLVED	0.24	0.20	mg/L	MCAWW 200.7
Potassium - DISSOLVED	1.9 B	3.0	mg/L	MCAWW 200.7
Sodium - DISSOLVED	360	5.0	mg/L	MCAWW 200.7
Zinc - DISSOLVED	0.015 B	0.020	mg/L	MCAWW 200.7
Barium - DISSOLVED	0.044	0.0010	mg/L	MCAWW 200.8
Copper - DISSOLVED	0.030	0.0020	mg/L	MCAWW 200.8
Lead - DISSOLVED	0.00040 B	0.0010	mg/L	MCAWW 200.8
Manganese - DISSOLVED	0.00045 B	0.0010	mg/L	MCAWW 200.8
pH	8.8	0.10	No Units	MCAWW 150.1
Total Dissolved Solids	850	10	mg/L	MCAWW 160.1
Carbonate, as CaCO3	73	5.0	mg/L	MCAWW 310.1

(Continued on next page)

## EXECUTIVE SUMMARY - Detection Highlights

D7B260110

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
CRAMER, A. WW 02/23/07 11:00 002				
Chloride	9.5	3.0	mg/L	MCAWW 300.0A
Sulfate	100 Q	25	mg/L	MCAWW 300.0A
Fluoride	1.1	0.50	mg/L	MCAWW 300.0A
Nitrate	0.38 B	0.50	mg/L	MCAWW 300.0A
Nitrite	0.067 B	0.50	mg/L	MCAWW 300.0A
Bicarbonate, as CaCO3	560	5.0	mg/L	MCAWW 310.1
Total Alkalinity	630 J	5.0	mg/L	MCAWW 310.1

# METHODS SUMMARY

D7B260110

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
pH (Electrometric)	MCAWW 150.1	MCAWW 150.1
Alkalinity	MCAWW 310.1	MCAWW 310.1
Bicarbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Bromide	MCAWW 300.0A	MCAWW 300.0A
Carbonate Alkalinity	MCAWW 310.1	MCAWW 310.1
Chloride	MCAWW 300.0A	MCAWW 300.0A
Dissolved Gases in Water	RSK SOP-175	RSK RSKSOP-175
Dissolved ICP Metals	MCAWW 200.7	MCAWW 200.7
Extractable Petroleum Hydrocarbons	SW846 8015B	SW846 3510
Filterable Residue (TDS)	MCAWW 160.1	MCAWW 160.1
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Hydroxide Alkalinity	MCAWW 310.1	MCAWW 310.1
ICP-Mass Spectrometry ICP-Mass Spectrometry	MCAWW 200.8	MCAWW 200.8
Nitrate as N	MCAWW 300.0A	MCAWW 300.0A
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
Non-Filterable Residue (TSS)	MCAWW 160.2	MCAWW 160.2
Sulfate	MCAWW 300.0A	MCAWW 300.0A
Sulfide (Colorimetric,MB)	MCAWW 376.2	MCAWW 376.2

## References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.
- RSK Sample Prep and Calculations for Dissolved Gas Analysis  
in Water Samples Using a GC Headspace Equilibration  
Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.

## METHOD / ANALYST SUMMARY

D7B260110

<u>ANALYTICAL METHOD</u>	<u>ANALYST</u>	<u>ANALYST ID</u>
MCAWW 150.1	Danielle M. Fougere	006481
MCAWW 160.1	Kevin Bloom	006134
MCAWW 160.2	Kevin Bloom	006134
MCAWW 200.7	Lynn-Anne Trudell	6645
MCAWW 200.8	Thomas Lill	6929
MCAWW 300.0A	Ewa Kudla	001167
MCAWW 310.1	Elizabeth Pryor	009450
MCAWW 376.2	Kim Bertha	007985
RSK SOP-175	Patrick Quirk	006795
SW846 8015B	Heather Dybas	038161

### References:

MCAWW "Methods for Chemical Analysis of Water and Wastes",  
EPA-600/4-79-020, March 1983 and subsequent revisions.

RSK Sample Prep and Calculations for Dissolved Gas Analysis  
in Water Samples Using a GC Headspace Equilibration  
Technique, RSKSOP-175, REV. 0, 8/11/94, USEPA Research Lab

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical  
Methods", Third Edition, November 1986 and its updates.



# SAMPLE SUMMARY

D7B260110

WO #	SAMPLE#	CLIENT	SAMPLE ID	SAMPLED DATE	SAMP TIME
JP4AW	001	HURLEY,	MWW	02/23/07	10:30
JP4A2	002	CRAMER,	A. WW	02/23/07	11:00

## NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Applied Hydrology Associates Inc

Client Sample ID: HURLEY, MWW

GC Volatiles

Lot-Sample #....: D7B260110-001    Work Order #....: JP4AW1AR    Matrix.....: WATER  
Date Sampled....: 02/23/07 10:30    Date Received...: 02/24/07  
Prep Date.....: 02/27/07    Analysis Date...: 02/27/07  
Prep Batch #....: 7060531    Analysis Time...: 14:10  
Dilution Factor: 10  
Method.....: RSK SOP-175

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Ethane	ND	50	ug/L	2.4
Ethene	ND	50	ug/L	4.0
Methane	3800	50	ug/L	2.2

Applied Hydrology Associates Inc

Client Sample ID: CRAMER, A. WW

GC Volatiles

Lot-Sample #....: D7B260110-002    Work Order #....: JP4A21A4    Matrix.....: WATER  
Date Sampled....: 02/23/07 11:00    Date Received...: 02/24/07  
Prep Date.....: 02/27/07    Analysis Date...: 02/27/07  
Prep Batch #....: 7060531    Analysis Time...: 11:56  
Dilution Factor: 1  
Method.....: RSK SOP-175

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Ethane	ND	5.0	ug/L	0.24
Ethene	ND	5.0	ug/L	0.40
Methane	8.1	5.0	ug/L	0.22

Applied Hydrology Associates Inc

Client Sample ID: HURLEY, MWW

GC Semivolatiles

Lot-Sample #....: D7B260110-001    Work Order #....: JP4AW1AT    Matrix.....: WATER  
Date Sampled....: 02/23/07 10:30    Date Received...: 02/24/07  
Prep Date.....: 02/27/07    Analysis Date...: 03/02/07  
Prep Batch #....: 7058422    Analysis Time...: 21:18  
Dilution Factor: 1

Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Diesel Range Organics	ND	0.25	mg/L	0.032

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
o-Terphenyl	80	(48 - 117)

Applied Hydrology Associates Inc

Client Sample ID: CRAMER, A. WW

GC Semivolatiles

Lot-Sample #....: D7B260110-002    Work Order #....: JP4A21A5    Matrix.....: WATER  
Date Sampled....: 02/23/07 11:00    Date Received...: 02/24/07  
Prep Date.....: 02/27/07    Analysis Date...: 03/02/07  
Prep Batch #....: 7058422    Analysis Time...: 21:57  
Dilution Factor: 1  
Method.....: SW846 8015B

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Diesel Range Organics	ND	0.25	mg/L	0.032

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
o-Terphenyl	101	(48 - 117)

**Applied Hydrology Associates Inc**

**Client Sample ID: HURLEY, MWW**

**DISSOLVED Metals**

**Lot-Sample #...: D7B260110-001**

**Matrix.....: WATER**

**Date Sampled...: 02/23/07 10:30 Date Received...: 02/24/07**

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
<b>Prep Batch #...: 7058560</b>						
<b>Arsenic</b>	<b>0.00051 B</b>	<b>0.0050</b>	<b>mg/L</b>	<b>MCAWW 200.8</b>	<b>03/08/07</b>	<b>JP4AW1A6</b>
		Dilution Factor: 1		Analysis Time...: 21:16	MDL.....: 0.00050	
<b>Barium</b>	<b>0.13</b>	<b>0.0010</b>	<b>mg/L</b>	<b>MCAWW 200.8</b>	<b>03/08/07</b>	<b>JP4AW1A7</b>
		Dilution Factor: 1		Analysis Time...: 21:16	MDL.....: 0.00012	
<b>Copper</b>	<b>0.0022</b>	<b>0.0020</b>	<b>mg/L</b>	<b>MCAWW 200.8</b>	<b>03/08/07</b>	<b>JP4AW1A8</b>
		Dilution Factor: 1		Analysis Time...: 21:16	MDL.....: 0.00020	
<b>Lead</b>	<b>ND</b>	<b>0.0010</b>	<b>mg/L</b>	<b>MCAWW 200.8</b>	<b>03/08/07</b>	<b>JP4AW1A9</b>
		Dilution Factor: 1		Analysis Time...: 21:16	MDL.....: 0.00010	
<b>Manganese</b>	<b>0.0084</b>	<b>0.0010</b>	<b>mg/L</b>	<b>MCAWW 200.8</b>	<b>03/08/07</b>	<b>JP4AW1CA</b>
		Dilution Factor: 1		Analysis Time...: 21:16	MDL.....: 0.00012	
<b>Selenium</b>	<b>ND</b>	<b>0.0050</b>	<b>mg/L</b>	<b>MCAWW 200.8</b>	<b>03/08/07</b>	<b>JP4AW1CC</b>
		Dilution Factor: 1		Analysis Time...: 21:16	MDL.....: 0.0010	
<b>Prep Batch #...: 7058569</b>						
<b>Boron</b>	<b>0.12</b>	<b>0.10</b>	<b>mg/L</b>	<b>MCAWW 200.7</b>	<b>03/01-03/02/07</b>	<b>JP4AW1AU</b>
		Dilution Factor: 1		Analysis Time...: 14:53	MDL.....: 0.0059	
<b>Cadmium</b>	<b>ND</b>	<b>0.0050</b>	<b>mg/L</b>	<b>MCAWW 200.7</b>	<b>03/01-03/02/07</b>	<b>JP4AW1AV</b>
		Dilution Factor: 1		Analysis Time...: 14:53	MDL.....: 0.00045	
<b>Calcium</b>	<b>4.4</b>	<b>0.20</b>	<b>mg/L</b>	<b>MCAWW 200.7</b>	<b>03/01-03/02/07</b>	<b>JP4AW1AW</b>
		Dilution Factor: 1		Analysis Time...: 14:53	MDL.....: 0.034	
<b>Chromium</b>	<b>ND</b>	<b>0.010</b>	<b>mg/L</b>	<b>MCAWW 200.7</b>	<b>03/01-03/02/07</b>	<b>JP4AW1AX</b>
		Dilution Factor: 1		Analysis Time...: 14:53	MDL.....: 0.0026	
<b>Iron</b>	<b>0.037 B</b>	<b>0.10</b>	<b>mg/L</b>	<b>MCAWW 200.7</b>	<b>03/01-03/02/07</b>	<b>JP4AW1A0</b>
		Dilution Factor: 1		Analysis Time...: 14:53	MDL.....: 0.022	
<b>Magnesium</b>	<b>1.9</b>	<b>0.20</b>	<b>mg/L</b>	<b>MCAWW 200.7</b>	<b>03/01-03/02/07</b>	<b>JP4AW1A1</b>
		Dilution Factor: 1		Analysis Time...: 14:53	MDL.....: 0.043	
<b>Potassium</b>	<b>2.1 B</b>	<b>3.0</b>	<b>mg/L</b>	<b>MCAWW 200.7</b>	<b>03/01-03/02/07</b>	<b>JP4AW1A2</b>
		Dilution Factor: 1		Analysis Time...: 14:53	MDL.....: 0.24	

