

Revision 2
AL Matthews
8/05/05

0067084 ✓

STL ST. LOUIS



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. 200-LW-1/LW-2

F03-025

Lot #: F5C160257
SDG #: W04380B

Steve Trent

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

RECEIVED
OCT 27 2005

EDMC

SEVERN TRENT LABORATORIES, INC.

MARTI WARD
Project Manager

April 19, 2005



LOT # F5C160257

W04380B

Severn Trent Laboratories, Inc.

1 of 13

Case Narrative
LOT NUMBER: F5C160257
SDG: W04380B

This report contains the analytical results for the sample received at STL-St. Louis on 3/15/05. This sample is associated with your F03-025 SAF.

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.

Observations/Nonconformances

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

TCLP Mercury

TCLP non-volatiles preparation requires 100 grams of sample. There was insufficient sample provided to perform analysis at the method specified amount. A reduced sample amount was used.

The samples had to be re-prepped. The MS/MSD was created after sample preservation.

SAMPLE SUMMARY

F5C160257

<u>NO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
G6CPV	001	B191F1	08/18/04	08:58

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 mass, solids, solubility, temperature, viscosity, and weight.

METHODS SUMMARY

F5C160257

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A	SW846 1311/7470

References:

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

F5C160257

CLIENT ANALYSIS SUMMARY

Storage Loc: **B127**

Project Manager: MAW Quote #: 56392 SDG: W04380B
 Project: 200-LW-1/LW-2 F03-025
 PO#: MRC-SBB-A-19981 Report to: Steve Trent
 Client: 108302 FLUOR HANFORD IC

Date Received: 2005-03-16
 Analytical Due Date: 2005-04-14
 Report Due Date: 2005-04-20
 Report Type: B Standard Report
 EDD Code: FEADII

#SMPS in LOT: 1

!!!SAMPLES ARE HIGH RAD - take proper precautions!!! Batch Hanford samples by themselves convert results for moisture
 Anions: CCV/CGB criteria +/-10% Anions/Metals: CRDL standard required +/-25% pH needs to be done within 24 hours of receipt
 BNA - tributyl phosphate and phenol are only targets WTPH needs to include Kerosene & diesel range Report = RO2 all raw data to reporting group

SAMPLE #	CLIENT SAMPLE ID	Site ID	Client Matrix	DATE/TIME SAMPLED	WORKORDER	A
1	B191F1			2004-08-18 / 858	G6CPV	SOLID
SAMPLE COMMENTS:						
HG 08	SW848 7470A	Mercury (7470A, Cold Vapor) - Liquid	OM TCLP(1311) -> METALS, TOTAL (Method exclusive)	01 STANDARD TEST SET	PROT: A	WRK 06 LOC
D HG 08	SW848 7470A	Mercury (7470A, Cold Vapor) - Liquid	OM TCLP(1311) -> METALS, TOTAL (Method exclusive)	01 STANDARD TEST SET	PROT: A	WRK 06 LOC
S HG 08	SW846 7470A	Mercury (7470A, Cold Vapor) - Liquid	OM TCLP(1311) -> METALS, TOTAL (Method exclusive)	01 STANDARD TEST SET	PROT: A	WRK 06 LOC

FLUOR Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F03-025-094	PAGE 2 OF 2
COLLECTOR Pape/Pfister/Wiberg/Tyra	COMPANY CONTACT TRENT, STEVE	TELEPHONE NO. 373-5689	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-S-20; 222-S-32 ICE CHEST NO. 870-101	PROJECT DESIGNATION 200-LW-1/LW-2 Characterization - Soil	FIELD LOGBOOK NO. HNF-N-356 1	SAF NO. F03-025	AIR QUALITY <input type="checkbox"/>	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	COA 119143ES10	METHOD OF SHIPMENT Government Vehicle		
BILL OF LADING/AIR BILL NO. N/A					

SPECIAL INSTRUCTIONS

The lab is to analyze pH within 24 hours of sample receipt. The lab is to report kerosene range organics from the WPH-D analysis. FH acknowledges that the analytical holding time for Nitrate, Nitrite and Phosphate by EPA Method 300.0 will not be met.

(1) VOA - B260A (TCL); VOA - B260A (Add-On) (1-Butanol)

(2) Semi-VOA - B270A (TCL) (Phenol) Semi-VOA - B270A (Add-On) (Tributyl phosphate) WPH-BKESCH range - WPH-D (Total petroleum hydrocarbons - diesel range; Total petroleum hydrocarbons - kerosene range); WPH-Casoline Range - WPH-G

(3) Alcohols: Glycerol - 8015 (Ethylene glycol) 8/30/04

(4) Semimicrospectroscopy: Eucalyptus - 152; Eucalyptus - 154; Eucalyptus - 155; Gamma Spec - Add-on (Antimony - 335; Cadmium - 337; Chromium - 339; Cobalt - 341; Copper - 343; Lead - 345; Manganese - 347; Mercury - 349; Nickel - 351; Silver - 353; Vanadium - 355; Zinc - 357)

