

RECEIVED AUGUST 18, 2008

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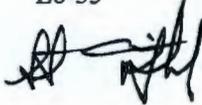
Fluor Hanford
WSCF Analytical Lab
P.O. Box 1000
Richland, WA 99352
Telephone 373-7495
Telefax 372-0456

FLUOR

Memorandum

M4W41-SLF-08-839

To: H. Hampt E6-35 Date: August 18, 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 WSCF20081734

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 WSCF20081734:

- 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#: WSCF20081734
Data Deliverable Date: 14-aug-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
I08-051	B1WCY8	W08P003924	WATER
	B1WD00	W08P003925	WATER
	B1WD02	W08P003926	WATER
	B1WD07	W08P003927	WATER
	B1WD09	W08P003928	WATER
	B1WD10	W08P003933	WATER
	B1WD11	W08P003934	WATER
	B1WD14	W08P003935	WATER
	B1WD16	W08P003936	WATER
	B1WD54	W08P003937	WATER
	B1WD55	W08P003938	WATER
	B1WD85	W08P003941	WATER
	B1WD91	W08P003942	WATER
	B1WD93	W08P003943	WATER
	B1WD97	W08P003944	WATER
	B1WD99	W08P003945	WATER
	B1WDB1	W08P003946	WATER
	B1WDB3	W08P003947	WATER
	B1WDB5	W08P003948	WATER
	B1WDB7	W08P003949	WATER
	B1WDB9	W08P003950	WATER
	B1WDC8	W08P003929	WATER
	B1WDC9	W08P003930	WATER
	B1WDD0	W08P003931	WATER
	B1WDD1	W08P003932	WATER
	I08-055	B1FW9	W08P003940
B1WFX2		W08P003939	WATER

M4W41-SLF-08-839

ATTACHMENT 2

NARRATIVE

Consisting of 2 pages
Including cover page

Introduction

Twenty-seven (27) groundwater samples were received at the WSCF Laboratory on August 13, 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

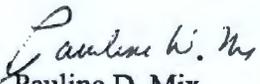
Hexavalent Chromium – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See page 37 for QC details. Analytical note(s):

- Sample results were D flagged if dilution(s) were required.
- Matrix Spike (BIWCY8) recovery was less than established laboratory limits due to high sample concentration. Sample concentration was significantly greater than the spike concentration. No flags issued.

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


Pauline D. Mix
WSCF Client Services

M4W41-SLF-08-839

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 32 pages
Including cover page

**WSCF
ANALYTICAL RESULTS REPORT**

for

**GPAP
Richland, WA 99352**

Attention: Steve Trent E6-35

Analytical:

S. Fitzgerald 8/18/08

Client Services:

P.D. Mix 8/15/2008

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#: WSCF20081734
Report Date: 15-aug-2008
Report WGPP/ver. 5.2
GPAP

W13q Worklist/Batch/QC Report for Group# WSCF20081734

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
37579	2	38019	42365	BLANK		Hexavalent chromium
37579	15	38019	42365	BLANK		Hexavalent chromium
37579	27	38019	42365	BLANK		Hexavalent chromium
37579	40	38019	42365	BLANK		Hexavalent chromium
37579	47	38019	42365	BLANK		Hexavalent chromium
37579	3	38019	42365	LCS		Hexavalent chromium
37579	5	38019	42365	DUP	W08P003924	Hexavalent chromium
37579	6	38019	42365	MS	W08P003924	Hexavalent chromium
37579	4	38019	42365	SAMPLE	W08P003924	Hexavalent chromium
37579	7	38019	42365	SAMPLE	W08P003925	Hexavalent chromium
37579	8	38019	42365	SAMPLE	W08P003926	Hexavalent chromium
37579	9	38019	42365	SAMPLE	W08P003927	Hexavalent chromium
37579	10	38019	42365	SAMPLE	W08P003928	Hexavalent chromium
37579	11	38019	42365	SAMPLE	W08P003929	Hexavalent chromium
37579	12	38019	42365	SAMPLE	W08P003930	Hexavalent chromium
37579	13	38019	42365	SAMPLE	W08P003931	Hexavalent chromium
37579	14	38019	42365	SAMPLE	W08P003932	Hexavalent chromium
37579	16	38019	42365	SAMPLE	W08P003933	Hexavalent chromium
37579	17	38019	42365	SAMPLE	W08P003934	Hexavalent chromium
37579	18	38019	42365	SAMPLE	W08P003935	Hexavalent chromium
37579	19	38019	42365	SAMPLE	W08P003936	Hexavalent chromium
37579	20	38019	42365	SAMPLE	W08P003937	Hexavalent chromium
37579	21	38019	42365	SAMPLE	W08P003938	Hexavalent chromium
37579	23	38019	42365	SAMPLE	W08P003939	Hexavalent chromium
37579	24	38019	42365	SAMPLE	W08P003940	Hexavalent chromium
37579	25	38019	42365	SAMPLE	W08P003941	Hexavalent chromium
37579	26	38019	42365	SAMPLE	W08P003942	Hexavalent chromium
37579	28	38019	42365	SAMPLE	W08P003943	Hexavalent chromium
37579	30	38019	42365	DUP	W08P003944	Hexavalent chromium
37579	31	38019	42365	MS	W08P003944	Hexavalent chromium
37579	29	38019	42365	SAMPLE	W08P003944	Hexavalent chromium
37579	32	38019	42365	SAMPLE	W08P003945	Hexavalent chromium
37579	33	38019	42365	SAMPLE	W08P003946	Hexavalent chromium
37579	34	38019	42365	SAMPLE	W08P003947	Hexavalent chromium
37579	35	38019	42365	SAMPLE	W08P003948	Hexavalent chromium
37579	36	38019	42365	SAMPLE	W08P003949	Hexavalent chromium
37579	37	38019	42365	SAMPLE	W08P003950	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: 15-aug-2008

Report#: WSCF20081734

Report WGPPM/5.2

Page 1

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003924
Client ID: B1WCY8

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.396	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

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: I08-051
Sample # W08P003925
Client ID: B1WD00

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

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		0.0906	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

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: I08-051
Sample # W08P003926
Client ID: B1WD02

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium	18540-29-9	LA-265-403	D	5.76	mg/L			20.00	0.040		08/13/08

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

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Report WGPP/ver. 5.2

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D - Analyte was identified at a secondary dilution factor(inorg)

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

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003927
Client ID: B1WD07

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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	D	0.746	mg/L			10.00	0.020		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(Inorg)

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

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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Report WGPP/ver. 5.2

GPAP

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003928
Client ID: B1WD09

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium	18540-29-9	LA-265-403	D	1.14	mg/L			10.00	0.020		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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Report WGPP/ver. 5.2

GPAP

14 of 67

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003929
Client ID: B1WDC8

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.0308	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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Report WGPP/ver. 5.2

GPAP

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003930
Client ID: B1WDC9

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.0515	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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Report WGPP/ver. 5.2

GPAP

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003931
Client ID: B1WDD0

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.0533	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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Report WGPP/ver. 5.2

GPAP

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003932
Client ID: B1WDD1

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium	18540-29-9	LA-265-403		0.0101	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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Report WGPP/ver. 5.2

GPAP

D - Analyte was identified at a secondary dilution factor(inorg)

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003934
Client ID: B1WD11

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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	U	< 2.00e-03	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

RQ=Result Qualifier

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DF=Dilution Factor

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Report WGPP/ver. 5.2

GPAP

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003935
Client ID: B1WD14

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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	U	< 2.00e-03	mg/L			1.00	2.0e-03		08/13/08

MDL = Minimum Detection Limit

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Report WGPP/ver. 5.2

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003936
Client ID: B1WD16

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.0569	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

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Report WGPP/ver. 5.2

GPAP

D - Analyte was identified at a secondary dilution factor(inorg)

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003937
Client ID: B1WD54

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.0153	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

RQ=Result Qualifier

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DF=Dilution Factor

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GPAP

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003938
Client ID: B1WD55

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.0148	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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Report WGPP/ver. 5.2

GPAP

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-055
Sample # W08P003939
Client ID: B1WFX2

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.311	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

D - Analyte was identified at a secondary dilution factor(inorg)

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

* - 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: I08-055
Sample # W08P003940
Client ID: B1WFW9

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium	18540-29-9	LA-265-403		0.0173	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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Report WGPP/ver. 5.2

GPAP

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-051
Sample # W08P003941
Client ID: B1WD85

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.0181	mg/L			1.00	2.0e-03		08/13/08

MDL = Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

RQ = Result Qualifier

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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: I08-051
Sample # W08P003942
Client ID: B1WD91

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.0244	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

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: I08-051
Sample # W08P003943
Client ID: B1WD93

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.0212	mg/L			1.00	2.0e-03		08/13/08

MDL = Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

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: I08-051
Sample # W08P003944
Client ID: B1WD97

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.0200	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

D - Analyte was identified at a secondary dilution factor(inorg)

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

* - 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: I08-051
Sample # W08P003945
Client ID: B1WD99

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		0.0187	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

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: I08-051
Sample # W08P003946
Client ID: B1WDB1

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium	18540-29-9	LA-265-403		0.0225	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

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: I08-051
Sample # W08P003947
Client ID: B1WDB3

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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	U	< 2.00e-03	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(Inorg)

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

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: I08-051
Sample # W08P003949
Client ID: B1WDB7

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium	18540-29-9	LA-265-403		0.0121	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

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: I08-051
Sample # W08P003950
Client ID: B1WDB9

Group #: WSCF20081734
Department: Inorganic
Sampled: 08/13/08
Received: 08/13/08

TRENT

Matrix: WATER

WSCF

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		2.50e-03	mg/L			1.00	2.0e-03		08/13/08

MDL=Minimum Detection Limit

D - Analyte was identified at a secondary dilution factor(inorg)

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

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: WSCF20081734
 Matrix: WATER
 Test: Hexavalent chromium

Sample Date: 08/13/08
 Receive Date: 08/13/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P003924											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Hexavalent chromium	18540-29-9	0.3903		RPD			1.323	15.000		08/13/08
MS	Hexavalent chromium	18540-29-9	0.0013	3.250	% Recov	85.000	115.000				08/13/08
Lab ID: W08P003944											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Hexavalent chromium	18540-29-9	0.0199		RPD			0.501	15.000		08/13/08
MS	Hexavalent chromium	18540-29-9	0.0403	100.750	% Recov	85.000	115.000				08/13/08
BATCH QC											
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	08/13/08
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	08/13/08
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	08/13/08
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	08/13/08
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	08/13/08
LCS	Hexavalent chromium	18540-29-9	0.0513	102.600	% Recov	80.000	120.000				08/13/08

M4W41-SLF-08-839

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 30 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
8/14/08

ACKNOWLEDGMENT OF SAMPLES RECEIVED

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081734

The following samples were received from you on 08/13/08. 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
W08P003924	B1WCY8	CR+6	TRENT Water	08/13/08
W08P003925	B1WD00	CR+6	TRENT Water	08/13/08
W08P003926	B1WD02	CR+6	TRENT Water	08/13/08
W08P003927	B1WD07	CR+6	TRENT Water	08/13/08
W08P003928	B1WD09	CR+6	TRENT Water	08/13/08
W08P003929	B1WDC8	CR+6	TRENT Water	08/13/08
W08P003930	B1WDC9	CR+6	TRENT Water	08/13/08
W08P003931	B1WDD0	CR+6	TRENT Water	08/13/08
W08P003932	B1WDD1	CR+6	TRENT Water	08/13/08
W08P003933	B1WD10	CR+6	TRENT Water	08/13/08
W08P003934	B1WD11	CR+6	TRENT Water	08/13/08
W08P003935	B1WD14	CR+6	TRENT Water	08/13/08
W08P003936	B1WD16	CR+6	TRENT Water	08/13/08
W08P003937	B1WD54	CR+6	TRENT Water	08/13/08
W08P003938	B1WD55	CR+6	TRENT Water	08/13/08

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081734

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W08P003939	B1WFX2	CR+6	TRENT Water	08/13/08
W08P003940	B1WFW9	CR+6	TRENT Water	08/13/08
W08P003941	B1WD85	CR+6	TRENT Water	08/13/08
W08P003942	B1WD91	CR+6	TRENT Water	08/13/08
W08P003943	B1WD93	CR+6	TRENT Water	08/13/08
W08P003944	B1WD97	CR+6	TRENT Water	08/13/08
W08P003945	B1WD99	CR+6	TRENT Water	08/13/08
W08P003946	B1WDB1	CR+6	TRENT Water	08/13/08
W08P003947	B1WDB3	CR+6	TRENT Water	08/13/08
W08P003948	B1WDB5	CR+6	TRENT Water	08/13/08
W08P003949	B1WDB7	CR+6	TRENT Water	08/13/08
W08P003950	B1WDB9	CR+6	TRENT Water	08/13/08

Test Acronym Description

Test Acronym	Description
CR+6	Hexavalent chromium

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

U.C.C. #
108-051-44
 Page 1 of 1

Collector R.D. Julian	Contact/Requester Steve Trent	Telephone No. 509-373-5869	MSIN FAX
SAF No. 108-051	Sampling Origin Hanford Site	Purchase Order/Charge Code	
Project Title 100HR31AM(1/2) AUGUST 2008	HNF-N-506-14/61	Ice Chest No. GWS-021	Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.	
Protocol CERCLA	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
 100 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes No

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WD14	WES1003135	W	8/13/08	1220	1x250-mL aG	7196_CR6: Hexavalent Chromium (1)	Cool-4C
							ICED

Relinquished By R. D. Julian	Print <i>R. D. Julian</i>	Sign <i>R. D. Julian</i>	Date/Time AUG 13 2008	1420	Received By TARAZIM JONES	Print <i>TARAZIM JONES</i>	Sign <i>TARAZIM JONES</i>	Date/Time AUG 13 2008	1420	Matrix * S = Soil DS = Drum Solid SF = Sediment DL = Drum Liquid SO = Solid T = Tissue SL = Sludge W1 = 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					

52 of 67

