

RECEIVED MARCH 14, 2008

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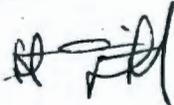
Fluor Hanford
WSCF Analytical Lab
P.O. Box 1000
Richland, WA 99352
Telephone 373-7495
Telefax 372-0456

FLUOR

Memorandum

M4W41-SLF-08-282

To: H. Hampt E6-35 Date: March 13, 2008

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

cc: w/Attachments

T. F. Dale	S3-30	J. E. Trechter	S3-30
H. K. Meznarich	S3-30	S. J. Trent	E6-35
P. D. Mix	S3-30	File/LB	

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20080440 – SAF NUMBER F07-075

Reference: (1) Groundwater Protection Program-Letter of Instruction, FH-EIS-2003-MEM-001, October 31, 2002

(2) HNF-SD-CD-QAPP-017, Rev. 8, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following information for sample delivery group WSCF20080440:

- Cover Sheet (Attachment 1)
- Narrative (Attachment 2)
- Analytical Results (Attachment 3)
- Sample Receipt Information (Attachment 4)

SLF/grf

Attachments 4

RECEIVED
JUN 26 2008

EDMC

M4W41-SLF-08-282

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20080440
Data Deliverable Date: 18-mar-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F07-075	B1PM62 B1PM90	W08GR00483 W08GR00484	WATER WATER

M4W41-SLF-08-282

ATTACHMENT 2

NARRATIVE

Consisting of 2 pages
Including cover page

Introduction

Two (2) S&GRP samples were received at the WSCF Laboratory on March 4, 2008. Samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was stamped “iced” by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the sample container.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report*, pages 10 through 11, for a complete listing of approved analytical methods.

Organic Comments

VOA – The holding time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See pages 15 through 16 for QC details.

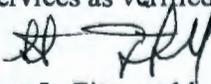
All QC controls are within the established limits.

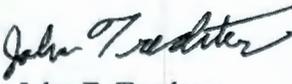
Radiochemistry Comments

Tc-99 Screen by ICP-MS – The holding time requirement for this analysis was met. A Blank and Laboratory Control Sample were analyzed with this delivery group. See page 13 for QC details.

All QC controls are within the established limits.

I certify that this data package is in compliance with the LOI, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager and Client Services as verified by the following signatures.


Scot L. Fitzgerald
WSCF Analytical Laboratory Manager


John E. Trechter
WSCF Client Services

M4W41-SLF-08-282

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 11 pages
Including cover page

**WSCF
ANALYTICAL RESULTS REPORT**

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical:

S. Fitzgerald 3/13/08

Client Services:

John Trechter John Trechter 3/13/08

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

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

Contract#: FH-EIS-2003-MEM-001

Report#: WSCF20080440

Report Date: 12-mar-2008

Report WGPP/ver. 5.2

Groundwater Remediation Program

w13qlog v4.2 12-mar-2008 14:30:39

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20080440

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
35410	1	35818	40099	BLANK		TC99 by ICP-200.8 MS
35410	2	35818	40099	LCS		TC99 by ICP-200.8 MS
35410	3	35818	40099	SAMPLE	W08GR00484	TC99 by ICP-200.8 MS

W13q Worklist/Batch/QC Report for Group# WSCF20080440

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			40200	BLANK		VOA Ground Water Protection
			40200	LCS		VOA Ground Water Protection
			40200	MS	W08GR00483	VOA Ground Water Protection
			40200	MSD	W08GR00483	VOA Ground Water Protection
			40200	SAMPLE	W08GR00483	VOA Ground Water Protection
			40200	SPK-RPD	W08GR00483	VOA Ground Water Protection
			40200	SURR	W08GR00483	VOA Ground Water Protection

WSCF

METHOD REFERENCES REPORT

Department: Radiochemistry

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-505-412	LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY
	EPA-600/R-94-111 200.8 DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS
	HEIS 200.8 METALS ICPMS Inductively Coupled Plasma - Mass Spectrometry
	HEIS RADISOTOPES ICPMS Radioisotopes by ICP/MS

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <http://www2.rl.gov/phmc/as-dol>.

Report Date: 12-mar-2008
Report#: WSCF20080440
Report WGPPM/5.2

Page 2

WSCF

METHOD REFERENCES REPORT

Department: Organic

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-523-455	LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846
EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
EPA SW-846 8260B	VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
HEIS 8260_VOA_GCMS	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <http://www2.rl.gov/phmc/as-dol>.

