

STL

STL St. Louis

13715 Rider Trail North
Earth City, MO 63045

Tel: 314 298 8566 Fax: 314 298 8757
www.stl-inc.com

ANALYTICAL REPORT

X07-013

Lot #: F7F130123
SDG #: SL686A

Steve Trent

Fluor Hanford Inc
PO Box 1000
MSIN E6-35
Richland, WA 99352

SEVERN TRENT LABORATORIES, INC.



Brian O'Donnell
Project Manager

June 28, 2007

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CASE NARRATIVE

Fluor Hanford Inc.
P.O. Box 1000
MSIN E6-135
Richland, Washington 99352
June 28, 2007
Attention: Steve Trent

SDG	:	SL686A
Number of Samples	:	3
Sample Matrix	:	Water
Data Deliverable	:	RDR-R3930
Date SDG Closed	:	June 13, 2007

II. Introduction

On June 13, 2007 data reanalysis orders were received at STL-St. Louis.

III. Analytical Results/ Methodology

The analytical results for this report are presented by analytical test. Each set of data includes sample identification information, analytical results and the appropriate detection limits.

Analyses requested: see attached copy of RDR

Deviation from Request: No Deviation from requested methods.

IV. Definitions

The following codes are used to denote laboratory quality control samples and can be found in the data summary section of this report:

QCBLK- Quality Control Blank, Method Blank

QCLCS- Quality Control Laboratory Control Sample, Blank Spike

V. Comments

General: The recheck request consists of RDR# 070621STLSL-R3930. A copy of the request is included in this package for reference.

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The term "Detection Limit" used in the analytical data reports refers to either the lab's standard reporting limits or contractually required reporting limits, whichever is applicable.

Anion Results:

The results from the reanalysis of all three samples closely matched the original results for all five anions.

Analysis Comments:

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 Nitrite in batch 7169097 is attributed to matrix interference.

The reanalyses were performed outside the method required holding time.

I certify that this Summary Package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. The Laboratory Manager or a designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Reviewed and approved:



Brian O'Donnell
St. Louis Project Manager

06/21/2007
RECHECK, RECOUNT, OR REANALYSIS ORDER
CONTRACT NO MW6-SBB-A19981

Severn Trent St. Louis
13715 Rider Trail North
Earth City, MO 63045

Battelle PNNL Order Number: 070621STLSSL-R3930

Sample Delivery Group: SL686

Special Instructions None

Samples(s)

Lab Sample ID	PNNL Sample	Action	TAT	METHOD_NAME:
F7D120168003	B1LX34	Reanalysis	15/15	300.0_ANIONS_IC
F7D120168002	B1LX33	Reanalysis	15/15	300.0_ANIONS_IC
F7D120168001	B1LX32	Reanalysis	15/15	300.0_ANIONS_IC

Deliver Report Results to: Fluor Hanford, Inc.
1200 Jadwin Ave.
Richland, WA 99352
C/O Mr. Steve Trent

The report results must reference the Battelle PNNL-order number, SDG number, and the Battelle PNNL sample identification number shown above.

METHODS SUMMARY

SL686A

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Chloride	MCAWW 300.0A	MCAWW 300.0A
Fluoride	MCAWW 300.0A	MCAWW 300.0A
Nitrate as NO3	MCAWW 300.0A	
Nitrite as N	MCAWW 300.0A	MCAWW 300.0A
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.

SAMPLE SUMMARY

SL686A : F7F130123

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT</u>	<u>SAMPLE ID</u>	<u>SAMPLED</u>	<u>SAMP</u>
				<u>DATE</u>	<u>TIME</u>
J0VWW	001	B1LX32		04/11/07	10:00
J0VW0	002	B1LX33		04/11/07	10:00
J0VW2	003	B1LX34		04/11/07	10:00

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.

WET CHEMISTRY

Fluor Hanford Inc

Client Sample ID: B1LX32

General Chemistry

Lot-Sample #...: F7F130123-001
Date Sampled...: 04/11/07

Work Order #...: JOVWW
Date Received...: 06/13/07

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>
Chloride	27.7 D	2.0	mg/L	MCAWW 300.0A	06/15/07	7169094
			Dilution Factor: 10	MDL.....: 0.20		
Fluoride	4.9 D	1.0	mg/L	MCAWW 300.0A	06/15/07	7169095
			Dilution Factor: 10	MDL.....: 0.25		
Nitrate	46.3 D	2.0	mg/L	MCAWW 300.0A	06/15/07	7169098
			Dilution Factor: 100	MDL.....: 0.40		
Nitrite	1.2 DN	0.20	mg/L	MCAWW 300.0A	06/15/07	7169097
			Dilution Factor: 10	MDL.....: 0.050		
Sulfate	13.1	0.50	mg/L	MCAWW 300.0A	06/15/07	7169096
			Dilution Factor: 1	MDL.....: 0.050		

NOTE(S) :

RL Reporting Limit

D Result was obtained from the analysis of a dilution.

DN Result obtained from dilution; spike sample recovery outside control limits.

Fluor Hanford Inc

Client Sample ID: B1LX33

General Chemistry

Lot-Sample #...: F7F130123-002 Work Order #...: JOVW0 Matrix.....: WATER
 Date Sampled...: 04/11/07 Date Received...: 06/13/07

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	28.2 D	2.0	mg/L	MCAWW 300.0A	06/15/07	7169094
			Dilution Factor: 10	MDL.....: 0.20		
Fluoride	4.8 D	1.0	mg/L	MCAWW 300.0A	06/15/07	7169095
			Dilution Factor: 10	MDL.....: 0.25		
Nitrate	45.8 D	2.0	mg/L	MCAWW 300.0A	06/15/07	7169098
			Dilution Factor: 100	MDL.....: 0.40		
Nitrite	1.3 DN	0.20	mg/L	MCAWW 300.0A	06/15/07	7169097
			Dilution Factor: 10	MDL.....: 0.050		
Sulfate	13.1	0.50	mg/L	MCAWW 300.0A	06/15/07	7169096
			Dilution Factor: 1	MDL.....: 0.050		

NOTE(S) :

RL Reporting Limit

D Result was obtained from the analysis of a dilution.

DN Result obtained from dilution; spike sample recovery outside control limits.

Fluor Hanford Inc

Client Sample ID: B1LX34

General Chemistry

Lot-Sample #...: F7F130123-003
Date Sampled...: 04/11/07

Work Order #...: JOVW2
Date Received...: 06/13/07

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>
Chloride	28.0 D	2.0	mg/L	MCAWW 300.0A	06/15/07	7169094
			Dilution Factor: 10	MDL.....: 0.20		
Fluoride	4.8 D	1.0	mg/L	MCAWW 300.0A	06/15/07	7169095
			Dilution Factor: 10	MDL.....: 0.25		
Nitrate	47.0 D	2.0	mg/L	MCAWW 300.0A	06/15/07	7169098
			Dilution Factor: 100	MDL.....: 0.40		
Nitrite	1.4 DN	0.20	mg/L	MCAWW 300.0A	06/15/07	7169097
			Dilution Factor: 10	MDL.....: 0.050		
Sulfate	13.3	0.50	mg/L	MCAWW 300.0A	06/15/07	7169096
			Dilution Factor: 1	MDL.....: 0.050		

NOTE(S) :

RL Reporting Limit

D Result was obtained from the analysis of a dilution.

DN Result obtained from dilution; spike sample recovery outside control limits.