(5) IC Anions - 300.0 (Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate) Cations (IC) - 300.7 (Nitrogen in ammonium) Cyanide (Total) - 335.2; pH (Soil) - 9045; HA 81 MS-1W 1 7471

(6) IC Anions - 300.0 (Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate) Cations (IC) - 300.7 (Nitrogen in ammonium) Cyanide (Total) - 335.2; pH (Soil) - 9045; HA 81 MS-1W 1 7471

(7) TCLP Mercury

Note: This is a copy of the original chain for the 20 ml plastic vial being sent to Severn Trent. The original chain is remaining with the other samples at 222-S. AT 3/11/05

8/30/04

8/30/04

8/28/04
9/5/04



STL

Lot No: F5C160257

W04380B

Condition Upon Receipt Form
St. Louis Laboratory

Client: Flour/Maryland
Quote No: 56392
Shipper/No: F03/B4430004083

Date: 3/15/05 Time: 0900
Initiated by: bl
COC/RFA Numbers: F03-02S-094

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

1. <input checked="" type="radio"/> N	Sample received in undamaged condition?	7. <input checked="" type="radio"/> N	Sample received with Chain of Custody?
2. <input checked="" type="radio"/> N	Sample received within 4-C ± 2-C* ?	8. <input checked="" type="radio"/> N	Chain of Custody matches sample IDs on containers?
	Record <u>5</u>	9. <input checked="" type="radio"/> N N/A	Custody seal received intact on cooler.?
3. <input checked="" type="radio"/> N N/A	Sample received with proper pH ?	10. <input checked="" type="radio"/> N N/A	Custody seal tamper evident on cooler.?
4. <input checked="" type="radio"/> N	If N/A - Was pH taken by original STL lab?	11. <input checked="" type="radio"/> N N/A	Custody seal on bottles received intact?
5. <input checked="" type="radio"/> N	Sample received in proper containers?	12. <input checked="" type="radio"/> N N/A	Custody seal tamper evident on bottles?
6. <input checked="" type="radio"/> N	Sample volume sufficient for analysis?	13. <input checked="" 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: Murad Date: 3.16.05

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

5512

ADMIN-0004, Revised 2/17/04
\\slsvr01\QA\FORMS\ST-LOUIS\ADMIN\ADMIN004 rev7.doc

STL St. Louis

METALS

STL ST. LOUIS

FLOOR HANFORD IC

Client Sample ID: B191F1

TCLP Metals

Lot-Sample #: F5C160257-001

Matrix: SOLID

Date Sampled: 08/18/04

Date Received: 03/16/05

Leach Date: 03/17/05

Leach Batch #: P507612

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK
		LIMIT	UNITS			ANALYSIS DATE	ORDER #
Prep Batch #	5079040						
Mercury	1.9 B	10.0	ug/L	SW846 7470A	03/20-03/22/05	G6CPV1AA	
		Dilution Factor: 5		MDL: 0.23			

NOTE(S):

Analysis performed in accordance with USEPA Toxicity Characteristic Leaching Procedure Method 1311

B Estimated result. Result is less than RL.

MATRIX SPIKE SAMPLE DATA REPORT

TCLP Metals

Client Lot #....: F5C160257

Matrix.....: SOLID

Date Sampled...: 08/18/04

Date Received...: 03/16/05

<u>PARAMETER</u>	<u>SAMPLE AMOUNT</u>	<u>SPIKE AMT</u>	<u>MEASRD AMOUNT</u>	<u>UNITS</u>	<u>PERCNT RECVRY</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
------------------	----------------------	------------------	----------------------	--------------	----------------------	------------	---------------	-----------------------------------	---------------------

MS Lot-Sample #: F5C160257-001 Prep Batch #....: 5079040

Leach Date.....: 03/17/05 Leach Batch #...: P507612

Mercury

1.9	25.0	24.9	ug/L	92			SW846 7470A	03/20-03/22/05	G6CPV1AC
1.9	25.0	24.2	ug/L	89	3.0		SW846 7470A	03/20-03/22/05	G6CPV1AD

Dilution Factor: 5

NOTE(S):

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

STL ST. LOUIS

METHOD BLANK REPORT

TCLP Metals

Client Lot #...: F5C160257

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>WORK</u> <u>ORDER #</u>
MB Lot-Sample #:	F5C170000-333	Prep Batch #...:	5079040			
Leach Date.....:	03/17/05	Leach Batch #...:	P507612			
Mercury	ND	10.0	ug/L	SW846 7470A	03/20-03/22/05	G6F621AK
		Dilution Factor: 5				

NOTE(S):

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

STL ST. LOUIS

LABORATORY CONTROL SAMPLE DATA REPORT

TCLP Metals

Client Lot #...: F5C160257

Matrix.....: SOLID

<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>
------------------	-------------------------------	----------------------------------	--------------	--------------------------------	---------------	---	-------------------------------

LCS Lot-Sample#: F5C200000-040 Prep Batch #...: 5079040

Mercury	25.0	25.9	ug/L	104	SW846 7470A	03/20-03/22/05	G6L621AA
---------	------	------	------	-----	-------------	----------------	----------

Dilution Factor: 5

NOTE(S):

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