Report Date: 12-mar-2008
Report#: WSCF20080440
Report WGPPM/5.2

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WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent

SAF Number: F07-075

Sample # W08GR00484

Client ID: B1PM90 GPP TRENT

WSCF

Matrix: WATER

Group #: WSCF20080440

Department: Radiochemistry

Sampled: 03/04/08

Received: 03/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by ICP-200.8 MS											
Technetium by ICP-MS	14133-76-7	LA-505-412	U	< 1.00e-03	ug/L			1.00	1.0e-03		03/05/08

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

* - Indicates results that have NOT been validated;

+ - Indicates more than six qualifier symbols

J - Analyte < lowest calibration but > = MDL.(org)

U - Analyzed for but not detected above limiting criteria.(org)

U - Analyzed for but not detected above limiting criteria(inorg)

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080440
Matrix: WATER
Test: TC99 by ICP-200.8 MS

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	Technetium by ICP-MS	14133-76-7	< 1e-3	n/a	ug/L					U	03/05/08
LCS	Technetium by ICP-MS	14133-76-7	0.14	97.902	% Recov	49.000	125.000				03/05/08

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F07-075
Sample # W08GR00483
Client ID: B1PM62

GPP TRENT
WSCF

Matrix: WATER

Group #: WSCF20080440
Department: Organic
Sampled: 03/04/08
Received: 03/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		03/05/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		03/05/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		03/05/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		03/05/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		03/05/08
Carbon tetrachloride	56-23-5	LA-523-455	J	3.60	ug/L			1.00	1.0		03/05/08

MDL=Minimum Detection Limit

J - Analyte < lowest calibration but > = MDL.(org)

U - Analyzed for but not detected above limiting criteria.(inorg)

RQ=Result Qualifier

U - Analyzed for but not detected above limiting criteria.(org)

TP Err=Total Propagated Error

DF=Dilution Factor

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080440
 Matrix: WATER
 Test: VOA Ground Water Protection

Sample Date: 03/04/08
 Receive Date: 03/04/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00483											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,1-Dichloroethene	75-35-4	24.540	98.200	% Recov	63.000	117.000				03/05/08
MS	Benzene	71-43-2	25.330	101.000	% Recov	75.000	129.000				03/05/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	49.560	99.100	% Recov	75.000	125.000				03/05/08
MS	Chlorobenzene	108-90-7	25.620	102.000	% Recov	79.000	119.000				03/05/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	50.540	101.000	% Recov	75.000	125.000				03/05/08
MS	Toluene-d8(Surr)	2037-26-5	50.990	102.000	% Recov	75.000	125.000				03/05/08
MS	Toluene	108-88-3	26.390	106.000	% Recov	76.000	120.000				03/05/08
MS	Trichloroethene	79-01-6	21.310	85.200	% Recov	73.000	123.000				03/05/08
MSD	1,1-Dichloroethene	75-35-4	26.280	105.000	% Recov	63.000	117.000				03/05/08
MSD	Benzene	71-43-2	24.990	100.000	% Recov	75.000	129.000				03/05/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	49.780	99.500	% Recov	75.000	125.000				03/05/08
MSD	Chlorobenzene	108-90-7	25.580	102.000	% Recov	79.000	119.000				03/05/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	50.940	102.000	% Recov	75.000	125.000				03/05/08
MSD	Toluene-d8(Surr)	2037-26-5	51.310	103.000	% Recov	75.000	125.000				03/05/08
MSD	Toluene	108-88-3	26.030	104.000	% Recov	76.000	120.000				03/05/08
MSD	Trichloroethene	79-01-6	20.500	82.000	% Recov	73.000	123.000				03/05/08
SPK-RPD	1,1-Dichloroethene	75-35-4	105.000		RPD			6.693	20.000		03/05/08
SPK-RPD	Benzene	71-43-2	100.000		RPD			0.995	20.000		03/05/08
SPK-RPD	Chlorobenzene	108-90-7	102.000		RPD			0.000	20.000		03/05/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	102.000		RPD			0.985	20.000		03/05/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	103.000		RPD			0.976	20.000		03/05/08
SPK-RPD	Toluene	108-88-3	104.000		RPD			1.905	20.000		03/05/08
SPK-RPD	Trichloroethene	79-01-6	82.000		RPD			3.828	20.000		03/05/08
SURR	4-Bromofluorobenzene(Surr)	460-00-4	49.960	99.900	% Recov	75.000	125.000				03/05/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	50.570	101.000	% Recov	75.000	125.000				03/05/08
SURR	Toluene-d8(Surr)	2037-26-5	51.470	103.000	% Recov	75.000	125.000				03/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080440
 Matrix: WATER
 Test: VOA Ground Water Protection

Sample Date: 03/04/08
 Receive Date: 03/04/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L					U	03/05/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	03/05/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	48.580	97.200	% Recov	75.000	125.000				03/05/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	03/05/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	03/05/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	49.020	98.000	% Recov	75.000	125.000				03/05/08
BLANK	Toluene-d8(Surr)	2037-26-5	49.780	99.600	% Recov	75.000	125.000				03/05/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	03/05/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	03/05/08
LCS	1,1-Dichloroethene	75-35-4	22.120	88.500	% Recov	75.000	125.000				03/05/08
LCS	Benzene	71-43-2	26.060	104.000	% Recov	75.000	125.000				03/05/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	48.050	96.100	% Recov	75.000	125.000				03/05/08
LCS	Chlorobenzene	108-90-7	25.950	104.000	% Recov	75.000	125.000				03/05/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	51.240	102.000	% Recov	75.000	125.000				03/05/08
LCS	Toluene-d8(Surr)	2037-26-5	51.330	103.000	% Recov	75.000	125.000				03/05/08
LCS	Toluene	108-88-3	26.190	105.000	% Recov	75.000	125.000				03/05/08
LCS	Trichloroethene	79-01-6	20.920	83.700	% Recov	75.000	125.000				03/05/08