METHOD BLANK REPORT

General Chemistry

Client Lot #...: SL686A

Matrix.....: WATER

PARAMETER	RESULT	REPORTING		METHOD	PREPARATION-	PREP
		LIMIT	UNITS		ANALYSIS DATE	BATCH #
Chloride	ND	Work Order #: J08R41AA		MB Lot-Sample #: F7F180000-094	MCAWW 300.0A	F7F180000-094
		0.20	mg/L			
		Dilution Factor: 1				
Fluoride	ND	Work Order #: J08R51AA		MB Lot-Sample #: F7F180000-095	MCAWW 300.0A	F7F180000-095
		0.10	mg/L			
		Dilution Factor: 1				
Nitrate	ND	Work Order #: J08TC1AA		MB Lot-Sample #: F7F180000-098	MCAWW 300.0A	F7F180000-098
		0.020	mg/L			
		Dilution Factor: 1				
Nitrite	ND	Work Order #: J08R81AA		MB Lot-Sample #: F7F180000-097	MCAWW 300.0A	F7F180000-097
		0.020	mg/L			
		Dilution Factor: 1				
Sulfate	ND	Work Order #: J08R61AA		MB Lot-Sample #: F7F180000-096	MCAWW 300.0A	F7F180000-096
		0.50	mg/L			
		Dilution Factor: 1				

NOTE (S) :

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: SL686A

Matrix.....: WATER

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCNT RECVRY</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Chloride								
						WO#:J08R41AC-LCS/J08R41AD-LCSD	LCS Lot-Sample#: F7F180000-094	
	2.00	1.92	mg/L	96		MCAWW 300.0A	06/15/07	7169094
	2.00	1.96	mg/L	98	2.3	MCAWW 300.0A	06/15/07	7169094
						Dilution Factor: 1		
Fluoride								
						WO#:J08R51AC-LCS/J08R51AD-LCSD	LCS Lot-Sample#: F7F180000-095	
	1.00	0.942	mg/L	94		MCAWW 300.0A	06/15/07	7169095
	1.00	0.934	mg/L	93	0.91	MCAWW 300.0A	06/15/07	7169095
						Dilution Factor: 1		
Nitrate								
						WO#:J08TC1AC-LCS/J08TC1AD-LCSD	LCS Lot-Sample#: F7F180000-098	
	0.400	0.395	mg/L	99		MCAWW 300.0A	06/15/07	7169098
	0.400	0.407	mg/L	102	2.8	MCAWW 300.0A	06/15/07	7169098
						Dilution Factor: 1		
Nitrite								
						WO#:J08R81AC-LCS/J08R81AD-LCSD	LCS Lot-Sample#: F7F180000-097	
	0.160	0.155	mg/L	97		MCAWW 300.0A	06/15/07	7169097
	0.160	0.167	mg/L	104	7.2	MCAWW 300.0A	06/15/07	7169097
						Dilution Factor: 1		
Sulfate								
						WO#:J08R61AC-LCS/J08R61AD-LCSD	LCS Lot-Sample#: F7F180000-096	
	8.00	7.60	mg/L	95		MCAWW 300.0A	06/15/07	7169096
	8.00	7.80	mg/L	98	2.6	MCAWW 300.0A	06/15/07	7169096
						Dilution Factor: 1		

NOTE (S) :

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

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: SL686A

Matrix.....: WATER

Date Sampled...: 04/11/07

Date Received...: 06/13/07

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Chloride	27.7	20.0	49.6 D	mg/L	110	MCAWW 300.0A	06/15/07	7169094
			Work Order #...: J0VWW1AG		MS Lot-Sample #: F7F130123-001			
			Dilution Factor: 10					
Fluoride	4.9	20.0	25.7 D	mg/L	104	MCAWW 300.0A	06/15/07	7169095
			Work Order #...: J0VWW1AJ		MS Lot-Sample #: F7F130123-001			
			Dilution Factor: 10					
Nitrate	46.3	40.0	84.2 D	mg/L	95	MCAWW 300.0A	06/15/07	7169098
			Work Order #...: J0VWW1AQ		MS Lot-Sample #: F7F130123-001			
			Dilution Factor: 100					
Nitrite	1.2	1.00	2.52 N,D	mg/L	129	MCAWW 300.0A	06/15/07	7169097
			Work Order #...: J0VWW1AN		MS Lot-Sample #: F7F130123-001			
			Dilution Factor: 10					
Sulfate	13.1	4.00	17.4	mg/L	107	MCAWW 300.0A	06/15/07	7169096
			Work Order #...: J0VWW1AL		MS Lot-Sample #: F7F130123-001			
			Dilution Factor: 1					

NOTE (S) :

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

D Result was obtained from the analysis of a dilution.

N Spiked analyte recovery is outside stated control limits.

