

0066052



STL

STL St. Louis  
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## ANALYTICAL REPORT

PROJECT NO. WMP 200 AREA

F05-011

Lot #: F5C100252  
SDG #: W04525

Steve Trent

Fluor Hanford Inc  
825 Jadwin  
Richland, WA 99352



SEVERN TRENT LABORATORIES, INC.

MARTI WARD  
Project Manager

RECEIVED  
AUG 22 2005  
EDMC

March 29, 2005

**Case Narrative**  
**LOT NUMBER: F5C100252**  
**SDG: W04525**

This report contains the analytical results for the sample received under chain of custody by STL St. Louis on March 10, 2005. This sample is associated with your F05-011 SAF.

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.

Observations/Nonconformances

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

Nitrate/Nitrite-N

The analytical results included in this report meet all applicable quality control requirements.

### SAMPLE SUMMARY

F5C100252

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
G50E0	001	B1CD84	03/07/05	04:45

**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.

## METHODS SUMMARY

F5C100252

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Nitrate-Nitrite	MCAWW 353.1	

**References:**

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





# STL

Lot No: F5C100252  
W04525

### Condition Upon Receipt Form St. Louis Laboratory

Client: Richard

Date: 3-10-05 Time: 0930

Quote No: 63421

Initiated by: [Signature]

Shipper/No: FedEx 7915 6883 2870

COC/RFA Numbers: F05-009-045 F0508098

Condition/Variance (Circle "Y" for yes, "N" for no and "N/A" for not applicable):  
-052  
-044  
-046  
F05-011-005

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in undamaged condition?	7. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody?
2. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received within 4C ± 2C*? Record <u>2</u>	8. <input checked="" type="radio"/> Y <input type="radio"/> N	Chain of Custody matches sample IDs on containers?
3. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Sample received with proper pH?	9. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Custody seal received intact on cooler?
4. <input type="radio"/> Y <input type="radio"/> N	If N/A - Was pH taken by original STL lab?	10. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Custody seal tamper evident on cooler?
5. <input type="radio"/> Y <input type="radio"/> N	Sample received in proper container?	11. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Custody seal on bottles received intact?
6. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample volume sufficient for analysis?	12. <input checked="" type="radio"/> Y <input type="radio"/> N <input type="radio"/> N/A	Custody seal tamper evident on bottles?
		13. <input type="radio"/> Y <input type="radio"/> N	Was CUR (equivalent) rec'd from original STL lab?

\* Temperature Variance Does Not Affect the Following Analyses: \_\_\_\_\_  
For DOE-AL (Pantex, LANL, Sandia) sites, verify pH all containers received, except for VOA, TOX, and soils.

Notes:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Corrective Action:  
 Client's Name: \_\_\_\_\_ Informed by: \_\_\_\_\_ By: \_\_\_\_\_  
 Sample(s) processed "as is". \_\_\_\_\_  
 Sample(s) on hold until: \_\_\_\_\_ If released, notify: \_\_\_\_\_

Project Management Review: M Ward Date: 3-10-05

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

STL ST. LOUIS

FLOOR HANFORD IC

Client Sample ID: B1CD84

General Chemistry

Lot-Sample #...: F5C100252-001    Work Order #...: G50E0    Matrix.....: WATER  
Date Sampled...: 03/07/05 04:45    Date Received...: 03/10/05

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Nitrate as N	ND	50.0	ug/L	MCAWW 353.1	03/17/05	5077275
		Dilution Factor: 1		Analysis Time...: 00:00	MDL.....: 2.7	

STL ST. LOUIS

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #....: F5C100252      Work Order #....: G50E0-SMP      Matrix.....: WATER  
G50E0-DUP  
Date Sampled....: 03/07/05 04:45      Date Received...: 03/10/05

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u>	<u>UNITS</u>	<u>RPD</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>FREP</u>
		<u>RESULT</u>			<u>LIMIT</u>		<u>ANALYSIS DATE</u>	<u>BATCH #</u>
Nitrate as N		ND	ug/L	0	(0-20)	SD Lot-Sample #: F5C100252-001	03/17/05	5077275
	ND	ND				MCAWW 353.1		
			Dilution Factor: 1			Analysis Time...: 00:00		

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: F5C100252

Matrix.....: WATER

Date Sampled...: 03/07/05 04:45 Date Received...: 03/10/05

<u>PARAMETER</u>	<u>SAMPLE AMOUNT</u>	<u>SPIKE AMT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Nitrate as N	ND	500	472	ug/L	94	MCAWW 353.1	03/17-03/21/05	5077275
			Work Order #...: G50E01AC				MS Lot-Sample #: F5C100252-001	
			Dilution Factor: 1			Analysis Time...: 00:00		

NOTE(S):

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

STL ST. LOUIS

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F5C100252

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>	<u>PREPARATION-</u>	<u>PREP</u>
		<u>LIMIT</u>	<u>UNITS</u>		<u>ANALYSIS DATE</u>	<u>BATCH #</u>
Nitrate as N	ND	50.0	ug/L	MCAWW 353.1	03/17/05	5077275
		Work Order #: G6H9E1AA		MB Lot-Sample #:	F5C180000-275	
		Dilution Factor: 1				
		Analysis Time...: 00:00				

