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SEVERN
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STL

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ANALYTICAL REPORT

F07-011

Lot #: F7C010172
SDG #: W05130

Steve Trent

Fluor Hanford Inc
PO Box 1000 T6-03
Richland, WA 99352

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SEVERN TRENT LABORATORIES, INC.

EDMC

Jane M. Klyne
for
Brian O'Donnell
Project Manager

April 10, 2007



Case Narrative

Lot Number: F7C010172

SDG: W05130

This report contains the analytical results for the sample received under chain of custody by STL St. Louis on February 28, 2007. This sample is associated with your F07-011 project.

The analytical results included in this report meet all applicable quality control procedure requirements except as noted below.

The test results in this report meet all NELAP requirements for parameters in which accreditations are held by STL St. Louis. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of this report.

All chemical analysis results are based upon sample as received, wet weight, unless noted otherwise. All radiochemistry results are based upon sample as dried and ground with the exception of tritium, unless requested wet weight by the client.

Observations/Nonconformances

Reference the chain of custody and condition upon receipt report for any variations on receipt conditions and temperature of samples on receipt.

ICP Metals by SW846 6010B

The MS and MSD recoveries for Iron are outside the established QC limits. The RPD is within method acceptance criteria indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recovery.

Affected Samples:

F7C010172 (1): BILTY7

Ion Chromatography by EPA 300.0A

The anion matrix spike solution contains all routine anions. Spiking technique, sample preparation and method compliance is demonstrated by the remaining acceptable MS recoveries. Poor matrix spike recovery for Chloride in batch 7086162 is attributed to matrix interference.

During the run, the CCB was analyzed before the CCV due to analyst error. A CCV/CCB was analyzed after one sample had injected after the incorrect sequence of the CCV/CCB. All CCVS and CCBs passed. Also due to the incorrect order of the CCV/CCB, there were 11 samples analyzed between CCV/CCBs.

Affected Samples:

F7C010172 (1): BILTY7

Nitrate by EPA 353.1

The MS recovery for Nitrate batch 7071435 is outside the established QC limits. The analyte concentration in the original sample is greater than four times the amount spiked, making percent recovery information uninformative. Method performance is demonstrated by acceptable LCS/LCSD recovery.

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Affected Samples:

F7C010172 (1): B1LTY7

Orthophosphate by EPA 365.2

Due to instrumentation contamination, the associated sample was unable to be analyzed by the requested EPA 300.0A method. They were analyzed instead by EPA 365.2. Results are reported in batch 7060328.

Affected Samples:

F7C010172 (1): B1LTY7

There were no observations or nonconformances to report for the following analyses:

Nitrite by EPA 354.1

METHODS SUMMARY

F7C010172

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Bromide	MCAWW 300.0A	MCAWW 300.0A
Chloride	MCAWW 300.0A	MCAWW 300.0A
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Inductively Coupled Plasma (ICP) Metals	SW846 6010B	
Nitrate	MCAWW 353.1	
Nitrite	MCAWW 354.1	
Phosphate, ortho as P (365.2)	MCAWW 365.2	
Sulfate	MCAWW 300.0A	MCAWW 300.0A

References:

- MCAWW "Methods for Chemical Analysis of Water and Wastes",
EPA-600/4-79-020, March 1983 and subsequent revisions.
- SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical
Methods", Third Edition, November 1986 and its updates.

SAMPLE SUMMARY**F7C010172**

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
JQAHH	001	BILTY7	02/27/07	08:57

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.

