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FLUOR**Memorandum**

To: H. Hampt E6-35 Date: M4W41-SLF-07-885
 November 20, 2007

From: S. L. Fitzgerald, Manager *SLF*
 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 WSCF20072040 – SAF NUMBER
 F08-002

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 WSCF20072040:

- 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#: WSCF20072040
Data Deliverable Date: 20-nov-2007
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F08-002	B1PYM6	W07GR02905	WATER
	B1PYM7	W07GR02906	WATER

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ATTACHMENT 2

NARRATIVE

Consisting of 2 pages
Including cover page

Introduction

Two (2) groundwater samples were received at the WSCF Laboratory on October 13, 2007. 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

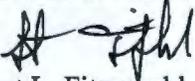
Refer to *WSCF Method References Report*, page 9, for a complete listing of approved analytical methods.

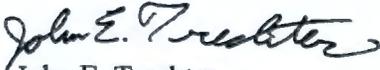
Inorganic Comments

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 12 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

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ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 7 pages
Including cover page

**WSCF
ANALYTICAL RESULTS REPORT**

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical:

S. Fitzgerald 11/20/07

Client Services:

P.D. Mix 11/19/2007

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#: WSCF20072040
Report Date: 19-nov-2007
Report WGPP/ver. 5.2
Groundwater Remediation Program

W13q Worklist/Batch/QC Report for Group# WSCF20072040

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
34103	2	34506	38688	BLANK		Hexavalent chromium
34103	3	34506	38688	LCS		Hexavalent chromium
34103	8	34506	38688	SAMPLE	W07GR02905	Hexavalent chromium
34103	5	34506	38688	DUP	W07GR02906	Hexavalent chromium
34103	6	34506	38688	MS	W07GR02906	Hexavalent chromium
34103	7	34506	38688	MSD	W07GR02906	Hexavalent chromium
34103	4	34506	38688	SAMPLE	W07GR02906	Hexavalent chromium
34103	7	34506	38688	SPK-RPD	W07GR02906	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: 19-nov-2007
Report#: WSCF20072040
Report WGPPM/5.2

Page 1

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-002
Sample # W07GR02905
Client ID: B1PYM6

TRENT
WSCF

Matrix: WATER

Group #: WSCF20072040
Department: Inorganic
Sampled: 11/12/07
Received: 11/13/07

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		7.20e-03	mg/L			1.00	2.0e-03		11/13/07

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-002
Sample # W07GR02906
Client ID: B1PYM7

TRENT
WSCF

Matrix: WATER

Group #: WSCF20072040
Department: Inorganic
Sampled: 11/13/07
Received: 11/13/07

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		9.70e-03	mg/L			1.00	2.0e-03		11/13/07

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20072040
 Matrix: WATER
 Test: Hexavalent chromium

Sample Date: 11/13/07
 Receive Date: 11/13/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W07GR02906											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Hexavalent chromium	18540-29-9	0.0097		RPD			0.000	15.000		11/13/07
MS	Hexavalent chromium	18540-29-9	0.0557	105.693	% Recov	85.000	115.000				11/13/07
MSD	Hexavalent chromium	18540-29-9	0.0557	105.693	% Recov	85.000	115.000				11/13/07
SPK-RPD	Hexavalent chromium	18540-29-9	105.693		RPD			0.000	20.000		11/13/07
BATCH QC											
BLANK	Hexavalent chromium	18540-29-9	< 0.002	n/a	mg/L	0.000	2.000			U	11/13/07
LCS	Hexavalent chromium	18540-29-9	0.0553	111.717	% Recov	80.000	120.000				11/13/07

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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

ACKNOWLEDGMENT OF SAMPLES RECEIVED

11/20/07
tdb

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 122636/ES10
Group#: 20072040
Project#: F08-002
Proj Mgr: Steve Trent E6-35
Phone: 373-5869

The following samples were received from you on 11/13/07. 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
W07GR02905	B1PYM6	TRENT CR+6	Water	11/12/07
W07GR02906	B1PYM7	TRENT CR+6	Water	11/13/07

Test Acronym Description

Test Acronym	Description
CR+6	Hexavalent chromium

COLLECTOR

NCO Sampler

20072040

COMPANY CONTACT

TRENT, SJ

TELEPHONE NO.

373-5869

PROJECT COORDINATOR

TRENT, SJ

PRICE CODE 1A

DATA TURNAROUND

SAMPLING LOCATION

C5937

73.5 pump Intake

PROJECT DESIGNATION

100-KR-4 Pump & Treat Expansion - Water

SAF NO.

F08-002

AIR QUALITY

24 Hours / 15 Days

ICE CHEST NO.

FIELD LOGBOOK NO.

COA

122636ES10

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)

PRESERVATION

None

TYPE OF CONTAINER

aGs*

NO. OF CONTAINER(S)

1

VOLUME

60ml

SPECIAL HANDLING AND/OR STORAGE

SAMPLE ANALYSIS

Chromium - Hex
(Hexavalent
Chromium)

SAMPLE NO.

MATRIX*

SAMPLE DATE SAMPLE TIME

B1PYM6
W076R0290S

WATER

11/12/07 1327 ✓

026004

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

** WSCF will be performing the quick turn, field method for Hex Chrome.

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

D. Parsha Dwyer

11/12/07 1500

MO 745 Ref #1

11/12/07 1500

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

MO 745 Ref #1

11/13/07 0700

D. Parsha Dwyer

11/13/07 0700

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

D. Parsha Dwyer

11/12/07 0855

TA & RAZIA Jones, Jg - 11/13/07 0855

11/13/07 0855

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

Temp 18.8
Cond. 0.675 mS
ph 7.36
Do 8.28 mg/L
Turb. 1.48 ntu

ICED

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LABORATORY SECTION

RECEIVED BY

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

COLLECTOR
 NCO Sampler
SAMPLING LOCATION
 C5938
ICE CHEST NO.
 73.5' pump Intake
COMPANY CONTACT
 TRENT, SJ
PROJECT DESIGNATION
 100-KR-4 Pump & Treat Expansion - Water
FIELD LOGBOOK NO.
 N/A
OFFSITE PROPERTY NO.
 N/A
TELEPHONE NO.
 373-5869
PROJECT COORDINATOR
 TRENT, SJ
SAF NO.
 F08-002
METHOD OF SHIPMENT
 GOVERNMENT VEHICLE
BILL OF LADING/AIR BILL NO.
 N/A
PRICE CODE 1A
AIR QUALITY
 24 Hours / 15 Days
SHIPPED TO
 Waste Sampling & Characterization
MATRIX*
 A=Air
 DL=Drum
 Liquids
 DS=Drum
 Solids
 L=Liquid
 O=Oil
 S=Soil
 SE=Sediment
 T=Tissue
 V=Vegetation
 W=Water
 W1=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)
PRESERVATION None
TYPE OF CONTAINER aGs*
NO. OF CONTAINER(S) 1
VOLUME 60mL
SAMPLE ANALYSIS Chromium - Hex (Hexavalent Chromium)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1PYM7 2906	WATER	11/13/07	0820

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	SIGN/ PRINT NAMES	DATE/TIME
D. Parthen Dany	11/13/07	TA FRAZIER	11/13/07
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** WSCF will be performing the quick turn, field method for Hex Chrome.

Temp 18.4°C
 Turb. 3.38 ntu
 Ph 7.52
 Cond. 0.675 mS
 DO 8.68 mg/L

ICED

16 of 16

LABORATORY SECTION

RECEIVED BY

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME