

0061938



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

PROJECT NO. 216-Z-9 TRENCH

F03-018

Lot #: F3L190424

W04140
Dayes

1/21/04

Steve Trent

Fluor Hanford Inc
MSIN A0-21
PO Box 1000
Richland, WA 99352



RECEIVED
JUN 21 2004

EDMC

SEVERN TRENT LABORATORIES, INC.

M Ward

MARTI WARD
Project Manager

000001

~~000018~~
cc 1/21/04

January 19, 2004



STL

January 19, 2004

STL LOT NUMBER: F3L190424
SDG: W04140

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13715 Rider Trail North
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Steve Trent
Fluor Hanford Inc.
MSIN A0-21
PO Box 1000
Richland, WA 99352



Dear Steve Trent,

This report contains the analytical results for the two samples received under chain of custody by Severn Trent Laboratories (STL) on December 19, 2003. These samples are associated with your F03-018 SAF.

All applicable quality control procedures met method-specified acceptance criteria.

Matrix QC was not performed on a sample from this SDG due to the high RAD levels.

This report shall not be reproduced except in full, without the written approval of the laboratory. This report is incomplete without the Case Narrative. Results are reported "as received" (i.e. wet weight) unless otherwise noted.

If you have any questions, please feel free to call me at (314) 298-8566.

Sincerely,

Marti Ward
Project Manager

cc: Project File

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SAMPLE SUMMARY

F3L190424

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
F65V7	001	B17N46-B	10/20/03	10:29
F65WN	002	B17TM6-B	10/29/03	08:56

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.

000003

METHODS SUMMARY

F3L190424

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Hexavalent Chromium	SW846 7196A	SW846 7196A/DI
Nitrate-Nitrite	MCAWW 353.1	
Oil & Grease (Gravimetric)	SW846 9071A	
Total Inorganic Carbon	SW846 9060	
Total Organic Carbon	SW846 9060	SW846 9060

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.

000004

SDGW04140

STL ST. LOUIS

LOT# F31190424

SDG# W04140

FLUOR Hanford Inc.		CENTRAL PLATEAU CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F03-018-074	Page 1 of 1
Collector <i>J.S. Pope</i>	Company Contact Steve Trent	Telephone No. 373-5689	Project Coordinator TRENT, SJ		Price Code 8N	Data Turnaround 45 Days
Project Designation 216-Z-9 Trench Characterization Borehole - Soil	Sampling Location Z-9 Trench <i>C3426</i>	SAF No. F03-018	Air Quality			
Ice Chest No. <i>100006</i>	Field Logbook No.	COA 119152ES10	Method of Shipment Federal Express			
Shipped To Severn Trent Incorporated, Richland	Offsite Property No.	Bill of Lading/Air Bill No. <i>4019544480 10-12-03</i> <i>842265470752</i>				

POSSIBLE SAMPLE HAZARDS/REMARKS <i>High Alpha content/Free phase CCL4 detected</i> Special Handling and/or Storage	Preservation	Cool 4C																		
	Type of Container	G																		
	No. of Container(s)	1																		
	Volume	33g																		

SAMPLE ANALYSIS				See item (1) in Special Instructions.																
Sample No.	Matrix *	Sample Date	Sample Time																	
B17TM6-B	SOIL	<i>10/29/03</i>	<i>0856</i>	X																

