

RECEIVED JUNE 3, 2008

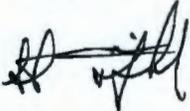
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Fluor Hanford
WSCF Analytical Lab
P.O. Box 1000
Richland, WA 99352
Telephone 373-7495
Telefax 372-0456

FLUOR

Memorandum

To: H. Hampt E6-35 Date: M4W41-SLF-08-584
June 2, 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 WSCF20081045

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. 8, Waste Sampling & Characterization Facility Quality Assurance Plan

This transmittal contains the following information for sample delivery group WSCF20081045:

- 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-08-584

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20081045
Data Deliverable Date: 05-jun-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
I08-035	B1V637	W08P002531	WATER
	B1V638	W08P002530	WATER
S08-004	B1V284	W08P002527	WATER
	B1V286	W08P002528	WATER
	B1V288	W08P002529	WATER

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ATTACHMENT 2

NARRATIVE

**Consisting of 2 pages
Including cover page**

Introduction

Five groundwater samples were received at the WSCF Laboratory on May 22, 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.

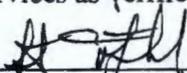
Inorganic Comments

Hexavalent Chromium – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See page 15 for QC details. Analytical Note(s):

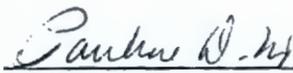
- Duplicates, Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1V5P9 and B1V5J4 (SDG# 20081050).

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

M4W41-SLF-08-584

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 10 pages
Including cover page

**WSCF
ANALYTICAL RESULTS REPORT**

for

**GPAP
Richland, WA 99352**

Attention: Steve Trent E6-35

Analytical:

S. Fitzgerald 6/2/08

Client Services:

P.D. Mix 6/2/2008

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.

Report#: WSCF20081045
Report Date: 2-jun-2008
Report WGPP/ver. 5.2
GPAP

Page 1

W13q Worklist/Batch/QC Report for Group# WSCF20081045

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36467	2	36880	41257	BLANK		Hexavalent chromium
36467	3	36880	41257	LCS		Hexavalent chromium
36467	9	36880	41257	SAMPLE	W08P002527	Hexavalent chromium
36467	10	36880	41257	SAMPLE	W08P002528	Hexavalent chromium
36467	11	36880	41257	SAMPLE	W08P002529	Hexavalent chromium
36467	12	36880	41257	SAMPLE	W08P002530	Hexavalent chromium
36467	13	36880	41257	SAMPLE	W08P002531	Hexavalent chromium
36467	5	36880	41257	DUP	W08P002560	Hexavalent chromium
36467	6	36880	41257	MS	W08P002560	Hexavalent chromium
36467	7	36880	41257	MSD	W08P002560	Hexavalent chromium
36467	7	36880	41257	SPK-RPD	W08P002560	Hexavalent chromium
36467	28	36880	41257	DUP	W08P002570	Hexavalent chromium
36467	29	36880	41257	MS	W08P002570	Hexavalent chromium
36467	30	36880	41257	MSD	W08P002570	Hexavalent chromium
36467	30	36880	41257	SPK-RPD	W08P002570	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>.

Report Date: 2-jun-2008
Report#: WSCF20081045
Report WGPPM/5.2

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-004
Sample # W08P002527
Client ID: B1V284

Group #: WSCF20081045
Department: Inorganic
Sampled: 05/22/08
Received: 05/22/08

PNNL
WSCF

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		0.0235	mg/L			1.00	2.0e-03		05/23/08

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

GPAP

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-004
Sample # W08P002528
Client ID: B1V286

Group #: WSCF20081045
Department: Inorganic
Sampled: 05/22/08
Received: 05/22/08

PNNL
 WSCF

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		0.0222	mg/L			1.00	2.0e-03		05/23/08

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

GPAP

WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-004
Sample # W08P002529
Client ID: B1V288

Group #: WSCF20081045
Department: Inorganic
Sampled: 05/22/08
Received: 05/22/08

PNNL
WSCF

Matrix: WATER

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium	18540-29-9	LA-265-403		0.0525	mg/L			1.00	2.0e-03		05/23/08

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

GPAP

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-035
Sample # W08P002530
Client ID: B1V638

Group #: WSCF20081045
Department: Inorganic
Sampled: 05/22/08
Received: 05/22/08

PNNL
 WSCF

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		0.0525	mg/L			1.00	2.0e-03		05/23/08

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

GPAP

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-035
Sample # W08P002531
Client ID: B1V637

Group #: WSCF20081045
Department: Inorganic
Sampled: 05/22/08
Received: 05/22/08

PNNL
 WSCF

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		0.0525	mg/L			1.00	2.0e-03		05/23/08

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

GPAP

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081045
 Matrix: WATER
 Test: Hexavalent chromium

Sample Date: 05/22/08
 Receive Date: 05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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Lab ID: W08P002560
BATCH QC ASSOCIATED WITH SAMPLE

DUP	Hexavalent chromium	18540-29-9	0.259		RPD			0.775	15.000		05/23/08
MS	Hexavalent chromium	18540-29-9	0.0505	94.216	% Recov	85.000	115.000				05/23/08
MSD	Hexavalent chromium	18540-29-9	0.0492	91.791	% Recov	85.000	115.000				05/23/08
SPK-RPD	Hexavalent chromium	18540-29-9	91.791		RPD			2.607	20.000		05/23/08

Lab ID: W08P002570
BATCH QC ASSOCIATED WITH SAMPLE

DUP	Hexavalent chromium	18540-29-9	0.0840		RPD			0.000	15.000		05/23/08
MS	Hexavalent chromium	18540-29-9	0.0517	96.455	% Recov	85.000	115.000				05/23/08
MSD	Hexavalent chromium	18540-29-9	0.0517	96.455	% Recov	85.000	115.000				05/23/08
SPK-RPD	Hexavalent chromium	18540-29-9	96.455		RPD			0.000	20.000		05/23/08

BATCH QC

BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	05/23/08
LCS	Hexavalent chromium	18540-29-9	0.0538	106.746	% Recov	80.000	120.000				05/23/08

M4W41-SLF-08-584

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 7 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

5/23/08
FILE KB

ACKNOWLEDGMENT OF SAMPLES RECEIVED

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081045

The following samples were received from you on 05/22/08. 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
W08P002527	B1V284	PNNL CR+6	Water	05/22/08
W08P002528	B1V286	PNNL CR+6	Water	05/22/08
W08P002529	B1V288	PNNL CR+6	Water	05/22/08
W08P002530	B1V638	PNNL CR+6	Water	05/22/08
W08P002531	B1V637	PNNL CR+6	Water	05/22/08

Test Acronym Description

Test Acronym	Description
CR+6	Hexavalent chromium