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Applied Hydrology Associates Inc

Client Sample ID: HURLEY, MWW

DISSOLVED Metals

Lot-Sample #....: D7B260110-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	ND	0.010	mg/L	MCAWW 200.7	03/01-03/02/07	JP4AW1A3
		Dilution Factor: 1		Analysis Time...: 14:53	MDL.....: 0.0028	
Sodium	290	5.0	mg/L	MCAWW 200.7	03/01-03/02/07	JP4AW1A4
		Dilution Factor: 1		Analysis Time...: 14:53	MDL.....: 0.092	
Zinc	0.0081 B	0.020	mg/L	MCAWW 200.7	03/01-03/02/07	JP4AW1A5
		Dilution Factor: 1		Analysis Time...: 14:53	MDL.....: 0.0045	

NOTE(S) :

B Estimated result. Result is less than RL.

**Applied Hydrology Associates Inc**

**Client Sample ID: CRAMER, A. WW**

**DISSOLVED Metals**

**Lot-Sample #....: D7B260110-002**

**Matrix.....: WATER**

**Date Sampled....: 02/23/07 11:00 Date Received...: 02/24/07**

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
<b>Prep Batch #....: 7058560</b>						
Arsenic	ND	0.0050	mg/L	MCAWW 200.8	03/08/07	JP4A21AH
		Dilution Factor: 1		Analysis Time...: 21:20	MDL.....: 0.00050	
Barium	0.044	0.0010	mg/L	MCAWW 200.8	03/08/07	JP4A21AJ
		Dilution Factor: 1		Analysis Time...: 21:20	MDL.....: 0.00012	
Copper	0.030	0.0020	mg/L	MCAWW 200.8	03/08/07	JP4A21AK
		Dilution Factor: 1		Analysis Time...: 21:20	MDL.....: 0.00020	
Lead	0.00040 B	0.0010	mg/L	MCAWW 200.8	03/08/07	JP4A21AL
		Dilution Factor: 1		Analysis Time...: 21:20	MDL.....: 0.00010	
Manganese	0.00045 B	0.0010	mg/L	MCAWW 200.8	03/08/07	JP4A21CA
		Dilution Factor: 1		Analysis Time...: 21:20	MDL.....: 0.00012	
Selenium	ND	0.0050	mg/L	MCAWW 200.8	03/08/07	JP4A21CC
		Dilution Factor: 1		Analysis Time...: 21:20	MDL.....: 0.0010	
<b>Prep Batch #....: 7058569</b>						
Boron	0.055 B	0.10	mg/L	MCAWW 200.7	03/01-03/02/07	JP4A21A6
		Dilution Factor: 1		Analysis Time...: 15:19	MDL.....: 0.0059	
Cadmium	ND	0.0050	mg/L	MCAWW 200.7	03/01-03/02/07	JP4A21A7
		Dilution Factor: 1		Analysis Time...: 15:19	MDL.....: 0.00045	
Calcium	1.7	0.20	mg/L	MCAWW 200.7	03/01-03/02/07	JP4A21A8
		Dilution Factor: 1		Analysis Time...: 15:19	MDL.....: 0.034	
Chromium	ND	0.010	mg/L	MCAWW 200.7	03/01-03/02/07	JP4A21A9
		Dilution Factor: 1		Analysis Time...: 15:19	MDL.....: 0.0026	
Iron	ND	0.10	mg/L	MCAWW 200.7	03/01-03/02/07	JP4A21AA
		Dilution Factor: 1		Analysis Time...: 15:19	MDL.....: 0.022	
Magnesium	0.24	0.20	mg/L	MCAWW 200.7	03/01-03/02/07	JP4A21AC
		Dilution Factor: 1		Analysis Time...: 15:19	MDL.....: 0.043	
Potassium	1.9 B	3.0	mg/L	MCAWW 200.7	03/01-03/02/07	JP4A21AD
		Dilution Factor: 1		Analysis Time...: 15:19	MDL.....: 0.24	

(Continued on next page)



Applied Hydrology Associates Inc

Client Sample ID: CRAMER, A. WW

DISSOLVED Metals

Lot-Sample #...: D7B260110-002

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver	ND	0.010	mg/L	MCAWW 200.7	03/01-03/02/07	JP4A21AE
		Dilution Factor: 1		Analysis Time...: 15:19	MDL.....: 0.0028	
Sodium	360	5.0	mg/L	MCAWW 200.7	03/01-03/02/07	JP4A21AF
		Dilution Factor: 1		Analysis Time...: 15:19	MDL.....: 0.092	
Zinc	0.015 B	0.020	mg/L	MCAWW 200.7	03/01-03/02/07	JP4A21AG
		Dilution Factor: 1		Analysis Time...: 15:19	MDL.....: 0.0045	

NOTE(S) :

B Estimated result. Result is less than RL.

# Applied Hydrology Associates Inc

Client Sample ID: HURLEY, MWW

## General Chemistry

Lot-Sample #...: D7B260110-001 Work Order #...: JP4AW Matrix.....: WATER  
Date Sampled...: 02/23/07 10:30 Date Received...: 02/24/07

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	8.2	0.10	No Units	MCAWW 150.1	02/27/07	7058532
		Dilution Factor: 1		Analysis Time...: 14:13	MDL.....:	
Bicarbonate, as CaCO <sub>3</sub>	570	5.0	mg/L	MCAWW 310.1	03/01/07	7061275
		Dilution Factor: 1		Analysis Time...: 17:00	MDL.....: 1.1	
Bromide	0.21	0.20	mg/L	MCAWW 300.0A	02/26/07	7058223
		Dilution Factor: 1		Analysis Time...: 10:44	MDL.....: 0.11	
Carbonate, as CaCO <sub>3</sub>	24	5.0	mg/L	MCAWW 310.1	03/01/07	7061278
		Dilution Factor: 1		Analysis Time...: 17:00	MDL.....: 1.1	
Chloride	19	3.0	mg/L	MCAWW 300.0A	02/26/07	7058220
		Dilution Factor: 1		Analysis Time...: 10:44	MDL.....: 0.25	
Fluoride	2.7	0.50	mg/L	MCAWW 300.0A	02/26/07	7058221
		Dilution Factor: 1		Analysis Time...: 10:44	MDL.....: 0.060	
Hydroxide, as CaCO <sub>3</sub>	ND	5.0	mg/L	MCAWW 310.1	03/01/07	7061279
		Dilution Factor: 1		Analysis Time...: 17:00	MDL.....: 1.1	
Nitrate	ND	0.50	mg/L	MCAWW 300.0A	02/26/07	7058224
		Dilution Factor: 1		Analysis Time...: 10:44	MDL.....: 0.042	
Nitrite	ND	0.50	mg/L	MCAWW 300.0A	02/26/07	7058225
		Dilution Factor: 1		Analysis Time...: 10:44	MDL.....: 0.049	
Sulfate	27	5.0	mg/L	MCAWW 300.0A	02/26/07	7058222
		Dilution Factor: 1		Analysis Time...: 10:44	MDL.....: 0.23	
Total Alkalinity	600 J	5.0	mg/L	MCAWW 310.1	03/01/07	7061268
		Dilution Factor: 1		Analysis Time...: 17:00	MDL.....: 1.1	
Total Dissolved Solids	730	10	mg/L	MCAWW 160.1	02/28/07	7059535
		Dilution Factor: 1		Analysis Time...: 14:10	MDL.....: 4.7	
Total Sulfide	0.87	0.050	mg/L	MCAWW 376.2	02/27/07	7058511
		Dilution Factor: 1		Analysis Time...: 16:00	MDL.....: 0.0071	

(Continued on next page)

Applied Hydrology Associates Inc

Client Sample ID: HURLEY, MWW

General Chemistry

Lot-Sample #....: D7B260110-001

Work Order #....: JP4AW

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Suspended Solids	15	4.0	mg/L	MCAWW 160.2	02/28/07	7059526

Dilution Factor: 1

Analysis Time...: 14:00

MDL.....: 1.1

**NOTE(S):**

RL Reporting Limit

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

**Applied Hydrology Associates Inc**

**Client Sample ID: CRAMER, A. WW**

**General Chemistry**

**Lot-Sample #...** D7B260110-002    **Work Order #...** JP4A2    **Matrix.....** WATER  
**Date Sampled...** 02/23/07 11:00    **Date Received...** 02/24/07