Fluor Hanford Inc

Client Sample ID: BILTY7

TOTAL Metals

Lot-Sample #....: F7C010172-001

Matrix.....: WATER

Date Sampled....: 02/27/07 08:57 Date Received...: 02/28/07

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Prep Batch #....: 7074225						
Strontium	195	5.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AA
		Dilution Factor: 1		Analysis Time...: 18:35		
Antimony	ND	60.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AC
		Dilution Factor: 1		Analysis Time...: 18:35		
Barium	55.0	50.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AD
		Dilution Factor: 1		Analysis Time...: 18:35		
Beryllium	ND	5.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AE
		Dilution Factor: 1		Analysis Time...: 18:35		
Cadmium	ND	5.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AF
		Dilution Factor: 1		Analysis Time...: 18:35		
Calcium	42700	1000	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AG
		Dilution Factor: 1		Analysis Time...: 18:35		
Chromium	25.2	10.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AH
		Dilution Factor: 1		Analysis Time...: 18:35		
Cobalt	ND	50.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AJ
		Dilution Factor: 1		Analysis Time...: 18:35		
Iron	686	100	ug/L	SW846 6010B	03/15-03/21/07	JQAHH1AK
		Dilution Factor: 1		Analysis Time...: 17:34		
Manganese	22.2	15.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AL
		Dilution Factor: 1		Analysis Time...: 18:35		
Nickel	ND	40.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AM
		Dilution Factor: 1		Analysis Time...: 18:35		
Potassium	5080	5000	ug/L	SW846 6010B	03/15-03/21/07	JQAHH1AN
		Dilution Factor: 1		Analysis Time...: 17:34		
Silver	ND	10.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AP
		Dilution Factor: 1		Analysis Time...: 18:35		

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Client Sample ID: B1LTY7

TOTAL Metals

Lot-Sample #: F7C010172-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Sodium	8600	1000	ug/L	SW846 6010B	03/15-03/21/07	JQAHH1AQ
		Dilution Factor: 1		Analysis Time...: 17:34		
Vanadium	8.0 B	50.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AR
		Dilution Factor: 1		Analysis Time...: 18:35		
Zinc	ND	20.0	ug/L	SW846 6010B	03/15-03/22/07	JQAHH1AT
		Dilution Factor: 1		Analysis Time...: 18:35		

NOTE(S):

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #: F7C010172

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: F7C150000-225 Prep Batch #: 7074225						
Strontium	ND	5.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AA
		Dilution Factor: 1				
		Analysis Time...: 18:27				
Antimony	ND	60.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AC
		Dilution Factor: 1				
		Analysis Time...: 18:27				
Barium	ND	50.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AD
		Dilution Factor: 1				
		Analysis Time...: 18:27				
Beryllium	ND	5.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AE
		Dilution Factor: 1				
		Analysis Time...: 18:27				
Cadmium	ND	5.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AF
		Dilution Factor: 1				
		Analysis Time...: 18:27				
Calcium	ND	1000	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AG
		Dilution Factor: 1				
		Analysis Time...: 18:27				
Chromium	ND	10.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AH
		Dilution Factor: 1				
		Analysis Time...: 18:27				
Cobalt	ND	50.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AJ
		Dilution Factor: 1				
		Analysis Time...: 18:27				
Iron	ND	100	ug/L	SW846 6010B	03/15-03/21/07	JQ4NV1AK
		Dilution Factor: 1				
		Analysis Time...: 17:23				
Manganese	ND	15.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AL
		Dilution Factor: 1				
		Analysis Time...: 18:27				
Nickel	ND	40.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AM
		Dilution Factor: 1				
		Analysis Time...: 18:27				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #....: F7C010172

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Potassium	ND	5000	ug/L	SW846 6010B	03/15-03/21/07	JQ4NV1AN
		Dilution Factor: 1 Analysis Time...: 17:23				
Silver	ND	10.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AP
		Dilution Factor: 1 Analysis Time...: 18:27				
Sodium	ND	1000	ug/L	SW846 6010B	03/15-03/21/07	JQ4NV1AQ
		Dilution Factor: 1 Analysis Time...: 17:23				
Vanadium	ND	50.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AR
		Dilution Factor: 1 Analysis Time...: 18:27				
Zinc	ND	20.0	ug/L	SW846 6010B	03/15-03/22/07	JQ4NV1AT
		Dilution Factor: 1 Analysis Time...: 18:27				

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: F7C010172

Matrix.....: WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: F7C150000-225 Prep Batch #....: 7074225					
Strontium	105	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1AU
		Dilution Factor: 1		Analysis Time...: 18:31	
Antimony	102	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1AV
		Dilution Factor: 1		Analysis Time...: 18:31	
Barium	101	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1AW
		Dilution Factor: 1		Analysis Time...: 18:31	
Beryllium	108	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1AX
		Dilution Factor: 1		Analysis Time...: 18:31	
Cadmium	104	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1AO
		Dilution Factor: 1		Analysis Time...: 18:31	
Calcium	107	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1A1
		Dilution Factor: 1		Analysis Time...: 18:31	
Chromium	103	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1A2
		Dilution Factor: 1		Analysis Time...: 18:31	
Cobalt	102	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1A3
		Dilution Factor: 1		Analysis Time...: 18:31	
Iron	106	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1A4
		Dilution Factor: 1		Analysis Time...: 07:54	
Manganese	104	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1A5
		Dilution Factor: 1		Analysis Time...: 18:31	
Nickel	101	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1A6
		Dilution Factor: 1		Analysis Time...: 18:31	
Potassium	97	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1A7
		Dilution Factor: 1		Analysis Time...: 07:54	
Silver	101	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1A8
		Dilution Factor: 1		Analysis Time...: 18:31	
Sodium	103	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1A9
		Dilution Factor: 1		Analysis Time...: 07:54	

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: F7C010172

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>
Vanadium	102	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1CA
		Dilution Factor: 1		Analysis Time...: 18:31	
Zinc	97	(80 - 120)	SW846 6010B	03/15-03/22/07	JQ4NV1CC
		Dilution Factor: 1		Analysis Time...: 18:31	

NOTE(S) :

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #....: F7C010172

Matrix.....: WATER

Date Sampled....: 02/27/07 08:57 Date Received...: 02/28/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: F7C010172-001 Prep Batch #....: 7074225						
Strontium	100	(75 - 125)		SW846 6010B	03/15-03/22/07	JQAHH1A6
	103	(75 - 125)	2.2 (0-20)	SW846 6010B	03/15-03/22/07	JQAHH1A7
				Dilution Factor: 1		
				Analysis Time...: 18:44		
Antimony	98	(75 - 125)		SW846 6010B	03/15-03/22/07	JQAHH1A8
	102	(75 - 125)	3.9 (0-20)	SW846 6010B	03/15-03/22/07	JQAHH1A9
				Dilution Factor: 1		
				Analysis Time...: 18:44		
Barium	98	(75 - 125)		SW846 6010B	03/15-03/22/07	JQAHH1CA
	100	(75 - 125)	2.8 (0-20)	SW846 6010B	03/15-03/22/07	JQAHH1CC
				Dilution Factor: 1		
				Analysis Time...: 18:44		
Beryllium	104	(75 - 125)		SW846 6010B	03/15-03/22/07	JQAHH1CD
	107	(75 - 125)	3.0 (0-20)	SW846 6010B	03/15-03/22/07	JQAHH1CE
				Dilution Factor: 1		
				Analysis Time...: 18:44		
Cadmium	99	(75 - 125)		SW846 6010B	03/15-03/22/07	JQAHH1CF
	102	(75 - 125)	3.0 (0-20)	SW846 6010B	03/15-03/22/07	JQAHH1CG
				Dilution Factor: 1		
				Analysis Time...: 18:44		
Calcium	98	(75 - 125)		SW846 6010B	03/15-03/22/07	JQAHH1CH
	102	(75 - 125)	1.3 (0-20)	SW846 6010B	03/15-03/22/07	JQAHH1CJ
				Dilution Factor: 1		
				Analysis Time...: 18:44		
Chromium	99	(75 - 125)		SW846 6010B	03/15-03/22/07	JQAHH1CK
	102	(75 - 125)	3.0 (0-20)	SW846 6010B	03/15-03/22/07	JQAHH1CL
				Dilution Factor: 1		
				Analysis Time...: 18:44		
Cobalt	96	(75 - 125)		SW846 6010B	03/15-03/22/07	JQAHH1CM
	98	(75 - 125)	3.0 (0-20)	SW846 6010B	03/15-03/22/07	JQAHH1CN
				Dilution Factor: 1		
				Analysis Time...: 18:44		

