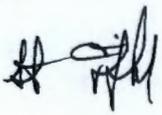


RECEIVED, DECEMBER 10, 2007

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

FLUOR**Memorandum**

To: H. Hampt E6-35 Date: M4W41-SLF-07-958
 December 6, 2007

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

cc: w/Attachments

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

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20071907 – SAF NUMBER F07-070

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 WSCF20071907:

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

SLF/grf

Attachments 4

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M4W41-SLF-07-958

ATTACHMENT 1

COVER SHEET

**Consisting of 2 pages
Including cover page**

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20071907
Data Deliverable Date: 07-dec-2007
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F07-070	B1PMP8	W07GR02729	WATER

M4W41-SLF-07-958

ATTACHMENT 2

NARRATIVE

Consisting of 2 pages
Including cover page

Introduction

One groundwater sample was received at the WSCF Laboratory on October 23, 2007. Sample was 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” and initialed 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*, page 9, for a complete listing of approved analytical methods.

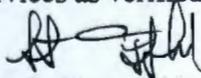
Organic Comments

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 12 through 14 for QC details.

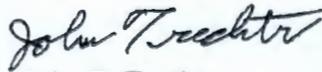
- Blank contamination result of carryover from sample syringe however all sample results except methylene chloride are non-detect, so minimal affect on the sample.
- Matrix Spike and Matrix Spike Duplicate analyzed on sample # B1PMP6 (SDG 20071875, SAF F07-070)

All other 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-07-958

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 10 pages
Including cover page

**WSCF
ANALYTICAL RESULTS REPORT**

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: *[Signature]* S. Fitzgerald 12/6/07

Client Services: *[Signature]* John Trechter 12/6/07

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#: WSCF20071907
Report Date: 29-nov-2007
Report WGPP/ver. 5.2
Groundwater Remediation Program

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20071907

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			38819	BLANK		VOA Ground Water Protection
			38819	LCS		VOA Ground Water Protection
			38819	MS	W07GR02684	VOA Ground Water Protection
			38819	MSD	W07GR02684	VOA Ground Water Protection
			38819	SPK-RPD	W07GR02684	VOA Ground Water Protection
			38819	SAMPLE	W07GR02729	VOA Ground Water Protection
			38819	SURR	W07GR02729	VOA Ground Water Protection

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: 29-nov-2007

Report#: WSCF20071907

Report WGPPM/5.2

WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F07-070
Sample # W07GR02729
Client ID: B1PMP8

GRP TRENT
WSCF

Matrix: WATER

Group #: WSCF20071907
Department: Organic
Sampled: 10/23/07
Received: 10/23/07

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		11/01/07
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Styrene	100-42-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
2-Hexanone	591-78-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Bromomethane	74-83-9	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Chloromethane	74-87-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07

MDL = Minimum Detection Limit

B - The Analyte detected in both the BLANK and the SAMPLE.(org)

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

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 RESULTS REPORT

Attention: Steve Trent
SAF Number: F07-070
Sample # W07GR02729
Client ID: B1PMP8

GRP TRENT
WSCF

Matrix: WATER

Group #: WSCF20071907
Department: Organic
Sampled: 10/23/07
Received: 10/23/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Chloroethane	75-00-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Methylenechloride	75-09-2	LA-523-455	BJ	3.50	ug/L			1.00	1.0		11/01/07
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Bromoform	75-25-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		11/01/07
Trichloromonofluoromethane	75-69-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
n-Butylbenzene	104-51-8	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		11/01/07

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)

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

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20071907
 Matrix: WATER
 Test: VOA Ground Water Protection