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	8.8	0.10	No Units	MCAWW 150.1	02/27/07	7058532
		Dilution Factor: 1		Analysis Time... 14:15	MDL.....	
Bicarbonate, as CaCO <sub>3</sub>	560	5.0	mg/L	MCAWW 310.1	03/01/07	7061275
		Dilution Factor: 1		Analysis Time... 17:00	MDL.....	1.1
Bromide	ND	0.20	mg/L	MCAWW 300.0A	02/26/07	7058223
		Dilution Factor: 1		Analysis Time... 11:34	MDL.....	0.11
Carbonate, as CaCO <sub>3</sub>	73	5.0	mg/L	MCAWW 310.1	03/01/07	7061278
		Dilution Factor: 1		Analysis Time... 17:00	MDL.....	1.1
Chloride	9.5	3.0	mg/L	MCAWW 300.0A	02/26/07	7058220
		Dilution Factor: 1		Analysis Time... 11:34	MDL.....	0.25
Fluoride	1.1	0.50	mg/L	MCAWW 300.0A	02/26/07	7058221
		Dilution Factor: 1		Analysis Time... 11:34	MDL.....	0.060
Hydroxide, as CaCO <sub>3</sub>	ND	5.0	mg/L	MCAWW 310.1	03/01/07	7061279
		Dilution Factor: 1		Analysis Time... 17:00	MDL.....	1.1
Nitrate	0.38 B	0.50	mg/L	MCAWW 300.0A	02/26/07	7058224
		Dilution Factor: 1		Analysis Time... 11:34	MDL.....	0.042
Nitrite	0.067 B	0.50	mg/L	MCAWW 300.0A	02/26/07	7058225
		Dilution Factor: 1		Analysis Time... 11:34	MDL.....	0.049
Sulfate	100 Q	25	mg/L	MCAWW 300.0A	03/05/07	7065158
		Dilution Factor: 5		Analysis Time... 15:53	MDL.....	1.2
Total Alkalinity	630 J	5.0	mg/L	MCAWW 310.1	03/01/07	7061268
		Dilution Factor: 1		Analysis Time... 17:00	MDL.....	1.1
Total Dissolved Solids	850	10	mg/L	MCAWW 160.1	02/28/07	7059535
		Dilution Factor: 1		Analysis Time... 14:10	MDL.....	4.7
Total Sulfide	ND	0.050	mg/L	MCAWW 376.2	02/27/07	7058511
		Dilution Factor: 1		Analysis Time... 16:00	MDL.....	0.0071

(Continued on next page)

Applied Hydrology Associates Inc

Client Sample ID: CRAMER, A. WW

General Chemistry

Lot-Sample #....: D7B260110-002

Work Order #....: JP4A2

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Total Suspended Solids	ND	4.0	mg/L	MCAWW 160.2	02/28/07	7059526
		Dilution Factor: 1		Analysis Time...: 14:00	MDL.....: 1.1	

**NOTE(S) :**

RL Reporting Limit

B Estimated result. Result is less than RL.

Q Elevated reporting limit. The reporting limit is elevated due to high analyte levels.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

# QC DATA ASSOCIATION SUMMARY

D7B260110

## Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	MCAWW 150.1		7058532	7059247
	WATER	MCAWW 160.1		7059535	7061211
	WATER	MCAWW 160.2		7059526	7060147
	WATER	MCAWW 200.7		7058569	7058329
	WATER	MCAWW 310.1		7061278	
	WATER	MCAWW 300.0A		7058220	7058138
	WATER	MCAWW 300.0A		7058222	7058145
	WATER	MCAWW 300.0A		7058221	7058136
	WATER	MCAWW 300.0A		7058224	7058142
	WATER	MCAWW 300.0A		7058223	7058141
	WATER	MCAWW 300.0A		7058225	7058140
	WATER	SW846 8015B		7058422	
	WATER	RSK SOP-175		7060531	
	WATER	MCAWW 310.1		7061279	
	WATER	MCAWW 200.8		7058560	7058321
	WATER	MCAWW 376.2		7058511	7058299
	WATER	MCAWW 310.1		7061275	
	WATER	MCAWW 310.1		7061268	7061178
002	WATER	MCAWW 150.1		7058532	7059247
	WATER	MCAWW 160.1		7059535	7061211
	WATER	MCAWW 160.2		7059526	7060147
	WATER	MCAWW 200.7		7058569	7058329
	WATER	MCAWW 310.1		7061278	
	WATER	MCAWW 300.0A		7058220	7058138
	WATER	MCAWW 300.0A		7065158	7065134
	WATER	MCAWW 300.0A		7058221	7058136
	WATER	MCAWW 300.0A		7058224	7058142
	WATER	MCAWW 300.0A		7058223	7058141
	WATER	MCAWW 300.0A		7058225	7058140
	WATER	SW846 8015B		7058422	
	WATER	RSK SOP-175		7060531	
	WATER	MCAWW 310.1		7061279	
	WATER	MCAWW 200.8		7058560	7058321
	WATER	MCAWW 376.2		7058511	7058299
	WATER	MCAWW 310.1		7061275	
	WATER	MCAWW 310.1		7061268	7061178

**METHOD BLANK REPORT**

**GC Volatiles**

**Client Lot #...** D7B260110  
**MB Lot-Sample #:** D7C010000-531

**Work Order #...** JQCN31AA

**Matrix.....:** WATER

**Analysis Date...** 02/27/07  
**Dilution Factor:** 1

**Prep Date.....:** 02/27/07

**Analysis Time...:** 10:22

**Prep Batch #...** 7060531

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Methane	ND	5.0	ug/L	RSK SOP-175
Ethane	ND	5.0	ug/L	RSK SOP-175
Ethene	ND	5.0	ug/L	RSK SOP-175

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC Volatiles

Client Lot #...: D7B260110      Work Order #...: JQCN31AC-LCS      Matrix.....: WATER  
 LCS Lot-Sample#: D7C010000-531      JQCN31AD-LCSD  
 Prep Date.....: 02/27/07      Analysis Date...: 02/27/07  
 Prep Batch #...: 7060531      Analysis Time...: 10:12  
 Dilution Factor: 1

PARAMETER	PERCENT	RECOVERY	RPD	RPD	METHOD
	RECOVERY	LIMITS		LIMITS	
Acetylene	102	(75 - 125)			RSK SOP-175
	108	(75 - 125)	5.6	(0-20)	RSK SOP-175
Ethane	94	(75 - 125)			RSK SOP-175
	93	(75 - 125)	0.54	(0-20)	RSK SOP-175
Ethene	97	(75 - 125)			RSK SOP-175
	97	(75 - 125)	0.56	(0-20)	RSK SOP-175
Methane	91	(75 - 125)			RSK SOP-175
	90	(75 - 125)	0.51	(0-20)	RSK SOP-175

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters



# LABORATORY CONTROL SAMPLE DATA REPORT

## GC Volatiles

Client Lot #....: D7B260110      Work Order #....: JQCN31AC-LCS      Matrix.....: WATER  
 LCS Lot-Sample#: D7C010000-531      JQCN31AD-LCSD  
 Prep Date.....: 02/27/07      Analysis Date...: 02/27/07  
 Prep Batch #....: 7060531      Analysis Time...: 10:12  
 Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Acetylene	118	120	ug/L	102		RSK SOP-175
	118	127	ug/L	108	5.6	RSK SOP-175
Ethane	137	128	ug/L	94		RSK SOP-175
	137	128	ug/L	93	0.54	RSK SOP-175
Ethene	127	123	ug/L	97		RSK SOP-175
	127	124	ug/L	97	0.56	RSK SOP-175
Methane	73.0	66.3	ug/L	91		RSK SOP-175
	73.0	66.0	ug/L	90	0.51	RSK SOP-175

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

# METHOD BLANK REPORT

## GC Semivolatiles

Client Lot #...: D7B260110  
MB Lot-Sample #: D7B270000-422

Work Order #...: JP6M21AA

Matrix.....: WATER

Analysis Date...: 03/02/07  
Dilution Factor: 1

Prep Date.....: 02/27/07  
Prep Batch #...: 7058422

Analysis Time...: 20:02

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Diesel Range Organics	ND	0.25	mg/L	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
o-Terphenyl	101	(48 - 117)

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC Semivolatiles

Client Lot #...: D7B260110      Work Order #...: JP6M21AC      Matrix.....: WATER  
 LCS Lot-Sample#: D7B270000-422  
 Prep Date.....: 02/27/07      Analysis Date...: 03/02/07  
 Prep Batch #...: 7058422      Analysis Time...: 20:40  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
Diesel Range Organics	96	(54 - 115)	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
o-Terphenyl	86	(50 - 115)

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

# LABORATORY CONTROL SAMPLE DATA REPORT

## GC Semivolatiles

Client Lot #....: D7B260110      Work Order #....: JP6M21AC      Matrix.....: WATER  
 LCS Lot-Sample#: D7B270000-422  
 Prep Date.....: 02/27/07      Analysis Date...: 03/02/07  
 Prep Batch #....: 7058422      Analysis Time...: 20:40  
 Dilution Factor: 1

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Diesel Range Organics	2.00	1.91	mg/L	96	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
o-Terphenyl	86	(50 - 115)

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

# METHOD BLANK REPORT

## DISSOLVED Metals

Client Lot #....: D7B260110

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
<b>MB Lot-Sample #: D7B270000-560    Prep Batch #....: 7058560</b>						
Arsenic	ND	0.0050	mg/L	MCAWW 200.8	03/08/07	JP67K1AA
		Dilution Factor: 1				
		Analysis Time...: 20:21				
Barium	ND	0.0010	mg/L	MCAWW 200.8	03/08/07	JP67K1AU
		Dilution Factor: 1				
		Analysis Time...: 20:21				
Copper	ND	0.0020	mg/L	MCAWW 200.8	03/08/07	JP67K1AE
		Dilution Factor: 1				
		Analysis Time...: 20:21				
Lead	ND	0.0010	mg/L	MCAWW 200.8	03/08/07	JP67K1AF
		Dilution Factor: 1				
		Analysis Time...: 20:21				
Manganese	ND	0.0010	mg/L	MCAWW 200.8	03/08/07	JP67K1AV
		Dilution Factor: 1				
		Analysis Time...: 20:21				
Selenium	ND	0.0050	mg/L	MCAWW 200.8	03/08/07	JP67K1AH
		Dilution Factor: 1				
		Analysis Time...: 20:21				
<b>MB Lot-Sample #: D7B270000-569    Prep Batch #....: 7058569</b>						
Boron	ND	0.10	mg/L	MCAWW 200.7	03/01-03/02/07	JP6821AA
		Dilution Factor: 1				
		Analysis Time...: 13:42				
Cadmium	ND	0.0050	mg/L	MCAWW 200.7	03/01-03/02/07	JP6821AC
		Dilution Factor: 1				
		Analysis Time...: 13:42				
Calcium	ND	0.20	mg/L	MCAWW 200.7	03/01-03/02/07	JP6821AD
		Dilution Factor: 1				
		Analysis Time...: 13:42				
Chromium	ND	0.010	mg/L	MCAWW 200.7	03/01-03/02/07	JP6821AE
		Dilution Factor: 1				
		Analysis Time...: 13:42				

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**METHOD BLANK REPORT****DISSOLVED Metals**

Client Lot #...: D7B260110

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Iron	ND	0.10	mg/L	MCAWW 200.7	03/01-03/02/07	JP6821AF
		Dilution Factor: 1				
		Analysis Time...: 13:42				
Magnesium	ND	0.20	mg/L	MCAWW 200.7	03/01-03/02/07	JP6821AG
		Dilution Factor: 1				
		Analysis Time...: 13:42				
Potassium	ND	3.0	mg/L	MCAWW 200.7	03/01-03/02/07	JP6821AH
		Dilution Factor: 1				
		Analysis Time...: 13:42				
Silver	ND	0.010	mg/L	MCAWW 200.7	03/01-03/02/07	JP6821AJ
		Dilution Factor: 1				
		Analysis Time...: 13:42				
Sodium	ND	5.0	mg/L	MCAWW 200.7	03/01-03/02/07	JP6821AK
		Dilution Factor: 1				
		Analysis Time...: 13:42				
Zinc	ND	0.020	mg/L	MCAWW 200.7	03/01-03/02/07	JP6821AL
		Dilution Factor: 1				
		Analysis Time...: 13:42				

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## DISSOLVED Metals

Client Lot #....: D7B260110

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
<b>LCS Lot-Sample#:</b> D7B270000-560 <b>Prep Batch #....:</b> 7058560					
Arsenic	103	(89 - 111)	MCAWW 200.8	03/08/07	JP67K1AK
		Dilution Factor: 1	Analysis Time...: 20:25		
Barium	101	(89 - 117)	MCAWW 200.8	03/08/07	JP67K1AW
		Dilution Factor: 1	Analysis Time...: 20:25		
Copper	102	(90 - 117)	MCAWW 200.8	03/08/07	JP67K1AN
		Dilution Factor: 1	Analysis Time...: 20:25		
Lead	104	(88 - 119)	MCAWW 200.8	03/08/07	JP67K1AP
		Dilution Factor: 1	Analysis Time...: 20:25		
Manganese	106	(87 - 124)	MCAWW 200.8	03/08/07	JP67K1AX
		Dilution Factor: 1	Analysis Time...: 20:25		
Selenium	103	(82 - 114)	MCAWW 200.8	03/08/07	JP67K1AR
		Dilution Factor: 1	Analysis Time...: 20:25		
<b>LCS Lot-Sample#:</b> D7B270000-569 <b>Prep Batch #....:</b> 7058569					
Boron	95	(86 - 110)	MCAWW 200.7	03/01-03/02/07	JP6821AM
		Dilution Factor: 1	Analysis Time...: 13:49		
Cadmium	98	(88 - 111)	MCAWW 200.7	03/01-03/02/07	JP6821AN
		Dilution Factor: 1	Analysis Time...: 13:49		
Calcium	98	(90 - 111)	MCAWW 200.7	03/01-03/02/07	JP6821AP
		Dilution Factor: 1	Analysis Time...: 13:49		
Chromium	97	(90 - 113)	MCAWW 200.7	03/01-03/02/07	JP6821AQ
		Dilution Factor: 1	Analysis Time...: 13:49		
Iron	96	(89 - 116)	MCAWW 200.7	03/01-03/02/07	JP6821AR
		Dilution Factor: 1	Analysis Time...: 13:49		
Magnesium	97	(90 - 113)	MCAWW 200.7	03/01-03/02/07	JP6821AT
		Dilution Factor: 1	Analysis Time...: 13:49		
Potassium	102	(89 - 114)	MCAWW 200.7	03/01-03/02/07	JP6821AU
		Dilution Factor: 1	Analysis Time...: 13:49		

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# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## DISSOLVED Metals

Client Lot #....: D7B260110

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Silver	109	(86 - 120)	MCAWW 200.7	03/01-03/02/07	JP6821AV
		Dilution Factor: 1		Analysis Time...: 13:49	
Sodium	98	(90 - 117)	MCAWW 200.7	03/01-03/02/07	JP6821AW
		Dilution Factor: 1		Analysis Time...: 13:49	
Zinc	98	(84 - 111)	MCAWW 200.7	03/01-03/02/07	JP6821AX
		Dilution Factor: 1		Analysis Time...: 13:49	

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.



# LABORATORY CONTROL SAMPLE DATA REPORT

## DISSOLVED Metals

Client Lot #...: D7B260110

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
<b>LCS Lot-Sample#:</b> D7B270000-560 <b>Prep Batch #...</b> : 7058560							
Arsenic	0.0400	0.0414	mg/L	103	MCAWW 200.8	03/08/07	JP67K1AK
				Dilution Factor: 1	Analysis Time...: 20:25		
Barium	0.0400	0.0403	mg/L	101	MCAWW 200.8	03/08/07	JP67K1AW
				Dilution Factor: 1	Analysis Time...: 20:25		
Copper	0.0400	0.0408	mg/L	102	MCAWW 200.8	03/08/07	JP67K1AN
				Dilution Factor: 1	Analysis Time...: 20:25		
Lead	0.0400	0.0416	mg/L	104	MCAWW 200.8	03/08/07	JP67K1AP
				Dilution Factor: 1	Analysis Time...: 20:25		
Manganese	0.0400	0.0425	mg/L	106	MCAWW 200.8	03/08/07	JP67K1AX
				Dilution Factor: 1	Analysis Time...: 20:25		
Selenium	0.0400	0.0414	mg/L	103	MCAWW 200.8	03/08/07	JP67K1AR
				Dilution Factor: 1	Analysis Time...: 20:25		
<b>LCS Lot-Sample#:</b> D7B270000-569 <b>Prep Batch #...</b> : 7058569							
Boron	1.00	0.948	mg/L	95	MCAWW 200.7	03/01-03/02/07	JP6821AM
				Dilution Factor: 1	Analysis Time...: 13:49		
Cadmium	0.100	0.0980	mg/L	98	MCAWW 200.7	03/01-03/02/07	JP6821AN
				Dilution Factor: 1	Analysis Time...: 13:49		
Calcium	50.0	48.9	mg/L	98	MCAWW 200.7	03/01-03/02/07	JP6821AP
				Dilution Factor: 1	Analysis Time...: 13:49		
Chromium	0.200	0.195	mg/L	97	MCAWW 200.7	03/01-03/02/07	JP6821AQ
				Dilution Factor: 1	Analysis Time...: 13:49		
Iron	1.00	0.960	mg/L	96	MCAWW 200.7	03/01-03/02/07	JP6821AR
				Dilution Factor: 1	Analysis Time...: 13:49		
Magnesium	50.0	48.6	mg/L	97	MCAWW 200.7	03/01-03/02/07	JP6821AT
				Dilution Factor: 1	Analysis Time...: 13:49		
Potassium	50.0	50.8	mg/L	102	MCAWW 200.7	03/01-03/02/07	JP6821AU
				Dilution Factor: 1	Analysis Time...: 13:49		

(Continued on next page)

# LABORATORY CONTROL SAMPLE DATA REPORT

## DISSOLVED Metals

Client Lot #...: D7B260110

Matrix.....: WATER

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCNT</u> <u>RECVRY</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>WORK</u> <u>ORDER #</u>
Silver	0.0500	0.0544	mg/L	109	MCAWW 200.7	03/01-03/02/07	JP6821AV
			Dilution Factor: 1		Analysis Time...: 13:49		
Sodium	50.0	48.9	mg/L	98	MCAWW 200.7	03/01-03/02/07	JP6821AW
			Dilution Factor: 1		Analysis Time...: 13:49		
Zinc	0.500	0.492	mg/L	98	MCAWW 200.7	03/01-03/02/07	JP6821AX
			Dilution Factor: 1		Analysis Time...: 13:49		

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# MATRIX SPIKE SAMPLE EVALUATION REPORT

