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WSCF Analytical Chemistry
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FLUOR

Memorandum

To: D. L. Klages H8-40 Date: M8141-SLF-06-079
April 24, 2006

From: S. L. Fitzgerald, Manager 
WSCF Analytical Chemistry

cc: S. J. Trent (FH) A0-21
T. F. Dale S3-30
H. K. Meznarich S3-30
P. D. Mix S3-30
J. E. Trechter S3-30
File/LB
(Above w/attachments)

Subject: FINAL RESULTS FOR 200-UW-1 OPERABLE UNIT TRENCH – SAMPLE DELIVERY
GROUP WSCF20060179 – SAF NUMBER R06-019

Reference: (1) 200-UW-1 Operable Unit Support Activities Sampling – Letter of Instruction, D&D-27876,
Rev. 0, dated December 14, 2005

(2) HNF-SD-CD-QAPP-017, Rev. 7, Waste Sampling & Characterization Facility Quality
Assurance Plan

This letter contains a narrative (Attachment 1) for sample delivery group WSCF20060179, the analytical results (Attachment 2), and the sample receipt information (Attachment 3).

SLF/grf

Attachments 3

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ATTACHMENT 1

NARRATIVE

Consisting of 3 pages
Including cover page

Sample Delivery Group	WSCF20060179
Sample Matrix	SOLID
Sample Visual	N/A
SAF Number	R06-019
Data Deliverable	Summary Report

Introduction

One (1) soil sample (B1HVN5) from the 200-UW-1 Operable Unit Clean Soil was received at the WSCF Laboratory on March 14, 2006. The sample was received in a cool condition with ice present in the coolers. The sample was analyzed for the analyte indicated on the attached copy of the chain of custody (COC) form in accordance with the *200-UW-1 Operable Unit Letter of Instruction*, referenced in the cover letter.

The sample was taken using the Multi-Increment Sampling Program, which requires the entire sample submitted to be analyzed. This does not allow for laboratory sample duplicates or matrix spikes.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical method. A Data Summary Report (Attachment 2) includes analytical results, a comment report detailing method abnormalities, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 3.

Analytical Methodology for Requested Analyses

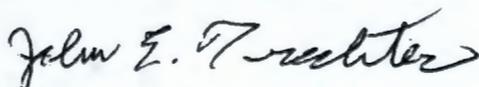
Refer to *WSCF Method References Report*, page 10, for a complete listing of approved analytical methods used.

Radiochemistry Comments

- There are no holding times associated with WSCF radiochemical methods.

Tecnicium-99 - A Blank, Laboratory Control Sample, Post Digestion Spike and Post Digestion Duplicate were analyzed with this delivery group of less than 20 samples. See page 11 for QC details. All QC controls are within the established limits.

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.



John E. Trechter
WSCF Client Services

Abbreviations

Hg – mercury

IC – ion chromatography

ICP – inductively coupled plasma

ICP/AES – ICP/atomic emission spectroscopy

ICP/MS – ICP/mass spectrometry

Total U – total uranium

AT/TB – total alpha/total beta

AEA – Alpha Energy Analysis

WTPH-G – Total Hydrocarbons-Gasoline

Am – americium

Cm – curium

Pu – plutonium

Np – neptunium

GEA – gamma energy analysis

H3 – Tritium

Sr – Strontium 89, 90

WTPH-D – Total Hydrocarbons-Diesel

TSS – Total Suspended Solids

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ATTACHMENT 2

ANALYTICAL RESULTS

Consisting of 8 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

PROJECT HANFORD MANAGEMENT COMPANY
RICHLAND, WA 99354

Attention: Deanna Klages H8-40

Analytical:

S. Fitzgerald

Client Services:

John Trechter John Trechter

All results are reported on an "as received" basis unless otherwise noted in the comment section.