Sample Date: 10/18/07
 Receive Date: 10/18/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W07GR02684											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,1-Dichloroethene	75-35-4	22.440	89.800	% Recov	63.000	117.000				11/01/07
MS	Benzene	71-43-2	24.890	99.600	% Recov	75.000	129.000				11/01/07
MS	4-Bromofluorobenzene(Surr)	460-00-4	46.500	93.000	% Recov	75.000	125.000				11/01/07
MS	Chlorobenzene	108-90-7	25.660	103.000	% Recov	79.000	119.000				11/01/07
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	46.740	93.500	% Recov	75.000	125.000				11/01/07
MS	Toluene-d8(Surr)	2037-26-5	47.170	94.300	% Recov	75.000	125.000				11/01/07
MS	Toluene	108-88-3	25.000	100.000	% Recov	76.000	120.000				11/01/07
MS	Trichloroethene	79-01-6	19.260	77.000	% Recov	73.000	123.000				11/01/07
MSD	1,1-Dichloroethene	75-35-4	21.140	84.600	% Recov	63.000	117.000				11/01/07
MSD	Benzene	71-43-2	25.370	101.000	% Recov	75.000	129.000				11/01/07
MSD	4-Bromofluorobenzene(Surr)	460-00-4	46.820	93.600	% Recov	75.000	125.000				11/01/07
MSD	Chlorobenzene	108-90-7	25.230	101.000	% Recov	79.000	119.000				11/01/07
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	46.440	92.900	% Recov	75.000	125.000				11/01/07
MSD	Toluene-d8(Surr)	2037-26-5	49.840	99.700	% Recov	75.000	125.000				11/01/07
MSD	Toluene	108-88-3	25.680	103.000	% Recov	76.000	120.000				11/01/07
MSD	Trichloroethene	79-01-6	19.620	78.500	% Recov	73.000	123.000				11/01/07
SPK-RPD	1,1-Dichloroethene	75-35-4	84.600		RPD			5.963	20.000		11/01/07
SPK-RPD	Benzene	71-43-2	101.000		RPD			1.396	20.000		11/01/07
SPK-RPD	Chlorobenzene	108-90-7	101.000		RPD			1.961	20.000		11/01/07
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	92.900		RPD			0.644	20.000		11/01/07
SPK-RPD	Toluene-d8(Surr)	2037-26-5	99.700		RPD			5.567	20.000		11/01/07
SPK-RPD	Toluene	108-88-3	103.000		RPD			2.958	20.000		11/01/07
SPK-RPD	Trichloroethene	79-01-6	78.500		RPD			1.929	20.000		11/01/07

Lab ID: W07GR02729
 BATCH QC ASSOCIATED WITH SAMPLE

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20071907
 Matrix: WATER
 Test: VOA Ground Water Protection

Sample Date: 10/23/07
 Receive Date: 10/23/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	4-Bromofluorobenzene(Surr)	460-00-4	46.280	92.600	% Recov	75.000	125.000				11/01/07
SURR	1,2-Dichloroethane-d4(Surr)	17080-07-0	48.890	93.400	% Recov	75.000	125.000				11/01/07
SURR	Toluene-d8(Surr)	2037-26-5	48.650	97.300	% Recov	75.000	125.000				11/01/07
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	11/01/07
BLANK	1,1,1-Trichloroethane	71-55-8	4.7	4.700	ug/L						11/01/07
BLANK	1,1,2-Trichloroethane	79-00-5	4.8	4.800	ug/L						11/01/07
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	5.3	5.300	ug/L	0.000	5.000				11/01/07
BLANK	1,1-Dichloroethene	75-35-4	1.8	1.800	ug/L						11/01/07
BLANK	1,2-Dichloroethane	107-06-2	4.9	4.900	ug/L						11/01/07
BLANK	1,2-Dichloroethene(Total)	540-59-0	2.8	2.800	ug/L						11/01/07
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	11/01/07
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/L					U	11/01/07
BLANK	4-Methyl-2-Pentanone	108-10-1	4.7	4.700	ug/L						11/01/07
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L					U	11/01/07
BLANK	Bromodichloromethane	75-27-4	4.8	4.800	ug/L						11/01/07
BLANK	Benzene	71-43-2	4.8	4.800	ug/L						11/01/07
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	49.170	98.300	% Recov	75.000	125.000				11/01/07
BLANK	Bromoform	75-25-2	4.7	4.700	ug/L						11/01/07
BLANK	n-Butylbenzene	104-51-8	< 1.0	n/a	ug/L					U	11/01/07
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	11/01/07
BLANK	Carbon tetrachloride	56-23-5	4.8	4.800	ug/L						11/01/07
BLANK	Dibromochloromethane	124-48-1	4.5	4.500	ug/L						11/01/07
BLANK	Chloroform	67-66-3	4.8	4.800	ug/L						11/01/07
BLANK	Chlorobenzene	108-90-7	5.2	5.200	ug/L						11/01/07
BLANK	cis-1,2-Dichloroethylene	156-59-2	2.6	2.600	ug/L						11/01/07
BLANK	cis-1,3-Dichloropropene	10081-01-5	7.5	7.500	ug/L						11/01/07
BLANK	Chloroethane	75-00-3	< 1.0	n/a	ug/L					U	11/01/07
BLANK	1,2-Dichloroethane-d4(Surr)	17080-07-0	45.650	91.300	% Recov	75.000	125.000				11/01/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20071907
 Matrix: WATER
 Test: VOA Ground Water Protection

Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	trans-1,2-Dichloroethylene	156-60-5	1.7	1.700	ug/L						11/01/07
BLANK	1,2-Dichloropropane	78-87-5	4.0	4.000	ug/L						11/01/07
BLANK	Ethylbenzene	100-41-4	3.7	3.700	ug/L						11/01/07
BLANK	Bromomethane	74-83-9	3.5	3.500	ug/L						11/01/07
BLANK	Chloromethane	74-87-3	2.7	2.700	ug/L						11/01/07
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	11/01/07
BLANK	Methylenechloride	75-09-2	8.5	8.500	ug/L						11/01/07
BLANK	Tetrachloroethene	127-18-4	4.0	4.000	ug/L						11/01/07
BLANK	Styrene	100-42-5	3.9	3.900	ug/L						11/01/07
BLANK	Xylenes (total)	1330-20-7	4.7	4.700	ug/L	0.000	5.000				11/01/07
BLANK	Toluene-d8(Surr)	2037-26-5	49.430	98.800	% Recov	75.000	125.000				11/01/07
BLANK	Toluene	108-88-3	4.4	4.400	ug/L						11/01/07
BLANK	trans-1,3-Dichloropropene	10061-02-6	3.2	3.200	ug/L						11/01/07
BLANK	Trichloromonofluoromethane	75-69-4	< 1.0	n/a	ug/L	0.000	5.000			U	11/01/07
BLANK	Trichloroethene	79-01-6	3.5	3.500	ug/L						11/01/07
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	11/01/07
LCS	1,1-Dichloroethene	75-35-4	20.700	82.800	% Recov	75.000	125.000				11/01/07
LCS	Benzene	71-43-2	24.050	96.200	% Recov	75.000	125.000				11/01/07
LCS	4-Bromofluorobenzene(Surr)	460-00-4	46.120	92.200	% Recov	75.000	125.000				11/01/07
LCS	Chlorobenzene	108-90-7	23.870	95.500	% Recov	75.000	125.000				11/01/07
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	46.880	93.800	% Recov	75.000	125.000				11/01/07
LCS	Toluene-d8(Surr)	2037-26-5	49.650	99.300	% Recov	75.000	125.000				11/01/07
LCS	Toluene	108-88-3	24.610	98.400	% Recov	75.000	125.000				11/01/07
LCS	Trichloroethene	79-01-6	19.310	77.200	% Recov	75.000	125.000				11/01/07

WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F07-070

Group #: WSCF20071907
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		VOA: Blank has targets at low level due to daily cal carry-over contaminated syringe. Did not affect samples. gar

Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample

VALTEST - Test Validation
LOGTEST - Login for Tests

TESTDATA - Test Data Entry

This report may not be reproduced, except in its entirety without the written approval of the WSCF Laboratory.

M4W41-SLF-07-958

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 3 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
✓13
12/7/07

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 123262/ES10
Group#: 20071907
Project#: F07-070
Proj Mgr: Steve Trent E6-35
Phone: 373-5869

The following samples were received from you on 10/23/07. 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
'07GR02729	B1PMP8	GRP @VOA-GPP	TRENT Water	10/23/07

Test Acronym Description

Test Acronym	Description
@VOA-GPP	VOA Ground Water Protection

