

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

FLUOR

Memorandum

M4W41-SLF-08-910

To: H. Hampt E6-35 Date: August 27, 2008

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



cc: w/Attachments

T. F. Dale	S3-30	P. D. Mix	S3-30
D. Felmy (PNNL)	K6-75	J. E. Trechter	S3-30
A. J. Kopriva	S3-30	S. J. Trent	E6-35
H. K. Meznarich	S3-30	File/LB	

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20081810

- Reference:
- 1) Letter of Instruction for Analytical Services for the Groundwater Performance Assessment Project and Analytical Laboratory Transition Plan, FH-0602422, September 19, 2006
 - 2) HNF-SD-CD-QAPP-017, Rev. 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This transmittal contains the following information for sample delivery group WSCF20081810:

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

SLF/grf

Attachments 4

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ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20081810
Data Deliverable Date: 04-sep-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
I08-051	B1WDC6	W08P004171	WATER
I08-055	B1WV8	W08P004169	WATER
	B1WV7	W08P004168	WATER
	B1WV8	W08P004170	WATER
S08-008	B1WH22	W08P004165	WATER
	B1WH23	W08P004167	WATER
	B1WH24	W08P004166	WATER

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ATTACHMENT 2

NARRATIVE

Consisting of 2 pages
Including cover page

Introduction

Seven groundwater samples were received at the WSCF Laboratory on August 24, 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

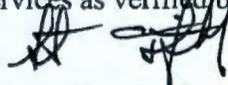
Refer to *WSCF Method References Report*, page 9, for a complete listing of approved analytical methods.

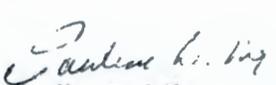
Inorganic Comments

Hexavalent Chromium – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See page 17 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


Pauline D. Mix
WSCF Client Services

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ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 13 pages
Including cover page

**WSCF
ANALYTICAL RESULTS REPORT**

for

**GPAP
Richland, WA 99352**

Attention: Steve Trent E6-35

Analytical:

S. Fitzgerald 8/27/08

Client Services:

P.D. Mix 8/27/2008

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

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Report#: WSCF20081810
Report Date: 26-aug-2008
Report WGPP/ver. 5.2
GPAP

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W13q Worklist/Batch/QC Report for Group# WSCF20081810

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
37742	2	38174	42535	BLANK		Hexavalent chromium
37742	13	38174	42535	BLANK		Hexavalent chromium
37742	3	38174	42535	LCS		Hexavalent chromium
37742	7	38174	42535	SAMPLE	W08P004165	Hexavalent chromium
37742	8	38174	42535	SAMPLE	W08P004166	Hexavalent chromium
37742	9	38174	42535	SAMPLE	W08P004167	Hexavalent chromium
37742	10	38174	42535	SAMPLE	W08P004168	Hexavalent chromium
37742	11	38174	42535	SAMPLE	W08P004169	Hexavalent chromium
37742	5	38174	42535	DUP	W08P004170	Hexavalent chromium
37742	6	38174	42535	MS	W08P004170	Hexavalent chromium
37742	4	38174	42535	SAMPLE	W08P004170	Hexavalent chromium
37742	12	38174	42535	SAMPLE	W08P004171	Hexavalent chromium

WSCF METHOD REFERENCES REPORT

Department: Inorganic

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-265-403	LA-265-403: Hexavalent Chromium analysis by Spectrophotometer
EPA SW-846 7196A	HEXAVALENT CHROMIUM
HEIS 7196_CR6	Hexavalent Chromium

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>.

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-008
Sample # W08P004165
Client ID: B1WH22

Group #: WSCF20081810
Department: Inorganic
Sampled: 08/24/08
Received: 08/24/08

WSCF TRENT Matrix: WATER

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403		0.197	mg/L			1.00	2.0e-03		08/25/08

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

Report WGPP/ver. 5.2

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-008
Sample # W08P004166
Client ID: B1WH24

Group #: WSCF20081810
Department: Inorganic
Sampled: 08/24/08
Received: 08/24/08

WSCF TRENT Matrix: WATER

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403		0.133	mg/L			1.00	2.0e-03		08/25/08