## DISSOLVED Metals

Client Lot #....: D7B260110

Matrix.....: WATER

Date Sampled....: 02/23/07 10:31 Date Received...: 02/23/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
<b>MS Lot-Sample #: D7B230396-001 Prep Batch #....: 7058560</b>						
Arsenic	118	(79 - 120)		MCAWW 200.8	03/08/07	JP2N71CR
	118	(79 - 120) 0.28 (0-30)		MCAWW 200.8	03/08/07	JP2N71CT
		Dilution Factor: 1				
		Analysis Time...: 20:32				
Barium	95	(83 - 118)		MCAWW 200.8	03/08/07	JP2N71DL
	98	(83 - 118) 1.0 (0-30)		MCAWW 200.8	03/08/07	JP2N71DM
		Dilution Factor: 1				
		Analysis Time...: 20:32				
Copper	97	(82 - 114)		MCAWW 200.8	03/08/07	JP2N71C0
	97	(82 - 114) 0.22 (0-30)		MCAWW 200.8	03/08/07	JP2N71C1
		Dilution Factor: 1				
		Analysis Time...: 20:32				
Lead	102	(79 - 119)		MCAWW 200.8	03/08/07	JP2N71C2
	103	(79 - 119) 1.3 (0-30)		MCAWW 200.8	03/08/07	JP2N71C3
		Dilution Factor: 1				
		Analysis Time...: 20:32				
Manganese	103	(57 - 149)		MCAWW 200.8	03/08/07	JP2N71DP
	105	(57 - 149) 1.4 (0-35)		MCAWW 200.8	03/08/07	JP2N71DQ
		Dilution Factor: 1				
		Analysis Time...: 20:32				
Selenium	134	(64 - 134)		MCAWW 200.8	03/08/07	JP2N71C6
	132	(64 - 134) 1.4 (0-35)		MCAWW 200.8	03/08/07	JP2N71C7
		Dilution Factor: 1				
		Analysis Time...: 20:32				

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# MATRIX SPIKE SAMPLE DATA REPORT

## DISSOLVED Metals

Client Lot #...: D7B260110

Matrix.....: WATER

Date Sampled...: 02/23/07 10:31 Date Received...: 02/23/07

	SAMPLE	SPIKE	MEASRD		PERCNT			PREPARATION-	WORK
PARAMETER	AMOUNT	AMT	AMOUNT	UNITS	RECVRY	RPD	METHOD	ANALYSIS DATE	ORDER #
MS Lot-Sample #: D7B230396-001    Prep Batch #...: 7058560									
Arsenic									
	0.0013	0.0400	0.0486	mg/L	118		MCAWW 200.8	03/08/07	JP2N71CR
	0.0013	0.0400	0.0485	mg/L	118	0.28	MCAWW 200.8	03/08/07	JP2N71CT
	Dilution Factor: 1								
	Analysis Time...: 20:32								
Barium									
	0.081	0.0400	0.119	mg/L	95		MCAWW 200.8	03/08/07	JP2N71DL
	0.081	0.0400	0.120	mg/L	98	1.0	MCAWW 200.8	03/08/07	JP2N71DM
	Dilution Factor: 1								
	Analysis Time...: 20:32								
Copper									
	0.00047	0.0400	0.0392	mg/L	97		MCAWW 200.8	03/08/07	JP2N71C0
	0.00047	0.0400	0.0392	mg/L	97	0.22	MCAWW 200.8	03/08/07	JP2N71C1
	Dilution Factor: 1								
	Analysis Time...: 20:32								
Lead									
	ND	0.0400	0.0408	mg/L	102		MCAWW 200.8	03/08/07	JP2N71C2
	ND	0.0400	0.0414	mg/L	103	1.3	MCAWW 200.8	03/08/07	JP2N71C3
	Dilution Factor: 1								
	Analysis Time...: 20:32								
Manganese									
	0.026	0.0400	0.0673	mg/L	103		MCAWW 200.8	03/08/07	JP2N71DP
	0.026	0.0400	0.0683	mg/L	105	1.4	MCAWW 200.8	03/08/07	JP2N71DQ
	Dilution Factor: 1								
	Analysis Time...: 20:32								
Selenium									
	ND	0.0400	0.0544	mg/L	134		MCAWW 200.8	03/08/07	JP2N71C6
	ND	0.0400	0.0537	mg/L	132	1.4	MCAWW 200.8	03/08/07	JP2N71C7
	Dilution Factor: 1								
	Analysis Time...: 20:32								

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# MATRIX SPIKE SAMPLE EVALUATION REPORT

## DISSOLVED Metals

Client Lot #...: D7B260110

Matrix.....: WATER

Date Sampled...: 02/23/07 10:30 Date Received...: 02/24/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
<b>MS Lot-Sample #: D7B260110-001 Prep Batch #...: 7058569</b>						
Boron	94	(86 - 110)		MCAWW 200.7	03/01-03/02/07	JP4AW1CP
	94	(86 - 110)	0.17 (0-20)	MCAWW 200.7	03/01-03/02/07	JP4AW1CQ
			Dilution Factor: 1			
			Analysis Time...: 15:07			
Cadmium	102	(88 - 111)		MCAWW 200.7	03/01-03/02/07	JP4AW1CR
	102	(88 - 111)	0.47 (0-20)	MCAWW 200.7	03/01-03/02/07	JP4AW1CT
			Dilution Factor: 1			
			Analysis Time...: 15:07			
Calcium	100	(90 - 111)		MCAWW 200.7	03/01-03/02/07	JP4AW1CU
	100	(90 - 111)	0.29 (0-20)	MCAWW 200.7	03/01-03/02/07	JP4AW1CV
			Dilution Factor: 1			
			Analysis Time...: 15:07			
Chromium	102	(90 - 113)		MCAWW 200.7	03/01-03/02/07	JP4AW1CW
	101	(90 - 113)	0.47 (0-20)	MCAWW 200.7	03/01-03/02/07	JP4AW1CX
			Dilution Factor: 1			
			Analysis Time...: 15:07			
Iron	102	(89 - 116)		MCAWW 200.7	03/01-03/02/07	JP4AW1C0
	99	(89 - 116)	2.2 (0-20)	MCAWW 200.7	03/01-03/02/07	JP4AW1C1
			Dilution Factor: 1			
			Analysis Time...: 15:07			
Magnesium	101	(90 - 113)		MCAWW 200.7	03/01-03/02/07	JP4AW1C2
	99	(90 - 113)	1.3 (0-20)	MCAWW 200.7	03/01-03/02/07	JP4AW1C3
			Dilution Factor: 1			
			Analysis Time...: 15:07			
Potassium	107	(89 - 114)		MCAWW 200.7	03/01-03/02/07	JP4AW1C4
	106	(89 - 114)	0.45 (0-20)	MCAWW 200.7	03/01-03/02/07	JP4AW1C5
			Dilution Factor: 1			
			Analysis Time...: 15:07			
Silver	109	(86 - 120)		MCAWW 200.7	03/01-03/02/07	JP4AW1C6
	109	(86 - 120)	0.45 (0-20)	MCAWW 200.7	03/01-03/02/07	JP4AW1C7
			Dilution Factor: 1			
			Analysis Time...: 15:07			

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# MATRIX SPIKE SAMPLE EVALUATION REPORT

## DISSOLVED Metals

Client Lot #...: D7B260110

Matrix.....: WATER

Date Sampled...: 02/23/07 10:30 Date Received...: 02/24/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Sodium	NC,MSB	(90 - 117)			MCAWW 200.7	03/01-03/02/07	JP4AW1C8
	NC,MSB	(90 - 117)		(0-20)	MCAWW 200.7	03/01-03/02/07	JP4AW1C9
					Dilution Factor: 1		
					Analysis Time...: 15:07		
Zinc	100	(84 - 111)			MCAWW 200.7	03/01-03/02/07	JP4AW1DA
	100	(84 - 111)	0.06	(0-20)	MCAWW 200.7	03/01-03/02/07	JP4AW1DC
					Dilution Factor: 1		
					Analysis Time...: 15:07		

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.

# MATRIX SPIKE SAMPLE DATA REPORT

## DISSOLVED Metals

Client Lot #....: D7B260110

Matrix.....: WATER

Date Sampled....: 02/23/07 10:30 Date Received...: 02/24/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
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MS Lot-Sample #: D7B260110-001 Prep Batch #....: 7058569

### Boron

0.12	1.00	1.06	mg/L	94			MCAWW 200.7	03/01-03/02/07	JP4AW1CP
0.12	1.00	1.06	mg/L	94	0.17		MCAWW 200.7	03/01-03/02/07	JP4AW1CQ
Dilution Factor: 1									
Analysis Time...: 15:07									

### Cadmium

ND	0.100	0.102	mg/L	102			MCAWW 200.7	03/01-03/02/07	JP4AW1CR
ND	0.100	0.102	mg/L	102	0.47		MCAWW 200.7	03/01-03/02/07	JP4AW1CT
Dilution Factor: 1									
Analysis Time...: 15:07									

### Calcium

4.4	50.0	54.7	mg/L	100			MCAWW 200.7	03/01-03/02/07	JP4AW1CU
4.4	50.0	54.5	mg/L	100	0.29		MCAWW 200.7	03/01-03/02/07	JP4AW1CV
Dilution Factor: 1									
Analysis Time...: 15:07									

### Chromium

ND	0.200	0.204	mg/L	102			MCAWW 200.7	03/01-03/02/07	JP4AW1CW
ND	0.200	0.203	mg/L	101	0.47		MCAWW 200.7	03/01-03/02/07	JP4AW1CX
Dilution Factor: 1									
Analysis Time...: 15:07									

### Iron

0.037	1.00	1.05	mg/L	102			MCAWW 200.7	03/01-03/02/07	JP4AW1C0
0.037	1.00	1.03	mg/L	99	2.2		MCAWW 200.7	03/01-03/02/07	JP4AW1C1
Dilution Factor: 1									
Analysis Time...: 15:07									

### Magnesium

1.9	50.0	52.2	mg/L	101			MCAWW 200.7	03/01-03/02/07	JP4AW1C2
1.9	50.0	51.5	mg/L	99	1.3		MCAWW 200.7	03/01-03/02/07	JP4AW1C3
Dilution Factor: 1									
Analysis Time...: 15:07									