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Report#: 20060179
Report Date: 24-apr-2006
Report W005/ver. 1.2

PROJECT HANFORD MANAGEMENT COMPANY

Page 1

WSCF ANALYTICAL RESULTS REPORT

Attention: Deanna Klages H8-40

Group #: 20060179

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF		Result	Unit	DF	MDL	Analyze	Sample	Receive	
					Method	RQ								
Radiochemistry														
W060000458	B1HVN5	K	14133-76-7	Tc-99 by Liquid Scin.	SOLID	LA-508-421	U	-0.600	pCi/g	1.00	0.50	03/18/06	03/14/06	03/14/06
W060000458	B1HVN5	K	E,T,C	Tc-99 Counting Error	SOLID	LA-508-421		100	%	1.00	0.0	03/18/06	03/14/06	03/14/06

MDL=Minimum Detection Limit U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

DF=Dilution Factor
 * - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

Report W005/ver. 1.2
 PROJECT HANFORD MANAGEMENT COMPANY

WSCF
ANALYTICAL COMMENT REPORT

Attention:
Project Number

Group #: 20060179

Sample #	Client ID	Lab Area	Test	Comment
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Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample

VALTEST - Test Validation
LOGTEST - Login for Tests

TESTDATA - Test Data Entry

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention:
Project Number :

Group #: 20060179

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
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RQ=Result Qualifier

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WSCF

METHOD REFERENCES REPORT

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-508-421	LA-508-421: OPERATION OF THE TRI-CARB MODEL 2500TR LIQUID SCINTILLATION ANALYZER
None	No reference to any industry method.

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <\\ap006\aspdocs\WSCF\Sample Mgmt\ProcedureMethodCrossReference.pdf>. This document includes on-line links to full-text versions of the procedures and methods, where available.

Report Date: 24-apr-2006

Report#: 20060179

Report W_005M/1

Page 1

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: 20060179
 Matrix: SOLID
 Test: TC99 by Liquid Scin.

SAF Number: R06-019
 Sample Date: 03/14/06
 Receive Date: 03/14/06

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W060000452									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Tc-99 by Liquid Scin.	14133-76-7	U-0.7	n/a	RPD	03/18/06	0.000	20.000	
MS	Tc-99 by Liquid Scin.	14133-76-7	86.0	86.000	% Recov	03/18/06	75.000	125.000	
BATCH QC									
BLANK	Tc-99 by Liquid Scin.	14133-76-7	-0.2	-0.200	pCi/g	03/18/06	-10.000	1000.000	
LCS	Tc-99 by Liquid Scin.	14133-76-7	10.1	89.381	% Recov	03/18/06	75.000	125.000	

W13q Worklist/Batch/QC Report for Group# 20060179

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
28263	1	28637	32478	BLANK		TC99 by Liquid Scin.
28263	2	28637	32478	LCS		TC99 by Liquid Scin.
28263	4	28637	32478	DUP	W060000452	TC99 by Liquid Scin.
28263	3	28637	32478	MS	W060000452	TC99 by Liquid Scin.
28263	8	28637	32478	SAMPLE	W060000458	TC99 by Liquid Scin.

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ATTACHMENT 3

SAMPLE RECEIPT INFORMATION

Consisting of 4 pages
Including cover page

Waste Sampling and Characterization Facility
P.O. BOX 1970 S3-30, Richland, WA 99352
PHONE: (509) 373-7004/FAX: (509) 373-7134

File
03/29/06
td

ACKNOWLEDGMENT OF SAMPLES RECEIVED

PROJECT HANFORD MANAGEMENT COMPANY

RICHLAND, WA 99354
Attn: Deanna Klages H8-40

Customer Code: PHMC-MISC
PO#: 121595/ES20
Group#: 20060179

The following samples were received from you on 03/14/06. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W060000458	B1HVN5	@TC99-30	KLAGES Solid, or handle as if solid	03/14/06

Test Acronym Description

Test Acronym	Description
@TC99-30	TC99 by Liquid Scin.