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: F7C010172

Matrix.....: WATER

Date Sampled...: 02/27/07 08:57 Date Received...: 02/28/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Iron	62 N	(75 - 125)			SW846 6010B	03/15-03/21/07	JQAHH1CP
	60 N	(75 - 125)	1.3	(0-20)	SW846 6010B	03/15-03/21/07	JQAHH1CQ
			Dilution Factor: 1				
			Analysis Time...: 17:44				
Manganese	98	(75 - 125)			SW846 6010B	03/15-03/22/07	JQAHH1CR
	100	(75 - 125)	2.3	(0-20)	SW846 6010B	03/15-03/22/07	JQAHH1CT
			Dilution Factor: 1				
			Analysis Time...: 18:44				
Nickel	95	(75 - 125)			SW846 6010B	03/15-03/22/07	JQAHH1CU
	98	(75 - 125)	3.0	(0-20)	SW846 6010B	03/15-03/22/07	JQAHH1CV
			Dilution Factor: 1				
			Analysis Time...: 18:44				
Potassium	90	(75 - 125)			SW846 6010B	03/15-03/21/07	JQAHH1CW
	98	(75 - 125)	6.2	(0-20)	SW846 6010B	03/15-03/21/07	JQAHH1CX
			Dilution Factor: 1				
			Analysis Time...: 17:44				
Silver	98	(75 - 125)			SW846 6010B	03/15-03/22/07	JQAHH1CO
	108	(75 - 125)	9.1	(0-20)	SW846 6010B	03/15-03/22/07	JQAHH1C1
			Dilution Factor: 1				
			Analysis Time...: 18:44				
Sodium	101	(75 - 125)			SW846 6010B	03/15-03/21/07	JQAHH1C2
	103	(75 - 125)	1.5	(0-20)	SW846 6010B	03/15-03/21/07	JQAHH1C3
			Dilution Factor: 1				
			Analysis Time...: 17:44				
Vanadium	98	(75 - 125)			SW846 6010B	03/15-03/22/07	JQAHH1C4
	100	(75 - 125)	2.6	(0-20)	SW846 6010B	03/15-03/22/07	JQAHH1C5
			Dilution Factor: 1				
			Analysis Time...: 18:44				
Zinc	93	(75 - 125)			SW846 6010B	03/15-03/22/07	JQAHH1C6
	95	(75 - 125)	3.0	(0-20)	SW846 6010B	03/15-03/22/07	JQAHH1C7
			Dilution Factor: 1				
			Analysis Time...: 18:44				

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

Fluor Hanford Inc

Client Sample ID: B1LTY7

General Chemistry

Lot-Sample #....: F7C010172-001 Work Order #....: JQAHH
Date Sampled....: 02/27/07 08:57 Date Received...: 02/28/07

Matrix.....: WATER

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bromide	ND	0.25	mg/L	MCAWW 300.0A	03/26/07	7086161
		Dilution Factor: 1		Analysis Time...: 02:49		
Chloride	8.3 J	2.0	mg/L	MCAWW 300.0A	03/26/07	7086162
		Dilution Factor: 10		Analysis Time...: 03:41		
Fluoride	0.094 B	0.10	mg/L	MCAWW 300.0A	03/26/07	7086164
		Dilution Factor: 1		Analysis Time...: 02:49		
Nitrate	2100	500	ug/L	MCAWW 353.1	03/09/07	7071435
		Dilution Factor: 10		Analysis Time...: 00:00		
Nitrite as N	ND	50.0	ug/L	MCAWW 354.1	03/05/07	7071434
		Dilution Factor: 1		Analysis Time...: 00:00		
Phosphate as P, Ortho	50.8	50.0	ug/L	MCAWW 365.2	02/28/07	7060328
		Dilution Factor: 1		Analysis Time...: 00:00		
Sulfate	32.9	5.0	mg/L	MCAWW 300.0A	03/26/07	7086163
		Dilution Factor: 10		Analysis Time...: 03:41		

NOTE(S):

RL Reporting Limit

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

B Estimated result. Result is less than RL.

METHOD BLANK REPORT

General Chemistry

Client Lot #....: F7C010172

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bromide	ND	Work Order #: JRRXP1AA 0.25	mg/L	MB Lot-Sample #: F7C270000-161 MCAWW 300.0A	03/26/07	7086161
		Dilution Factor: 1 Analysis Time...: 09:32				
Chloride	0.12 B	Work Order #: JRRXQ1AA 0.20	mg/L	MB Lot-Sample #: F7C270000-162 MCAWW 300.0A	03/26/07	7086162
		Dilution Factor: 1 Analysis Time...: 09:32				
Fluoride	ND	Work Order #: JRRXT1AA 0.10	mg/L	MB Lot-Sample #: F7C270000-164 MCAWW 300.0A	03/26/07	7086164
		Dilution Factor: 1 Analysis Time...: 09:32				
Nitrate	ND	Work Order #: JQWNK1AA 50.0	ug/L	MB Lot-Sample #: F7C120000-435 MCAWW 353.1	03/09/07	7071435
		Dilution Factor: 1 Analysis Time...: 00:00				
Nitrite as N	ND	Work Order #: JQWNN1AA 50.0	ug/L	MB Lot-Sample #: F7C120000-434 MCAWW 354.1	03/05/07	7071434
		Dilution Factor: 1 Analysis Time...: 00:00				
Phosphate as P, Ortho	ND	Work Order #: JQAXW1AA 50.0	ug/L	MB Lot-Sample #: F7C010000-328 MCAWW 365.2	02/28/07	7060328
		Dilution Factor: 1 Analysis Time...: 00:00				
Sulfate	ND	Work Order #: JRRXR1AA 0.50	mg/L	MB Lot-Sample #: F7C270000-163 MCAWW 300.0A	03/26/07	7086163
		Dilution Factor: 1 Analysis Time...: 09:32				

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 #...: F7C010172

Matrix.....: WATER

	PERCENT	RECOVERY	RPD	PREPARATION-	PREP
PARAMETER	RECOVERY	LIMITS	LIMITS	ANALYSIS DATE	BATCH #
Bromide		WO#:JRRXP1AC-LCS/JRRXP1AD-LCSD LCS Lot-Sample#: F7C270000-161			
	104	(90 - 110)		MCAWW 300.0A	03/26/07 7086161
	103	(90 - 110) 0.70 (0-20)		MCAWW 300.0A	03/26/07 7086161
		Dilution Factor: 1		Analysis Time...: 09:15	
Chloride		WO#:JRRXQ1AC-LCS/JRRXQ1AD-LCSD LCS Lot-Sample#: F7C270000-162			
	104	(90 - 110)		MCAWW 300.0A	03/26/07 7086162
	107	(90 - 110) 2.8 (0-20)		MCAWW 300.0A	03/26/07 7086162
		Dilution Factor: 1		Analysis Time...: 09:15	
Fluoride		WO#:JRRXT1AC-LCS/JRRXT1AD-LCSD LCS Lot-Sample#: F7C270000-164			
	102	(90 - 110)		MCAWW 300.0A	03/26/07 7086164
	105	(90 - 110) 3.0 (0-20)		MCAWW 300.0A	03/26/07 7086164
		Dilution Factor: 1		Analysis Time...: 09:15	
Nitrate		WO#:JQWNK1AC-LCS/JQWNK1AD-LCSD LCS Lot-Sample#: F7C120000-435			
	104	(90 - 110)		MCAWW 353.1	03/09/07 7071435
	96	(90 - 110) 8.4 (0-20)		MCAWW 353.1	03/09/07 7071435
		Dilution Factor: 1		Analysis Time...: 00:00	
Nitrite as N		WO#:JQWNN1AC-LCS/JQWNN1AD-LCSD LCS Lot-Sample#: F7C120000-434			
	99	(90 - 110)		MCAWW 354.1	03/05/07 7071434
	100	(90 - 110) 1.5 (0-20)		MCAWW 354.1	03/05/07 7071434
		Dilution Factor: 1		Analysis Time...: 00:00	
Sulfate		WO#:JRRXR1AC-LCS/JRRXR1AD-LCSD LCS Lot-Sample#: F7C270000-163			
	100	(90 - 110)		MCAWW 300.0A	03/26/07 7086163
	101	(90 - 110) 1.4 (0-20)		MCAWW 300.0A	03/26/07 7086163
		Dilution Factor: 1		Analysis Time...: 09:15	

NOTE(S):