### Potassium

2.1	50.0	55.6	mg/L	107			MCAWW 200.7	03/01-03/02/07	JP4AW1C4
2.1	50.0	55.3	mg/L	106	0.45		MCAWW 200.7	03/01-03/02/07	JP4AW1C5
Dilution Factor: 1									
Analysis Time...: 15:07									

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# MATRIX SPIKE SAMPLE DATA REPORT

## DISSOLVED Metals

Client Lot #....: D7B260110

Matrix.....: WATER

Date Sampled....: 02/23/07 10:30 Date Received...: 02/24/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Silver									
	ND	0.0500	0.0549	mg/L	109		MCAWW 200.7	03/01-03/02/07	JP4AW1C6
	ND	0.0500	0.0547	mg/L	109	0.45	MCAWW 200.7	03/01-03/02/07	JP4AW1C7
			Dilution Factor: 1						
			Analysis Time...: 15:07						
Sodium									
	290	50.0	365	mg/L			MCAWW 200.7	03/01-03/02/07	JP4AW1C8
			Qualifiers: NC,MSB						
	290	50.0	350	mg/L			MCAWW 200.7	03/01-03/02/07	JP4AW1C9
			Qualifiers: NC,MSB						
			Dilution Factor: 1						
			Analysis Time...: 15:07						
Zinc									
	0.0081	0.500	0.506	mg/L	100		MCAWW 200.7	03/01-03/02/07	JP4AW1DA
	0.0081	0.500	0.507	mg/L	100	0.06	MCAWW 200.7	03/01-03/02/07	JP4AW1DC
			Dilution Factor: 1						
			Analysis Time...: 15:07						

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

NC The recovery and/or RPD were not calculated.

MSB The recovery and RPD were not calculated because the sample amount was greater than four times the spike amount.



# METHOD BLANK REPORT

## General Chemistry

Client Lot #....: D7B260110

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bicarbonate, as CaCO3	ND	Work Order #: JQED01AA 5.0	mg/L	MB Lot-Sample #: D7C020000-275 MCAWW 310.1	03/01/07	7061275
		Dilution Factor: 1				
		Analysis Time...: 00:00				
Bromide	ND	Work Order #: JP5VA1AA 0.20	mg/L	MB Lot-Sample #: D7B270000-223 MCAWW 300.0A	02/26/07	7058223
		Dilution Factor: 1				
		Analysis Time...: 09:37				
Carbonate, as CaCO3	ND	Work Order #: JQEF01AA 5.0	mg/L	MB Lot-Sample #: D7C020000-278 MCAWW 310.1	03/01/07	7061278
		Dilution Factor: 1				
		Analysis Time...: 17:00				
Chloride	ND	Work Order #: JP5T21AA 3.0	mg/L	MB Lot-Sample #: D7B270000-220 MCAWW 300.0A	02/26/07	7058220
		Dilution Factor: 1				
		Analysis Time...: 09:37				
Fluoride	ND	Work Order #: JP5TR1AA 0.50	mg/L	MB Lot-Sample #: D7B270000-221 MCAWW 300.0A	02/26/07	7058221
		Dilution Factor: 1				
		Analysis Time...: 09:37				
Hydroxide, as CaCO3	ND	Work Order #: JQEG11AA 5.0	mg/L	MB Lot-Sample #: D7C020000-279 MCAWW 310.1	03/01/07	7061279
		Dilution Factor: 1				
		Analysis Time...: 17:00				
Nitrate	ND	Work Order #: JP5VD1AA 0.50	mg/L	MB Lot-Sample #: D7B270000-224 MCAWW 300.0A	02/26/07	7058224
		Dilution Factor: 1				
		Analysis Time...: 09:37				
Nitrite	ND	Work Order #: JP5T61AA 0.50	mg/L	MB Lot-Sample #: D7B270000-225 MCAWW 300.0A	02/26/07	7058225
		Dilution Factor: 1				
		Analysis Time...: 09:37				
Sulfate	ND	Work Order #: JP5VN1AA 5.0	mg/L	MB Lot-Sample #: D7B270000-222 MCAWW 300.0A	02/26/07	7058222
		Dilution Factor: 1				
		Analysis Time...: 09:37				

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# METHOD BLANK REPORT

## General Chemistry

Client Lot #...: D7B260110

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Sulfate	ND	Work Order #: JQHRQ1AA 5.0	mg/L	MB Lot-Sample #: D7C060000-158 MCAWW 300.0A	03/05/07	7065158
		Dilution Factor: 1				
		Analysis Time...: 14:30				
Total Alkalinity	1.1 B	Work Order #: JQEA51AA 5.0	mg/L	MB Lot-Sample #: D7C020000-268 MCAWW 310.1	03/01/07	7061268
		Dilution Factor: 1				
		Analysis Time...: 17:00				
Total Dissolved Solids	ND	Work Order #: JQEMR1AA 10	mg/L	MB Lot-Sample #: D7B280000-535 MCAWW 160.1	02/28/07	7059535
		Dilution Factor: 1				
		Analysis Time...: 14:10				
Total Sulfide	ND	Work Order #: JP60T1AA 0.050	mg/L	MB Lot-Sample #: D7B270000-511 MCAWW 376.2	02/27/07	7058511
		Dilution Factor: 1				
		Analysis Time...: 16:00				
Total Suspended Solids	ND	Work Order #: JQAEL1AA 4.0	mg/L	MB Lot-Sample #: D7B280000-526 MCAWW 160.2	02/28/07	7059526
		Dilution Factor: 1				
		Analysis Time...: 14:00				

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## General Chemistry

Lot-Sample #....: D7B260110

Matrix.....: WATER

	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH		WO#:JP82D1AA-LCS/JP82D1AC-LCSD LCS Lot-Sample#: D7B270000-532					
	100	(97 - 102)			MCAWW 150.1	02/27/07	7058532
	100	(97 - 102)	0.14	(0-5.0)	MCAWW 150.1	02/27/07	7058532
		Dilution Factor: 1		Analysis Time...: 09:40			
Bromide		WO#:JP5VA1AC-LCS/JP5VA1AD-LCSD LCS Lot-Sample#: D7B270000-223					
	101	(90 - 110)			MCAWW 300.0A	02/26/07	7058223
	101	(90 - 110)	0.55	(0-10)	MCAWW 300.0A	02/26/07	7058223
		Dilution Factor: 1		Analysis Time...: 09:03			
Chloride		WO#:JP5T21AC-LCS/JP5T21AD-LCSD LCS Lot-Sample#: D7B270000-220					
	101	(90 - 110)			MCAWW 300.0A	02/26/07	7058220
	99	(90 - 110)	1.5	(0-10)	MCAWW 300.0A	02/26/07	7058220
		Dilution Factor: 1		Analysis Time...: 09:03			
Fluoride		WO#:JP5TR1AC-LCS/JP5TR1AD-LCSD LCS Lot-Sample#: D7B270000-221					
	99	(90 - 110)			MCAWW 300.0A	02/26/07	7058221
	98	(90 - 110)	0.80	(0-10)	MCAWW 300.0A	02/26/07	7058221
		Dilution Factor: 1		Analysis Time...: 09:03			
Nitrate		WO#:JP5VD1AC-LCS/JP5VD1AD-LCSD LCS Lot-Sample#: D7B270000-224					
	97	(90 - 110)			MCAWW 300.0A	02/26/07	7058224
	95	(90 - 110)	1.5	(0-10)	MCAWW 300.0A	02/26/07	7058224
		Dilution Factor: 1		Analysis Time...: 09:03			
Nitrite		WO#:JP5T61AC-LCS/JP5T61AD-LCSD LCS Lot-Sample#: D7B270000-225					
	94	(90 - 110)			MCAWW 300.0A	02/26/07	7058225
	94	(90 - 110)	0.01	(0-10)	MCAWW 300.0A	02/26/07	7058225
		Dilution Factor: 1		Analysis Time...: 09:03			
Sulfate		WO#:JP5VN1AC-LCS/JP5VN1AD-LCSD LCS Lot-Sample#: D7B270000-222					
	101	(90 - 110)			MCAWW 300.0A	02/26/07	7058222
	99	(90 - 110)	2.0	(0-10)	MCAWW 300.0A	02/26/07	7058222
		Dilution Factor: 1		Analysis Time...: 09:03			
Sulfate		WO#:JQHRQ1AC-LCS/JQHRQ1AD-LCSD LCS Lot-Sample#: D7C060000-158					
	95	(90 - 110)			MCAWW 300.0A	03/05/07	7065158
	96	(90 - 110)	0.49	(0-10)	MCAWW 300.0A	03/05/07	7065158
		Dilution Factor: 1		Analysis Time...: 13:57			

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# LABORATORY CONTROL SAMPLE EVALUATION REPORT

## General Chemistry

Lot-Sample #....: D7B260110

Matrix.....: WATER

	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity		WO#:JQEA51AC-LCS/JQEA51AD-LCSD LCS Lot-Sample#: D7C020000-268					
	95	(90 - 110)			MCAWW 310.1	03/01/07	7061268
	96	(90 - 110)	0.52	(0-10)	MCAWW 310.1	03/01/07	7061268
		Dilution Factor: 1		Analysis Time...: 17:00			
Total Dissolved Solids		WO#:JQEMR1AC-LCS/JQEMR1AD-LCSD LCS Lot-Sample#: D7B280000-535					
	103	(86 - 106)			MCAWW 160.1	02/28/07	7059535
	104	(86 - 106)	0.57	(0-20)	MCAWW 160.1	02/28/07	7059535
		Dilution Factor: 1		Analysis Time...: 14:10			
Total Sulfide		WO#:JP60T1AC-LCS/JP60T1AD-LCSD LCS Lot-Sample#: D7B270000-511					
	104	(83 - 112)			MCAWW 376.2	02/27/07	7058511
	108	(83 - 112)	3.3	(0-10)	MCAWW 376.2	02/27/07	7058511
		Dilution Factor: 1		Analysis Time...: 16:00			
Total Suspended Solids		WO#:JQAEL1AC-LCS/JQAEL1AD-LCSD LCS Lot-Sample#: D7B280000-526					
	94	(86 - 114)			MCAWW 160.2	02/28/07	7059526
	94	(86 - 114)	0.0	(0-20)	MCAWW 160.2	02/28/07	7059526
		Dilution Factor: 1		Analysis Time...: 14:00			