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS				Matrix *
Relinquished By/Removed From <i>RL Chambers</i>	Date/Time <i>12-8-03 1050</i>	Received By/Stored In <i>J. Hogan</i>	Date/Time <i>12-5-03</i>	(1) Chromium Hex - 7196; NO2/NO3 - 353.2; TOC - 9060; TIC - 415.1M; Oil & Grease - 413.1				S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <i>J. Hogan</i>	Date/Time <i>12-8-03 1300</i>	Received By/Stores In <i>FED EX</i>	Date/Time					
Relinquished By/Removed From <i>FED EX</i>	Date/Time	Received By/Stored In <i>K.J. Young</i>	Date/Time <i>12/11/03 0915</i>					
Relinquished By/Removed From <i>K.J. Young</i>	Date/Time <i>12/11/03 0915</i>	Received By/Stored In <i>RL Chambers</i>	Date/Time <i>12/11/03 0915</i>					
Relinquished By/Removed From <i>RL Chambers</i>	Date/Time <i>12-18-03 1000</i>	Received By/Stored In <i>J. Hogan</i>	Date/Time <i>12-18-03 1000</i>					
Relinquished By/Removed From <i>J. Hogan</i>	Date/Time <i>12-18-03 1100</i>	Received By/Stores In <i>FED EX</i>	Date/Time					
LABORATORY SECTION	Received By <i>[Signature]</i>	Title		0 0 0 0 0 0 0 0 0 0				Date/Time <i>12-19-03 0930</i>
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By <i>[Signature]</i>						Date/Time

Lot No.: F3L190424

Condition Upon Receipt Form
St. Louis Laboratory

Client: Fluor Hanford

Date: 12-19-03 Time: 0930

Quote No: 56412

Initiated by: SV

Shipper/No: FedEx 4019374480

COC/RFA Numbers: F03-018-073, 74

Condition/Variance (Circle "Y" for yes and "N" for no. If "N" is circled, see notes for explanation):

1. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in undamaged condition.	5. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample volume sufficient for analysis.
2. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received within 4-C ± 2-C* Record temperature: <u>4°</u>	6. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received with Chain of Custody.
3. <input type="radio"/> Y <input type="radio"/> N <input checked="" type="radio"/> N/A	Sample received with proper pH**.	7. <input checked="" type="radio"/> Y <input type="radio"/> N	Chain of Custody matches sample IDs on containers.
4. <input checked="" type="radio"/> Y <input type="radio"/> N	Sample received in proper containers.	8. <input type="radio"/> Y <input checked="" type="radio"/> N	Custody seal received intact and tamper evident on cooler.
		9. <input type="radio"/> Y <input checked="" type="radio"/> N	Custody seal received intact and tamper evident on bottles.

* Temperature Variance Does Not Affect the Following Analyses: _____

** For DOE-AL (Pantex, LANL, Sandia, Timet) sites, remember to pH all containers received, except for VOA, TOX, and soils.

Notes: Seals are broken; probably due to sharp edges on plastic shipping container.

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Corrective Action:

- Client's Name: _____ Informed verbally on: _____ By: _____
- Client's Name: _____ Informed in writing on: _____ By: _____
- Sample(s) processed "as is". _____
- Sample(s) on hold until: _____ If released, notify: _____

Sample Control Supervisor (or designate) Review: [Signature] Date: 12-19-03

Project Management Review: [Signature] Date: 12-21-03

SIGNED ORIGINAL MUST BE RETAINED IN THE PROJECT FILE
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

7981

WET CHEMISTRY

000008

FLUOR HANFORD IC

Client Sample ID: B17N46-B

General Chemistry

Lot-Sample #....: F3L190424-001 Work Order #....: F65V7 Matrix.....: SOLID
 Date Sampled....: 10/20/03 10:29 Date Received...: 12/19/03
 % Moisture.....:

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.40	mg/kg	SW846 7196A	01/06/04	4006381
				Dilution Factor: 1 Analysis Time...: 00:00		
Nitrate/Nitrite as N	9.6	1.0	mg/kg	MCAWW 353.1	12/23-12/26/03	3357542
				Dilution Factor: 2 Analysis Time...: 00:00		
Oil and Grease (Gravimetric)	107 B	200	mg/kg	SW846 9071A	01/01-01/05/04	4001116
				Dilution Factor: 1 Analysis Time...: 15:00		
Total Inorganic Carbon	23.8 B	25.0	mg/kg	SW846 9060	01/16/04	4016446
				Dilution Factor: 1 Analysis Time...: 00:00		
Total Organic Carbon	341	25.0	mg/kg	SW846 9060	01/16/04	4016447
				Dilution Factor: 1 Analysis Time...: 00:00		

NOTE(S):

RL Reporting Limit
 B Estimated result. Result is less than RL.