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

STL ST. LOUIS

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F7C010172

Matrix.....: WATER

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Phosphate as P, Ortho	100	(90 - 110)	MCAWW 365.2	02/28/07	7060328
		Dilution Factor: 1	Analysis Time...: 00:00		

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: F7C010172

Matrix.....: WATER

Date Sampled...: 02/27/07 08:57 Date Received...: 02/28/07

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bromide	93	Work Order #...: JQAHH1C8 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F7C010172-001 03/26/07	7086161
		Dilution Factor: 1		Analysis Time...: 02:49	
Chloride	112 N	Work Order #...: JQAHH1C9 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F7C010172-001 03/26/07	7086162
		Dilution Factor: 10		Analysis Time...: 03:42	
Fluoride	101	Work Order #...: JQAHH1DU (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F7C010172-001 03/26/07	7086164
		Dilution Factor: 1		Analysis Time...: 02:49	
Nitrate	0 N	Work Order #...: JQAHH1DP (90 - 110)	MCAWW 353.1	MS Lot-Sample #: F7C010172-001 03/09/07	7071435
		Dilution Factor: 10		Analysis Time...: 00:00	
Nitrite as N	107	Work Order #...: JQAHH1DR (90 - 110)	MCAWW 354.1	MS Lot-Sample #: F7C010172-001 03/05/07	7071434
		Dilution Factor: 1		Analysis Time...: 00:00	
Phosphate as P, Ortho	99	Work Order #...: JQAHH1AS (75 - 125)	MCAWW 365.2	MS Lot-Sample #: F7C010172-001 02/28/07	7060328
		Dilution Factor: 1		Analysis Time...: 00:00	
Sulfate	101	Work Order #...: JQAHH1A4 (90 - 110)	MCAWW 300.0A	MS Lot-Sample #: F7C010172-001 03/26/07	7086163
		Dilution Factor: 10		Analysis Time...: 03:41	

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: F7C010172

Work Order #...: JQAHH-SMP

Matrix.....: WATER

JOAHH-DUP

Date Sampled...: 02/27/07 08:57

Date Received..: 02/28/07

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Bromide	ND	ND	mg/L	0	(0-20)	SD Lot-Sample #: F7C010172-001 MCAW 300.0A	03/26/07	7086161
			Dilution Factor: 1		Analysis Time...: 02:49			
Chloride	8.3 J	8.3	mg/L	0.25	(0-20)	SD Lot-Sample #: F7C010172-001 MCAW 300.0A	03/26/07	7086162
			Dilution Factor: 10		Analysis Time...: 03:41			
Sulfate	32.9	32.2	mg/L	2.4	(0-20)	SD Lot-Sample #: F7C010172-001 MCAW 300.0A	03/26/07	7086163
			Dilution Factor: 10		Analysis Time...: 03:41			
Phosphate as P, Ortho	50.8	50.8	ug/L	0.0	(0-20)	SD Lot-Sample #: F7C010172-001 MCAW 365.2	02/28/07	7060328
			Dilution Factor: 1		Analysis Time...: 00:00			
Nitrate	2100	2140	ug/L	1.9	(0-20)	SD Lot-Sample #: F7C010172-001 MCAW 353.1	03/09/07	7071435
			Dilution Factor: 10		Analysis Time...: 00:00			
Nitrite as N	ND	ND	ug/L	0	(0-20)	SD Lot-Sample #: F7C010172-001 MCAW 354.1	03/05/07	7071434
			Dilution Factor: 1		Analysis Time...: 00:00			
Fluoride	0.094 B	0.093 B	mg/L	0.99	(0-20)	SD Lot-Sample #: F7C010172-001 MCAW 300.0A	03/26/07	7086164
			Dilution Factor: 1		Analysis Time...: 02:49			

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.

B Estimated result. Result is less than RL.