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			R06-019-001	PAGE 1 OF 1
COLLECTOR <i>K. B. Hulse</i>	COMPANY CONTACT TRECHTER, JE	TELEPHONE NO.	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days	
SAMPLING LOCATION Spills Pile	PROJECT DESIGNATION 200-UW-1 Operable Unit, Clean Soil from Trench between 216-U-8 and 21	SAF NO. R06-019	AIR QUALITY			
ICE CHEST NO. <i>2531</i>	FIELD LOGBOOK NO. DTS-SAWS-H100	COA 121595E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE			
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A				

MATRIX*	SPECIAL HANDLING AND/OR STORAGE				POSSIBLE SAMPLE HAZARDS/ REMARKS		
OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	<i>20060179</i>						
SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	RESERVATION
B1HVNS	<i>20060179S</i>	S	<i>3-14-06</i>	<i>1500</i>	1X60mL G/P <i>20.6 grams</i>	Technetium-99 (Tc-99)	None

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS Sample will be taken using the multiple-increment sampling program. This requires the entire sample provided in each bottle to be used in analysis. Reporting format the same as GPP, including QC.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>K. B. HULSE</i>	<i>3-14-06 1358</i>	<i>J. A. HAZZARD</i>	<i>3-14-06 1358</i>		
<i>K. B. HULSE</i>					

RECEIVED BY	TITLE	DATE/TIME
DISPOSAL METHOD	DISPOSED BY	DATE/TIME

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GENERATOR KNOWLEDGE INFORMATION

1. Chain of Custody Number 1.6.013, 007003 CACN/COA 12157/1010 Customer Identification Number _____

2. List generator knowledge or description of process that produced sample. Or list description of sample source:
 Samples were generated from W42 trench and the spoils pile from the same excavation.

MSDS Available? No Yes Hanford MSDS No. n/a

3. List all waste codes and constituents associated with the waste or media that was sampled, regardless of CERCLA status.

a) Does the sample contain any of the following listed waste codes?
By checking "unknown" the customer understands that no knowledge is available following a careful search.

List Federal Waste Code(s):	List Constituent(s):
P Codes: _____	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
U Codes: _____	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
K Codes: _____	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
F Codes: _____	<input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown

b) List applicable characteristic waste codes, flash point, pH, constituents, and concentrations as appropriate.

D001: <input type="checkbox"/> FP <100°F	<input type="checkbox"/> FP ≥100 <140°F	<input type="checkbox"/> DOT Oxidizer	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown
D002: <input type="checkbox"/> pH ≤2	<input type="checkbox"/> pH ≥12.5	<input type="checkbox"/> Solid Corrosive (WSC2)	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown
D003: <input type="checkbox"/> Cyanide	<input type="checkbox"/> Sulfide	<input type="checkbox"/> Water Reactive	<input type="checkbox"/> Other _____	<input type="radio"/> Yes	<input checked="" type="radio"/> No
D004-D043 (Identify applicable waste codes and concentrations):			(i.e., peroxide former, explosive, air reactive)		
None			<input type="radio"/> Yes	<input checked="" type="radio"/> No	<input type="radio"/> Unknown

c) If characteristic, list any known underlying hazardous constituents (UHCs) reasonably expected to be present, and their concentrations that may be present above the LDR treatment standard (40 CFR 268.48):
 None

d) List any known Land Disposal Restrictions (LDR) subcategories, if applicable (40 CFR 268.40):
 None

e) List any applicable Washington State dangerous waste codes: (not required if federally regulated) (*State mixture rule for ignitability)

WT01: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP01: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
WT02: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP02: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
W001: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown	WP03: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown
List constituents and concentrations:	F003:* <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Unknown

4. Is this material TSCA regulated for PCBs? Yes No Unknown Analysis Requested

List concentration if applicable: n/a
 If yes, what is the source of the PCBs? (see TSCA PCB Hanford Site User Guide, DOE/RL-2001-50)

<input type="checkbox"/> PCB Liquid Waste	<input type="checkbox"/> PCB Bulk Product Waste	<input type="checkbox"/> PCB Transformer ≥500 ppm	<input type="checkbox"/> Unknown
<input type="checkbox"/> PCB Remediation Waste	<input type="checkbox"/> PCB R&D Waste	<input type="checkbox"/> PCB contaminated electrical equipment (capacitor/ballast) <500 ppm	
<input type="checkbox"/> PCB Spill Material	<input type="checkbox"/> PCB Item	<input type="checkbox"/> Other PCB Waste (list) _____	

5. Is this material TRU? Yes No Unknown

6. ACCURACY OF INFORMATION
 Based on my inquiry of those individuals immediately responsible for obtaining this information, that to the best of my knowledge, the information entered in this document is true, accurate, and complete.

Print & Sign John Hasson / John Hasson Date 3-14-06