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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-008
Sample # W08P004167
Client ID: B1WH23

Group #: WSCF20081810
Department: Inorganic
Sampled: 08/24/08
Received: 08/24/08

WSCF
 TRENT

Matrix: WATER

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403		0.134	mg/L			1.00	2.0e-03		08/25/08

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-055
Sample # W08P004168
Client ID: B1WFW7

Group #: WSCF20081810
Department: Inorganic
Sampled: 08/24/08
Received: 08/24/08

WSCF TRENT Matrix: WATER

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403		0.0491	mg/L			1.00	2.0e-03		08/25/08

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-055
Sample # W08P004169
Client ID: B1WV8

Group #: WSCF20081810
Department: Inorganic
Sampled: 08/24/08
Received: 08/24/08

WSCF TRENT Matrix: WATER

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403		0.432	mg/L			1.00	2.0e-03		08/25/08

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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35

SAF Number: I08-055

Sample # W08P004170

Client ID: B1WFW8

WSCF

TRENT

Matrix: WATER

Group #: WSCF20081810

Department: Inorganic

Sampled: 08/24/08

Received: 08/24/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403		0.0480	mg/L			1.00	2.0e-03		08/25/08

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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P004171
Client ID: B1WDC6

Group #: WSCF20081810
Department: Inorganic
Sampled: 08/24/08
Received: 08/24/08

WSCF TRENT Matrix: WATER

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403		0.0110	mg/L			1.00	2.0e-03		08/25/08

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

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081810
 Matrix: WATER
 Test: Hexavalent chromium

Sample Date: 08/24/08
 Receive Date: 08/24/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004170											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Hexavalent chromium	18540-29-9	0.0478		RPD			0.418	15.000		08/25/08
MS	Hexavalent chromium	18540-29-9	0.0400	100.000	% Recov	85.000	115.000				08/25/08
BATCH QC											
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	08/25/08
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	08/25/08
LCS	Hexavalent chromium	18540-29-9	0.0517	103.400	% Recov	80.000	120.000				08/25/08

WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081810
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Cr(VI) Analysis began at 0807, first result was reported by the instrument at 0820. Hold times for all samples were met

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

VALTEST - Test Validation
LOGTEST - Login for Tests

TESTDATA - Test Data Entry

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ggppc/5.2 Report#: WSCF20081810

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ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 9 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
Due 
8/24/08

ACKNOWLEDGMENT OF SAMPLES RECEIVED

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081810

The following samples were received from you on 08/24/08. 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
W08P004165	B1WH22	CR+6	TRENT Water	08/24/08
W08P004166	B1WH24	CR+6	TRENT Water	08/24/08
W08P004167	B1WH23	CR+6	TRENT Water	08/24/08
W08P004168	B1WFW7	CR+6	TRENT Water	08/24/08
W08P004169	B1WFW8	CR+6	TRENT Water	08/24/08
W08P004170	B1WFW8	CR+6	TRENT Water	08/24/08
W08P004171	B1WDC6	CR+6	TRENT Water	08/24/08

Test Acronym Description

Test Acronym	Description
CR+6	Hexavalent chromium

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

DOE # S08-008-5
Page 1 of 1

Collector RM Arnold	Contact/Requester Steve Trent	Telephone No. 509-373-5869	MSIN FAX
SAF No. S08-008	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title SURV AUGUST 2008	HNF-N-506-19	Ice Chest No.	Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.	
Protocol SURV	Priority: 24 Hours PRIORITY	Offsite Property No.	

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 INSTRUCTIONS Hold Time
 Site-Wide Generator Knowledge Information Form applies. Total Activity Exemption: Yes No

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WH24	W08P004166	W	8/24/08	0845	1x250-mL aG	7196_CR6: Hexavalent Chromium (1)	Cool-4C
							ICED

Relinquished By RM Arnold	Print <i>RM Arnold</i>	Sign	Date/Time AUG 24 2008 12:15	Received By <i>Victor J Sims</i>	Print <i>Victor J Sims</i>	Sign	Date/Time AUG 24 2008 12:15	Matrix * S = Soil DS = Drum Solid SF = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge W = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
Relinquished By			Date/Time	Received By			Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time		

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