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# LABORATORY CONTROL SAMPLE DATA REPORT

## General Chemistry

Lot-Sample #...: D7B260110

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH								
			WO#:JP82D1AA-LCS/JP82D1AC-LCSD LCS Lot-Sample#: D7B270000-532					
	7.00	7.02	No Units	100		MCAWW 150.1	02/27/07	7058532
	7.00	7.03	No Units	100	0.14	MCAWW 150.1	02/27/07	7058532
			Dilution Factor: 1		Analysis Time...: 09:40			
Bromide								
			WO#:JP5VA1AC-LCS/JP5VA1AD-LCSD LCS Lot-Sample#: D7B270000-223					
	5.00	5.07	mg/L	101		MCAWW 300.0A	02/26/07	7058223
	5.00	5.04	mg/L	101	0.55	MCAWW 300.0A	02/26/07	7058223
			Dilution Factor: 1		Analysis Time...: 09:03			
Chloride								
			WO#:JP5T21AC-LCS/JP5T21AD-LCSD LCS Lot-Sample#: D7B270000-220					
	25.0	25.2	mg/L	101		MCAWW 300.0A	02/26/07	7058220
	25.0	24.9	mg/L	99	1.5	MCAWW 300.0A	02/26/07	7058220
			Dilution Factor: 1		Analysis Time...: 09:03			
Fluoride								
			WO#:JP5TR1AC-LCS/JP5TR1AD-LCSD LCS Lot-Sample#: D7B270000-221					
	5.00	4.96	mg/L	99		MCAWW 300.0A	02/26/07	7058221
	5.00	4.92	mg/L	98	0.80	MCAWW 300.0A	02/26/07	7058221
			Dilution Factor: 1		Analysis Time...: 09:03			
Nitrate								
			WO#:JP5VD1AC-LCS/JP5VD1AD-LCSD LCS Lot-Sample#: D7B270000-224					
	5.00	4.83	mg/L	97		MCAWW 300.0A	02/26/07	7058224
	5.00	4.76	mg/L	95	1.5	MCAWW 300.0A	02/26/07	7058224
			Dilution Factor: 1		Analysis Time...: 09:03			
Nitrite								
			WO#:JP5T61AC-LCS/JP5T61AD-LCSD LCS Lot-Sample#: D7B270000-225					
	5.00	4.71	mg/L	94		MCAWW 300.0A	02/26/07	7058225
	5.00	4.71	mg/L	94	0.01	MCAWW 300.0A	02/26/07	7058225
			Dilution Factor: 1		Analysis Time...: 09:03			
Sulfate								
			WO#:JP5VN1AC-LCS/JP5VN1AD-LCSD LCS Lot-Sample#: D7B270000-222					
	25.0	25.2	mg/L	101		MCAWW 300.0A	02/26/07	7058222
	25.0	24.7	mg/L	99	2.0	MCAWW 300.0A	02/26/07	7058222
			Dilution Factor: 1		Analysis Time...: 09:03			
Sulfate								
			WO#:JQHRQ1AC-LCS/JQHRQ1AD-LCSD LCS Lot-Sample#: D7C060000-158					
	25.0	23.8	mg/L	95		MCAWW 300.0A	03/05/07	7065158
	25.0	23.9	mg/L	96	0.49	MCAWW 300.0A	03/05/07	7065158
			Dilution Factor: 1		Analysis Time...: 13:57			

(Continued on next page)

# LABORATORY CONTROL SAMPLE DATA REPORT

## General Chemistry

Lot-Sample #....: D7B260110

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity								
						WO#:JQEA51AC-LCS/JQEA51AD-LCSD	LCS Lot-Sample#:	D7C020000-268
	200	190	mg/L	95		MCAWW 310.1	03/01/07	7061268
	200	191	mg/L	96	0.52	MCAWW 310.1	03/01/07	7061268
						Dilution Factor: 1		Analysis Time...: 17:00
Total Dissolved Solids								
						WO#:JQEMR1AC-LCS/JQEMR1AD-LCSD	LCS Lot-Sample#:	D7B280000-535
	500	517	mg/L	103		MCAWW 160.1	02/28/07	7059535
	500	520	mg/L	104	0.57	MCAWW 160.1	02/28/07	7059535
						Dilution Factor: 1		Analysis Time...: 14:10
Total Sulfide								
						WO#:JP60T1AC-LCS/JP60T1AD-LCSD	LCS Lot-Sample#:	D7B270000-511
	0.538	0.560	mg/L	104		MCAWW 376.2	02/27/07	7058511
	0.538	0.579	mg/L	108	3.3	MCAWW 376.2	02/27/07	7058511
						Dilution Factor: 1		Analysis Time...: 16:00
Total Suspended Solids								
						WO#:JQAEL1AC-LCS/JQAEL1AD-LCSD	LCS Lot-Sample#:	D7B280000-526
	100	94.0	mg/L	94		MCAWW 160.2	02/28/07	7059526
	100	94.0	mg/L	94	0.0	MCAWW 160.2	02/28/07	7059526
						Dilution Factor: 1		Analysis Time...: 14:00

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# MATRIX SPIKE SAMPLE EVALUATION REPORT

## General Chemistry

Client Lot #...: D7B260110

Matrix.....: WATER

Date Sampled...: 02/19/07 17:00 Date Received...: 02/23/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bromide			WO#:	JP4AW1CH-MS/JP4AW1CJ-MSD	MS Lot-Sample #:	D7B260110-001	
	88	(80 - 120)			MCAWW 300.0A	02/26/07	7058223
	91	(80 - 120)	2.7	(0-20)	MCAWW 300.0A	02/26/07	7058223
			Dilution Factor: 1				
			Analysis Time...: 11:00				
Chloride			WO#:	JP4AW1CF-MS/JP4AW1CG-MSD	MS Lot-Sample #:	D7B260110-001	
	112	(80 - 120)			MCAWW 300.0A	02/26/07	7058220
	115	(80 - 120)	1.4	(0-20)	MCAWW 300.0A	02/26/07	7058220
			Dilution Factor: 1				
			Analysis Time...: 11:00				
Fluoride			WO#:	JP4AW1CD-MS/JP4AW1CE-MSD	MS Lot-Sample #:	D7B260110-001	
	102	(80 - 120)			MCAWW 300.0A	02/26/07	7058221
	104	(80 - 120)	1.7	(0-20)	MCAWW 300.0A	02/26/07	7058221
			Dilution Factor: 1				
			Analysis Time...: 11:00				
Nitrate			WO#:	JP4AW1DG-MS/JP4AW1DH-MSD	MS Lot-Sample #:	D7B260110-001	
	98	(80 - 120)			MCAWW 300.0A	02/26/07	7058224
	100	(80 - 120)	2.4	(0-20)	MCAWW 300.0A	02/26/07	7058224
			Dilution Factor: 1				
			Analysis Time...: 10:44				
Nitrite			WO#:	JP4AW1DJ-MS/JP4AW1DK-MSD	MS Lot-Sample #:	D7B260110-001	
	98	(80 - 120)			MCAWW 300.0A	02/26/07	7058225
	100	(80 - 120)	2.6	(0-20)	MCAWW 300.0A	02/26/07	7058225
			Dilution Factor: 1				
			Analysis Time...: 10:44				
Sulfate			WO#:	JP1MA1CT-MS/JP1MA1CU-MSD	MS Lot-Sample #:	D7B230276-001	
	104	(80 - 120)			MCAWW 300.0A	03/05/07	7065158
	109	(80 - 120)	2.6	(0-20)	MCAWW 300.0A	03/05/07	7065158
			Dilution Factor: 5				
			Analysis Time...: 20:36				
Sulfate			WO#:	JP4AW1CK-MS/JP4AW1CL-MSD	MS Lot-Sample #:	D7B260110-001	
	115	(80 - 120)			MCAWW 300.0A	02/26/07	7058222
	118	(80 - 120)	1.2	(0-20)	MCAWW 300.0A	02/26/07	7058222
			Dilution Factor: 1				
			Analysis Time...: 11:00				

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# MATRIX SPIKE SAMPLE EVALUATION REPORT

## General Chemistry

Client Lot #...: D7B260110

Matrix.....: WATER

Date Sampled...: 02/19/07 17:00 Date Received...: 02/23/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Sulfide			WO#:	JP4AW1CM-MS/JP4AW1CN-MSD	MS Lot-Sample #:	D7B260110-001
	73	(20 - 156)		MCAWW 376.2	02/27/07	7058511
	83	(20 - 156)	4.1 (0-30)	MCAWW 376.2	02/27/07	7058511
			Dilution Factor:	1		
			Analysis Time...	16:00		

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.