LOT# F7C010172

SDG# W05130

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				CUR-6117		F07-011-078		PAGE 1 OF 1	
COLLECTOR Pope/Pfister/Hughes/Wise		COMPANY CONTACT TRENT, SJ		TELEPHONE NO. 373-5869		PROJECT COORDINATOR TRENT, SJ		PRICE CODE 7N		DATA TURNAROUND 45 Days / 45 Days	
SAMPLING LOCATION 05-D		PROJECT DESIGNATION AQUIFER TUBE SAMPLING IN THE 100-BC-5 OU				SAF NO. F07-011		AIR QUALITY ☐			
ICE CHEST NO. GFP-07-010		FIELD LOGBOOK NO. HNF-N-451-1		COA 122543ES10		METHOD OF SHIPMENT GOVERNMENT VEHICLE Federal Express					
SHIPPED TO Severn Trent St. Louis		OFFSITE PROPERTY NO. #A-1 See PTR 19011				BILL OF LADING/AIR BILL NO. #A-1 See PTR 19011 @MAD 2/27/07					
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)		PRESERVATION		HNO3 to pH 2	Cool 4C					
			TYPE OF CONTAINER		P	P					
			NO. OF CONTAINER(S)		1	1					
			VOLUME		500mL	500mL					
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
BILTY7	WATER	2/27/07	0857	✓	✓						
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS					
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		(1)ICP Metals - 6010B (TAL) {Antimony, Barium, Cadmium, Calcium, Chromium, Cobalt, Iron, Manganese, Nickel, Potassium, Silver, Sodium, Vanadium, Zinc}- ICP Metals - 6010B (Add-On) {Beryllium, Strontium} (2)IC Anions - 300.0 {Bromide, Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME					
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME					
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME					
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME					

STL ST. LOUIS
STL St. Louis

Lot #(s): F7C010172

- 6147 -

Client: Fluor Hanabecoc/RFA No:
Quote No: 74332 Initiated By: MB

Condition Upon Receipt Form

Date: 2/28/07
Time: 9:45

Shipper Name: Fed Ex
Shipping # (s): 7986 1705 9470

Shipping Information

Multiple Packages Y ☒ N/A
Sample Temperature (s):**

1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.

*Numbered shipping lines correspond to Numbered Sample Temp lines

**Sample must be received at 4°C ± 2°C- If not, note contents below. Temperature variance does NOT affect the following: Metals-Liquid or Rad tests- Liquid or Solids

Condition (Circle "Y" for yes, "N" for no and "N/A" for not applicable):

1.	☒ Y ☐ N	Was sample received broken?	8.	☒ Y ☐ N	Sample received with Chain of Custody?
2.	☒ Y ☐ N ☐ N/A	Was sample received with proper pH? (If not, make note below)	9.	☒ Y ☐ N	Chain of Custody matches sample ID's on container(s)?
3.	☐ Y ☐ N	If N/A-Was pH taken by original STL Lab?	10.	☒ Y ☐ N	Are there custody seals present on cooler?
4.	☒ Y ☐ N	Sample received in proper containers?	11.	☐ Y ☒ N ☐ N/A	Do custody seals on cooler appear to be tampered with?
5.	☒ Y ☐ N	Sample volume sufficient for analysis?	12.	☒ Y ☐ N	Are there custody seals present on bottles?
6.	☐ Y ☐ N ☒ N/A	Headspace in VOA or TOX liquid samples? (If Yes, note sample ID's below)	13.	☐ Y ☒ N ☐ N/A	Do custody seals on bottles appear to be tampered with?
7.	☐ Y ☒ N	Were contents of the cooler frisked after opening	14.	☐ Y ☐ N	Was Internal COC/Workshare received?

¹ For DOE-AL (Pantex, LANL, Sandia) sites, pH of ALL containers received must be verified, EXCEPT VOA, TOX and soils.

Notes:

Corrective Action:

- ☐ Client Contact Name:
☐ Sample(s) processed "as is"
☐ Sample(s) on hold until:

Informed by:

Project Management Review:

If released, notify:

Date: 3/2/07

THIS FORM MUST BE COMPLETED AT THE TIME THE ITEMS ARE BEING CHECKED IN. IF ANY ITEM IS COMPLETED BY SOMEONE OTHER THAN THE INITIATOR, THEN THAT PERSON IS REQUIRED TO APPLY THEIR INITIAL AND THE DATE NEXT TO THAT ITEM.

ADMIN-0004, REVISED 03/01/06\slr\01\QA\FORMS\ST-LOUIS\ADMIN\Admin004030106.doc
SDG# WQ5130

LOT# F7C010172

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