000009

FLUOR HANFORD IC

Client Sample ID: B17TM6-B

General Chemistry

Lot-Sample #....: F3L190424-002 Work Order #....: P65WN Matrix.....: SOLID
 Date Sampled...: 10/29/03 08:56 Date Received...: 12/19/03
 % Moisture.....:

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	0.75	0.40	mg/kg	SW846 7196A	01/06/04	4006381
				Dilution Factor: 1	Analysis Time...: 00:00	
Nitrate/Nitrite as N	10.8	2.0	mg/kg	MCAWW 353.1	12/23-12/26/03	3357542
				Dilution Factor: 4	Analysis Time...: 00:00	
Oil and Grease (Gravimetric)	2400	200	mg/kg	SW846 9071A	01/01-01/05/04	4001116
				Dilution Factor: 1	Analysis Time...: 15:00	
Total Inorganic Carbon	260	25.0	mg/kg	SW846 9060	01/16/04	4016446
				Dilution Factor: 1	Analysis Time...: 00:00	
Total Organic Carbon	2430	25.0	mg/kg	SW846 9060	01/16/04	4016447
				Dilution Factor: 1	Analysis Time...: 00:00	

000010

METHOD BLANK REPORT

General Chemistry

Client Lot #...: F3L190424

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	ND	0.40	mg/kg	SW846 7196A	01/06/04	4006381
		Work Order #: F7LXW1AA MB Lot-Sample #: F4A060000-381				
		Dilution Factor: 1				
		Analysis Time...: 00:00				
Nitrate/Nitrite as N	ND	0.50	mg/kg	MCAWW 353.1	12/23-12/26/03	3357542
		Work Order #: F7AMW1AA MB Lot-Sample #: F3L230000-542				
		Dilution Factor: 1				
		Analysis Time...: 00:00				
Oil and Grease (Gravimetric)	ND	200	mg/kg	SW846 9071A	01/01-01/05/04	4001116
		Work Order #: F7H181AA MB Lot-Sample #: F4A010000-116				
		Dilution Factor: 1				
		Analysis Time...: 15:00				
Total Organic Carbon	ND	25.0	mg/kg	SW846 9060	01/16/04	4016447
		Work Order #: F76EV1AA MB Lot-Sample #: F4A160000-447				
		Dilution Factor: 1				
		Analysis Time...: 00:00				

NOTE (S) :

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

000011

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Lot-Sample #...: F3L190424

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Nitrate/Nitrite as N	20.0	19.4	mg/kg	97		MCAWW 353.1	12/23-12/26/03	3357542
	20.0	19.6	mg/kg	98	0.51	MCAWW 353.1	12/23-12/26/03	3357542
				Dilution Factor: 1		Analysis Time...: 00:00		

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Oil and Grease (Gravimetric)	3330	3100	mg/kg	93		SW846 9071A	01/01-01/05/04	4001116
	3330	3000	mg/kg	90	3.3	SW846 9071A	01/01-01/05/04	4001116
				Dilution Factor: 1		Analysis Time...: 15:00		

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECVRY	RPD	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Total Organic Carbon	600	623	mg/kg	104		SW846 9060	01/16/04	4016447
	600	647	mg/kg	108	3.8	SW846 9060	01/16/04	4016447
				Dilution Factor: 1		Analysis Time...: 00:00		

NOTE (S) :

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

000012

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: F3L190424

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	2.00	1.96	mg/kg	98	SW846 7196A	01/06/04	4006381
				Work Order #: F7LXW1AC LCS Lot-Sample#: F4A060000-381			
				Dilution Factor: 1		Analysis time...: 00:00	

NOTE(S):

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

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