M4W41-SLF-08-282

ATTACHMENT 4

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
MS*

ACKNOWLEDGMENT OF SAMPLES RECEIVED

3/5/08

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 122590/ES10
Group#: 20080440
Project#: F07-075
Proj Mgr: STEVE TRENT E6-35
Phone: 373-5869



The following samples were received from you on 03/04/08. 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
W08GR00483	B1PM62	GPP @VOA-GPP	TRENT Water	03/04/08
W08GR00484	B1PM90	GPP @TC99-MS	TRENT Water	03/04/08

Test Acronym Description

Test Acronym	Description
@TC99-MS	TC99 screen by ICP-200.8 MS
@VOA-GPP	VOA Ground Water Protection

COLLECTOR

NCO Sampler *MA White*

SAMPLING LOCATION

C4976, I-2

ICE CHEST NO.

COMPANY CONTACT

Trent, SJ

TELEPHONE NO.

373-5869

PROJECT COORDINATOR

WIDRIG, DL

PRICE CODE

1A

DATA TURNAROUND

24 Hours / 15 Days

PROJECT DESIGNATION

200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater

SAF NO.

F07-075

AIR QUALITY

FIELD LOGBOOK NO.

ACTUAL SAMPLE DEPTH

273'

COA

122590ES10

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.

N/A

BILL OF LADING/AIR BILL NO.

N/A

MATRIX*

A=Air
DL=Drum
Liquids
DS=Drum
Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS

Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION

HCl to pH <2/Cool~4C

TYPE OF CONTAINER

aGs*

NO. OF CONTAINER(S)

3

VOLUME

40mL

SAMPLE ANALYSIS

SEE ITEM (1) IN SPECIAL INSTRUCTIONS

20080440

SAMPLE NO.

MATRIX*

B1PM62 *W086R00453* WATER

SAMPLE DATE

SAMPLE TIME

3-4-08 1330 ✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM

DATE/TIME

MA White MA White 3-4-08 1405

RELINQUISHED BY/REMOVED FROM

DATE/TIME

SIGN/ PRINT NAMES

RECEIVED BY/STORED IN

SPECIAL INSTRUCTIONS

(1)VOLATILE ORGANICS BY FIELD GC (Carbon tetrachloride)

ICED

LABORATORY SECTION

RECEIVED BY

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

19 OF 20

COLLECTOR: NCO Sampler
 COMPANY CONTACT: Trent, SJ
 TELEPHONE NO.: 373-5869
 PROJECT COORDINATOR: WIDRIG, DL
 PRICE CODE: 1A
 DATA TURNAROUND: 24 Hours / 15 Days
 SAMPLING LOCATION: C4976, I-2
 PROJECT DESIGNATION: 200-UP-1 Remedial Investigation Sampling and Analysis - Groundwater
 SAF NO.: F07-075
 AIR QUALITY:
 ICE CHEST NO.:
 FIELD LOGBOOK NO.:
 ACTUAL SAMPLE DEPTH: 273'
 COA: 122590ES10
 METHOD OF SHIPMENT: GOVERNMENT VEHICLE

SHIPPED TO: Waste Sampling & Characterization
 OFFSITE PROPERTY NO.: N/A
 BILL OF LADING/AIR BILL NO.: N/A

MATRIX* POSSIBLE SAMPLE HAZARDS/ REMARKS
 A=Air
 DL=Drum
 Liquids
 DS=Drum
 Solids
 L=Liquid
 O=Oil
 S=Soil
 SE=Sediment
 T=Tissue
 V=Vegetation
 W=Water
 WI=Wipe
 X=Other

CONTAINS Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

PRESERVATION: HNO3 to pH <2 (ULTREX)
 TYPE OF CONTAINER: Nalgene
 NO. OF CONTAINER(S): 1
 VOLUME: 500mL
 SAMPLE ANALYSIS: Tc-99 by ICPMS (Technetium-99)

SPECIAL HANDLING AND/OR STORAGE:

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1PM90	WATER	3-4-08	1330

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: MAWA... 3-4-08	RECEIVED BY/STORED IN: T. A. Frazier	
DATE/TIME: 1405	DATE/TIME: 3-4-08 1405	
RELINQUISHED BY/REMOVED FROM:	RECEIVED BY/STORED IN:	
DATE/TIME:	DATE/TIME:	
RELINQUISHED BY/REMOVED FROM:	RECEIVED BY/STORED IN:	
DATE/TIME:	DATE/TIME:	
RELINQUISHED BY/REMOVED FROM:	RECEIVED BY/STORED IN:	
DATE/TIME:	DATE/TIME:	
RELINQUISHED BY/REMOVED FROM:	RECEIVED BY/STORED IN:	
DATE/TIME:	DATE/TIME:	

ICED

LABORATORY SECTION RECEIVED BY: TITLE: DATE/TIME:
 FINAL SAMPLE DISPOSITION DISPOSAL METHOD: DISPOSED BY: DATE/TIME:

20 of 20