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: F5C100252

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate as N								
	400	373	ug/L	93		MCAWW 353.1	03/17/05	5077275
	400	376	ug/L	94	0.80	MCAWW 353.1	03/17/05	5077275
				Dilution Factor: 1			Analysis Time...: 00:00	

**NOTE(S):**

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

## **Scheidegger, Gary L**

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**Subject:** At bank (OPEN)  
**Start:** Fri 4/1/2005 11:00 AM  
**End:** Fri 4/1/2005 11:30 AM  
**Show Time As:** Free  
**Recurrence:** Weekly  
**Recurrence Pattern:** every 2 weeks on Friday from 11:00 AM to 11:30 AM

Get change for allowances - three 5s and twelve 1s

When you get back from the bank you should have three unopened rolls of quarters. Get enough quarters to round out three rolls.

**Take Newsweek**

**STL St. Louis**  
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Earth City, MO 63045

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## **ANALYTICAL REPORT**

**PROJECT NO. 216-U-1/216-U-2**

**F05-009**

**Lot #: F5C230304**  
**SDG #: W04597**

**Steve Trent**

**Fluor Hanford Inc**  
**825 Jadwin Ave.**  
**Richland, WA 99352**



**SEVERN TRENT LABORATORIES, INC.**

**MARTI WARD**  
Project Manager

**March 29, 2005**

**SAMPLE SUMMARY**

F5C230304

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
G6VCA	001	B1CF85	03/15/05	10:15

**NOTE(S) :**

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## METHODS SUMMARY

F5C230304

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Nitrate-Nitrite	MCAWW 353.1	
Percent Moisture	MCAWW 160.3 MOD	MCAWW 160.3 MOD

**References:**

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





STL ST. LOUIS

FLUOR HANFORD IC

Client Sample ID: B1CF85

General Chemistry

Lot-Sample #....: F5C230304-001    Work Order #....: G6VCA    Matrix.....: SOLID  
Date Sampled....: 03/15/05    Date Received...: 03/23/05  
% Moisture.....: 2.2

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>PREP BATCH #</u>
Nitrate/Nitrite as N	8.0	0.50	mg/kg	MCANW 353.1	03/23/05	5083052
		Dilution Factor: 1		MDL.....: 0.027		
Percent Moisture	2.2	0.10	%	MCANW 160.3 MOD	03/25/05	5085075
		Dilution Factor: 1		MDL.....:		

STL ST. LOUIS

**SAMPLE DUPLICATE EVALUATION REPORT**

**General Chemistry**

Client Lot #....: F5C230304

Work Order #....: G6VCA-SMP  
G6VCA-DUP

Matrix.....: SOLID

Date Sampled....: 03/15/05

Date Received...: 03/23/05

% Moisture.....: 2.2

<u>PARAM</u>	<u>RESULT</u>	<u>DUPLICATE</u> <u>RESULT</u>	<u>UNITS</u>	<u>RPD</u>	<u>RPD</u> <u>LIMIT</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Nitrate/Nitrite as N	8.0	7.7	mg/kg	4.6	(0-30)	MCAWW 353.1	SD Lot-Sample #: F5C230304-001 03/23/05	5083052
			Dilution Factor: 1					
Percent Moisture	2.2	2.1	%	4.7	(0-30)	MCAWW 160.3 MOD	SD Lot-Sample #: F5C230304-001 03/25/05	5085075
			Dilution Factor: 1					

STL ST. LOUIS

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: F5C230304  
Date Sampled...: 03/15/05

Date Received...: 03/23/05

Matrix.....: SOLID

Percent Moisture: 0.0

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate/Nitrite as N	8.0	20.0	28.7	mg/kg	103	MCAWW 353.1	Work Order #...: G6VCA1AE MS Lot-Sample #: F5C230304-001 03/23/05	5083052

Dilution Factor: 4

NOTE(S):

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

STL ST. LOUIS

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F5C230304

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Nitrate/Nitrite as N	ND	Work Order #: G60KN1AA 0.50	mg/kg	MB Lot-Sample #: MCAWW 353.1	F5C240000-052 03/23/05	5083052

Dilution Factor: 1

NOTE(S):

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

STL ST. LOUIS

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: F5C230304

Matrix.....: SOLID

<u>PARAMETER</u>	<u>SPIKE</u> <u>AMOUNT</u>	<u>MEASURED</u> <u>AMOUNT</u>	<u>UNITS</u>	<u>PERCENT</u> <u>RECVRY</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS DATE</u>	<u>PREP</u> <u>BATCH #</u>
Nitrate/Nitrite as N								
				WO#:G60KNLAC-LCS/G60KNLAD-LCSD LCS Lot-Sample#: F5C240000-052				
	4.00	3.78	mg/kg	94		MCAWW 353.1	03/23/05	5083052
	4.00	3.85	mg/kg	96	1.8	MCAWW 353.1	03/23/05	5083052

Dilution Factor: 1

NOTE(S) :

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