# MATRIX SPIKE SAMPLE DATA REPORT

## General Chemistry

Client Lot #....: D7B260110

Matrix.....: WATER

Date Sampled....: 02/19/07 17:00 Date Received...: 02/23/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bromide			WO#: JP4AW1CH-MS/JP4AW1CJ-MSD MS Lot-Sample #: D7B260110-001						
	0.21	5.00	4.61	mg/L	88		MCAWW 300.0A	02/26/07	7058223
	0.21	5.00	4.74	mg/L	91	2.7	MCAWW 300.0A	02/26/07	7058223
			Dilution Factor: 1						
			Analysis Time...: 11:00						
Chloride			WO#: JP4AW1CF-MS/JP4AW1CG-MSD MS Lot-Sample #: D7B260110-001						
	19	25.0	47.0	mg/L	112		MCAWW 300.0A	02/26/07	7058220
	19	25.0	47.7	mg/L	115	1.4	MCAWW 300.0A	02/26/07	7058220
			Dilution Factor: 1						
			Analysis Time...: 11:00						
Fluoride			WO#: JP4AW1CD-MS/JP4AW1CE-MSD MS Lot-Sample #: D7B260110-001						
	2.7	5.00	7.79	mg/L	102		MCAWW 300.0A	02/26/07	7058221
	2.7	5.00	7.93	mg/L	104	1.7	MCAWW 300.0A	02/26/07	7058221
			Dilution Factor: 1						
			Analysis Time...: 11:00						
Nitrate			WO#: JP4AW1DG-MS/JP4AW1DH-MSD MS Lot-Sample #: D7B260110-001						
	ND	5.00	4.89	mg/L	98		MCAWW 300.0A	02/26/07	7058224
	ND	5.00	5.01	mg/L	100	2.4	MCAWW 300.0A	02/26/07	7058224
			Dilution Factor: 1						
			Analysis Time...: 10:44						
Nitrite			WO#: JP4AW1DJ-MS/JP4AW1DK-MSD MS Lot-Sample #: D7B260110-001						
	ND	5.00	4.89	mg/L	98		MCAWW 300.0A	02/26/07	7058225
	ND	5.00	5.02	mg/L	100	2.6	MCAWW 300.0A	02/26/07	7058225
			Dilution Factor: 1						
			Analysis Time...: 10:44						
Sulfate			WO#: JP1MA1CT-MS/JP1MA1CU-MSD MS Lot-Sample #: D7B230276-001						
	110	125	239	mg/L	104		MCAWW 300.0A	03/05/07	7065158
	110	125	246	mg/L	109	2.6	MCAWW 300.0A	03/05/07	7065158
			Dilution Factor: 5						
			Analysis Time...: 20:36						
Sulfate			WO#: JP4AW1CK-MS/JP4AW1CL-MSD MS Lot-Sample #: D7B260110-001						
	27	25.0	56.1	mg/L	115		MCAWW 300.0A	02/26/07	7058222
	27	25.0	56.8	mg/L	118	1.2	MCAWW 300.0A	02/26/07	7058222
			Dilution Factor: 1						
			Analysis Time...: 11:00						

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# MATRIX SPIKE SAMPLE DATA REPORT

## General Chemistry

Client Lot #...: D7B260110

Matrix.....: WATER

Date Sampled...: 02/19/07 17:00 Date Received...: 02/23/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Sulfide			WO#: JP4AW1CM-MS/JP4AW1CN-MSD				MS Lot-Sample #: D7B260110-001		
	0.87	0.538	1.26	mg/L	73		MCAWW 376.2	02/27/07	7058511
	0.87	0.538	1.31	mg/L	83	4.1	MCAWW 376.2	02/27/07	7058511
			Dilution Factor: 1						
			Analysis Time...: 16:00						

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

# SAMPLE DUPLICATE EVALUATION REPORT

## General Chemistry

Client Lot #....: D7B260110

Work Order #....: JPX80-SMP  
JPX80-DUP

Matrix.....: WATER

Date Sampled....: 02/22/07

Date Received...: 02/22/07

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
pH	7.6	7.6	No Units	0.0	(0-5.0)	MCAWW 150.1	02/27/07	7058532
				Dilution Factor: 1	Analysis Time...: 12:54			

SD Lot-Sample #: D7B220135-006

# SAMPLE DUPLICATE EVALUATION REPORT

## General Chemistry

Client Lot #....: D7B260110

Work Order #....: JP53H-SMP  
JP53H-DUP

Matrix.....: WATER

Date Sampled....: 02/26/07 15:20

Date Received...: 02/27/07

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Suspended Solids	ND	ND	mg/L	0	(0-20)	MCAWW 160.2	02/28/07	7059527
Dilution Factor: 1						Analysis Time...: 14:00		
SD Lot-Sample #: D7B270184-003								

# SAMPLE DUPLICATE EVALUATION REPORT

## General Chemistry

Client Lot #....: D7B260110

Work Order #....: JP5MX-SMP  
JP5MX-DUP

Matrix.....: WATER

Date Sampled....: 02/25/07 13:50 Date Received...: 02/27/07

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids	51	48	mg/L	6.1	(0-20)	MCAWW 160.1	02/28/07	7059535
Dilution Factor: 1					Analysis Time...: 14:10			
SD Lot-Sample #: D7B270130-001								

# SAMPLE DUPLICATE EVALUATION REPORT

## General Chemistry

Client Lot #....: D7B260110

Work Order #....: JPX5X-SMP  
JPX5X-DUP

Matrix.....: WATER

Date Sampled....: 02/22/07

Date Received...: 02/22/07

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Alkalinity						SD Lot-Sample #: D7B220135-005		
	72 J	73	mg/L	1.7	(0-10)	MCAWW 310.1	03/01/07	7061268
			Dilution Factor: 1			Analysis Time...: 17:00		

### NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

J Method blank contamination. The associated method blank contains the target analyte at a reportable level.

STL Denver  
Sample Receiving Checklist

Lot #: D7B260110 Date/Time Received: 2/24/07 0920

Company Name & Sampling Site: Applied Hydrology Ass.

PM to Complete This Section: Yes

Residual chlorine check required: ☐

No

☒

Quarantined: Yes

☐

No

☒

Quote #: 73407

Special Instructions:

Time Zone:

• EDT/EST • CDT/CST • MDT/MST • PDT/PST • OTHER

Unpacking Checks:

Cooler #(s): 1

Temperatures (°C): 2.8

N/A Yes No

- ☒ ☒ ☐ 1. Cooler seals intact? (N/A if hand delivered) If no, document on CUR.
- ☒ ☐ 2. Chain of custody present? If no, document on CUR.
- ☒ ☐ 3. Bottles broken and/or are leaking? If yes, document on CUR.
- ☐ ☒ 4. Multiphasic samples obvious? If yes, document on CUR.
- ☒ ☐ 5. Proper container & preservatives used? (ref. Attachment D of SOP# DEN-QA-0003) If no, document on CUR.
- ☐ ☒ 6. pH of all samples checked and meet requirements? If no, document on CUR.
- ☒ ☐ 7. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DEN-QA-0003) If no, document on CUR, and contact PM before proceeding.
- ☐ ☒ 8. Did chain of custody agree with labels ID and samples received? If no, document on CUR.
- ☐ ☒ 9. Were VOA samples without headspace? If no, document on CUR.
- ☐ ☒ 10. Were VOA vials preserved? Preservative ☒ HCl ☐ 4±2°C ☐ Sodium Thiosulfate ☐ Ascorbic Acid
- ☐ ☒ 11. Did samples require preservation with sodium thiosulfate?
- ☒ ☐ 12. If yes to #11, did the samples contain residual chlorine? If yes, document on CUR.
- ☒ ☐ 13. Sediment present in dissolved/filtered bottles? If yes, document on CUR.
- ☒ ☐ 14. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.
- ☐ ☒ 15. Receipt date(s) > 48 hours past the collection date(s)? If yes, notify PA/PM.
- ☐ ☐ 16. Are analyses with short holding times requested?
- ☐ ☒ 17. Was a quick Turn Around (TAT) requested?

Initials

PS

*STL Denver*  
**Sample Receiving Checklist**

Lot # D7B2100110

**Login Checks:**

Initials

SB

N/A Yes No

- ☒ ☐ 18. Sufficient volume provided for all analysis requested? (ref. Attachment D of SOP# DEN-QA-0003) If no, document on CUR, and contact PM before proceeding.
  - ☒ ☐ 19. Is sufficient volume provided for client requested MS, MSD or matrix duplicates? If no, document on CUR, and contact PM before proceeding.
  - ☒ ☐ 20. Did the chain of custody includes "received by" and "relinquished" by signatures, dates, and times?
  - ☐ ☒ 21. Were special log in instructions read and followed?
  - ☒ ☐ 22. Were AFCEE metals logged for refrigerated storage?
  - ☒ ☐ 23. Were tests logged checked against the COC? Which samples were confirmed? 1
  - ☒ ☐ 24. Was a Rush form completed for quick TAT?
  - ☐ ☒ 25. Was a Short Hold form completed for any short holds?
  - ☐ ☒ 26. Is "Strict ICOC" required?
  - ☐ ☒ 27. Were special archiving instructions indicated in the General Comments? If so, what were they?
- 

**Labeling and Storage Checks:**

Initials

SB

- ☒ ☐ 28. Was the subcontract COC signed and sent with samples to bottle prep?
- ☒ ☐ 29. Were sample labels double-checked by a second person?
- ☒ ☐ 30. Were sample bottles and COC double checked for dissolved/filtered metals by a second person?
- ☒ ☐ 31. Did the sample ID, Date, and Time from label match what was logged?
- ☒ ☐ 32. Were stickers for special archiving instructions affixed to each box and to the ICOC? See #27
- ☒ ☐ 33. Were AFCEE metals stored refrigerated?
- ☒ ☐ 34. Were "Strict ICOC" copies given to satellite storage areas?

Document any problems or discrepancies and the actions taken to resolve them on a Condition Upon Receipt Anomaly Report (CUR).



2-24 of 2-25

**SEVERN**  
**TRENT**  
**Severn Trent**

# STILL

**STL Denver**  
4955 Yarrow Street  
Arvada, CO 80002

**DISTRIBUTION:** WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy