RECEIVED OCTOBER 31, 2007

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FLUOR

Memorandum

M4W41-SLF-07-796

To: H. Hampt E6-35 Date: October 29, 2007

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

cc: w/Attachments

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

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20071930

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 WSCF20071930:

- 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-07-796

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20071930
Data Deliverable Date: 15-nov-2007
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
I07-066	B1PDX3	W07P002185	WATER
	B1PDX4	W07P002186	WATER
S07-009	B1PFP8	W07P002181	WATER
	B1PFP9	W07P002182	WATER
W07-005	B1N567	W07P002187	WATER

M4W41-SLF-07-796

ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Introduction

Five (5) groundwater samples were received at the WSCF Laboratory on October 3, 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" 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,* pages 11 through 12, for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See pages 19 through 20 for QC details. Analytical Note(s):

- Sample results were D flagged (dilution).
- Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1PXC4 (SDG# 20071761).

All QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were 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 21 through 24 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1PDD1 (SDG# 20071741).
- Sample results were D flagged if dilution(s) were required.

- Chromium, Magnesium, Sodium, Nickel, Vanadium and Zinc contamination detected in the Blank was evaluated and affected sample results were C flagged.

- Calcium, Magnesium and Sodium – In sufficient Spike Concentrations. Sample concentrations were greater than four times the spike concentration. Check standard was analyzed to ensure sample result linearity and acceptability.

All other QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See page 25 for QC details. Analytical Note(s):

- Duplicate was analyzed on sample# B1NXH8 (SDG# 20071740).

All QC controls are within the established limits.

Organic Comments

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See page 27 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

Abbreviations
Hg – mercury
IC – ion chromatography
ICP – inductively coupled plasma
ICP/AES – ICP/atomic emission spectroscopy
ICP/MS – ICP/mass spectrometry
Total U – total uranium
AT/TB – total alpha/total beta
AEA – Alpha Energy Analysis
WTPH-G – Total Hydrocarbons-Gasoline
Am – americium
Cm - curium
Pu – plutonium
Np – neptunium
GEA – gamma energy analysis
H3 – Tritium
Sr – Strontium 89, 90
WTPH-D – Total Hydrocarbons-Diesel
TSS – Total Suspended Solids

M4W41-SLF-07-796

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 21 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

GPAP
Richland, WA 99352

Attention: Steve Trent E6-35

Analytical: S. Fitzgerald 10/29/07

Client Services: P.D. Mix 10/26/2007

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.

Report#: WSCF20071930
Report Date: 26-oct-2007
Report WGPP/ver. 5.2
GPAP

w13qlog v4.2 26-oct-2007 11:07:45

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20071930

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
33588	2	33987	38116	BLANK		Anions by Ion Chromatography
33588	12	33987	38116	BLANK		Anions by Ion Chromatography
33588	3	33987	38116	LCS		Anions by Ion Chromatography
33588	8	33987	38116	SAMPLE	W07P002182	Anions by Ion Chromatography
33588	5	33987	38116	DUP	W07P002184	Anions by Ion Chromatography
33588	6	33987	38116	MS	W07P002184	Anions by Ion Chromatography
33588	7	33987	38116	MSD	W07P002184	Anions by Ion Chromatography
33588	7	33987	38116	SPK-RPD	W07P002184	Anions by Ion Chromatography
33588	9	33987	38116	SAMPLE	W07P002186	Anions by Ion Chromatography
33612	1	34010	38163	LCS		Total Alkalinity as mg/L CaCO3
33612	13	34010	38163	LCS		Total Alkalinity as mg/L CaCO3
33612	25	34010	38163	LCS		Total Alkalinity as mg/L CaCO3
33612	20	34010	38163	DUP	W07GR02534	Total Alkalinity as mg/L CaCO3
33612	3	34010	38163	DUP	W07P002131	Total Alkalinity as mg/L CaCO3
33612	16	34010	38163	SAMPLE	W07P002182	Total Alkalinity as mg/L CaCO3
33612	17	34010	38163	SAMPLE	W07P002187	Total Alkalinity as mg/L CaCO3
33729	1	34129	38406	BLANK		ICP Metals Analysis, Grd H20 P
33729	2	34129	38406	LCS		ICP Metals Analysis, Grd H20 P
33729	4	34129	38406	MS	W07P002157	ICP Metals Analysis, Grd H20 P
33729	5	34129	38406	MSD	W07P002157	ICP Metals Analysis, Grd H20 P
33729	5	34129	38406	SPK-RPD	W07P002157	ICP Metals Analysis, Grd H20 P
33729	8	34129	38406	SAMPLE	W07P002181	ICP Metals Analysis, Grd H20 P
33729	9	34129	38406	SAMPLE	W07P002182	ICP Metals Analysis, Grd H20 P
33729	12	34129	38406	SAMPLE	W07P002185	ICP Metals Analysis, Grd H20 P

w13qlog v4.2 26-oct-2007 11:07:45

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20071930

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			38209	BLANK		NWTPH-D TPH Diesel Range (Wa)
			38209	LCS		NWTPH-D TPH Diesel Range (Wa)
			38209	MS	W07P002182	NWTPH-D TPH Diesel Range (Wa)
			38209	MSD	W07P002182	NWTPH-D TPH Diesel Range (Wa)
			38209	SAMPLE	W07P002182	NWTPH-D TPH Diesel Range (Wa)
			38209	SPK-RPD	W07P002182	NWTPH-D TPH Diesel Range (Wa)
			38209	SURR	W07P002182	NWTPH-D TPH Diesel Range (Wa)

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-505-411	LA-505-411: ELEMENTAL ANALYSIS BY INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPE	
	HEIS 6010_METALS_ICP	Inductively Coupled Plasma-Atomic Emmision Spectrometry
LA-531-411	LA-531-411: ALKALINITY (TITRIMETRIC)	
	HEIS 2320B	Alkalinity
	Standard Methods 2320B	Alkalinity
LA-533-410	LA-533-410: ANION ANALYSIS BY ION CHROMATOGRAPHY	
	EPA-600/R-94-111 300.0	DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY
	HEIS 300.0_ANIONS_IC	Determination of Inorganic Anions by Ion Chromatography

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.

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-523-493 NWTPH-Diesel and/or Gasoline

HEIS WTPH_DIESEL (HEIS)	Total Petroleum Hydrocarbons in Diesel
WDOE TPHD	Total Petroleum Hydrocarbons in Diesel

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.

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S07-009
Sample # W07P002181
Client ID: B1PFP8 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20071930
Department: Inorganic
Sampled: 10/03/07
Received: 10/03/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**10/16/07**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		13.9	ug/L			1.00	9.0		10/17/07
Magnesium	7439-95-4	LA-505-411		1.21e+04	ug/L			1.00	6.0		10/17/07
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07
Nickel	7440-02-0	LA-505-411	C	9.00	ug/L			1.00	4.0		10/17/07
Potassium	7440-09-7	LA-505-411		6.67e+03	ug/L			1.00	45		10/17/07
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		10/17/07
Sodium	7440-23-5	LA-505-411	D	9.99e+04	ug/L			10.00	2.7e+02		10/18/07
Antimony	7440-36-0	LA-505-411	U	< 32.0	ug/L			1.00	32		10/17/07
Barium	7440-39-3	LA-505-411		61.5	ug/L			1.00	4.0		10/17/07
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07
Chromium	7440-47-3	LA-505-411	C	4.10	ug/L			1.00	4.0		10/17/07
Cobalt	7440-48-4	LA-505-411		6.20	ug/L			1.00	4.0		10/17/07
Copper	7440-50-8	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07
Vanadium	7440-62-2	LA-505-411	C	22.0	ug/L			1.00	7.0		10/17/07
Zinc	7440-66-6	LA-505-411	C	6.30	ug/L			1.00	4.0		10/17/07
Calcium	7440-70-2	LA-505-411		5.78e+04	ug/L			1.00	34		10/17/07
Strontium	7440-24-6	LA-505-411		325	ug/L			1.00	4.0		10/17/07
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07

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

C - The Analyte was found in the Associated Blank.(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S07-009
Sample # W07P002182
Client ID: B1PFP9 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20071930
Department: Inorganic
Sampled: 10/03/07
Received: 10/03/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	D	0.238	mg/L			2.00	0.012		10/03/07
Chloride	16887-00-6	LA-533-410	D	54.5	mg/L			10.00	0.30		10/03/07
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0200	mg/L			2.00	0.020		10/03/07
Nitrogen in Nitrate	NO3-N	LA-533-410	D	13.7	mg/L			10.00	0.050		10/03/07
Sulfate	14808-79-8	LA-533-410	D	105	mg/L			10.00	0.70		10/03/07
ICP Metals Analysis, Grd H20 P Prep											**10/16/07**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		38.5	ug/L			1.00	9.0		10/17/07
Magnesium	7439-95-4	LA-505-411		1.21e+04	ug/L			1.00	6.0		10/17/07
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07
Nickel	7440-02-0	LA-505-411	C	11.0	ug/L			1.00	4.0		10/17/07
Potassium	7440-09-7	LA-505-411		6.78e+03	ug/L			1.00	45		10/17/07
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		10/17/07
Sodium	7440-23-5	LA-505-411	D	1.02e+05	ug/L			10.00	2.7e+02		10/18/07
Antimony	7440-36-0	LA-505-411	U	< 32.0	ug/L			1.00	32		10/17/07
Barium	7440-39-3	LA-505-411		61.5	ug/L			1.00	4.0		10/17/07
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07
Chromium	7440-47-3	LA-505-411	C	12.3	ug/L			1.00	4.0		10/17/07
Cobalt	7440-48-4	LA-505-411		5.30	ug/L			1.00	4.0		10/17/07
Copper	7440-50-8	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07
Vanadium	7440-62-2	LA-505-411	C	12.3	ug/L			1.00	7.0		10/17/07
Zinc	7440-66-6	LA-505-411	C	7.60	ug/L			1.00	4.0		10/17/07
Calcium	7440-70-2	LA-505-411		5.84e+04	ug/L			1.00	34		10/17/07
Strontium	7440-24-6	LA-505-411		322	ug/L			1.00	4.0		10/17/07

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

C - The Analyte was found in the Associated Blank.(Inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S07-009
Sample # W07P002182
Client ID: B1PFP9 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20071930
Department: Inorganic
Sampled: 10/03/07
Received: 10/03/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		190	mg/L			1.00	1.0		10/08/07

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I07-066
Sample # W07P002185
Client ID: B1PDX3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20071930
Department: Inorganic
Sampled: 10/03/07
Received: 10/03/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**10/16/07**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		14.8	ug/L			1.00	9.0		10/17/07
Magnesium	7439-95-4	LA-505-411		1.21e+04	ug/L			1.00	6.0		10/17/07
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07
Nickel	7440-02-0	LA-505-411	C	9.10	ug/L			1.00	4.0		10/17/07
Potassium	7440-09-7	LA-505-411		6.47e+03	ug/L			1.00	45		10/17/07
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		10/17/07
Sodium	7440-23-5	LA-505-411	D	1.02e+05	ug/L			10.00	2.7e+02		10/18/07
Antimony	7440-36-0	LA-505-411	U	< 32.0	ug/L			1.00	32		10/17/07
Barium	7440-39-3	LA-505-411		63.0	ug/L			1.00	4.0		10/17/07
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07
Chromium	7440-47-3	LA-505-411	C	10.6	ug/L			1.00	4.0		10/17/07
Cobalt	7440-48-4	LA-505-411		5.70	ug/L			1.00	4.0		10/17/07
Copper	7440-50-8	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07
Vanadium	7440-62-2	LA-505-411	C	13.5	ug/L			1.00	7.0		10/17/07
Zinc	7440-66-6	LA-505-411	C	8.30	ug/L			1.00	4.0		10/17/07
Calcium	7440-70-2	LA-505-411		5.88e+04	ug/L			1.00	34		10/17/07
Strontium	7440-24-6	LA-505-411		328	ug/L			1.00	4.0		10/17/07
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		10/17/07

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: I07-066
Sample # W07P002186
Client ID: B1PDX4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20071930
Department: Inorganic
Sampled: 10/03/07
Received: 10/03/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	D	0.259	mg/L			2.00	0.012		10/03/07
Chloride	16887-00-6	LA-533-410	D	55.5	mg/L			10.00	0.30		10/03/07
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0200	mg/L			2.00	0.020		10/03/07
Nitrogen in Nitrate	NO3-N	LA-533-410	D	14.0	mg/L			10.00	0.050		10/03/07
Sulfate	14808-79-8	LA-533-410	D	106	mg/L			10.00	0.70		10/03/07

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

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W07-005
Sample # W07P002187
Client ID: B1N567 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20071930
Department: Inorganic
Sampled: 10/03/07
Received: 10/03/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		130	mg/L			1.00	1.0		10/08/07

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071930
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 10/03/07
Receive Date: 10/03/07

Lab ID: W07P002184

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
DUP	Chloride	16887-00-6	13.2379		RPD			0.531	20.000		10/03/07
DUP	Fluoride	16984-48-8	0.3413		RPD			0.794	20.000		10/03/07
DUP	Nitrogen in Nitrite	NO2-N	<1e-2		RPD			n/a	20.000	U	10/03/07
DUP	Nitrogen in Nitrate	NO3-N	17.2097		RPD			0.520	20.000		10/03/07
DUP	Sulfate	14808-79-8	50.0271		RPD			0.535	20.000		10/03/07
MS	Chloride	16887-00-6	0.8176	82.586	% Recov	75.000	125.000				10/03/07
MS	Fluoride	16984-48-8	0.5186	103.307	% Recov	75.000	125.000				10/03/07
MS	Nitrogen in Nitrite	NO2-N	0.5263	105.683	% Recov	75.000	125.000				10/03/07
MS	Nitrogen in Nitrate	NO3-N	0.44839	99.421	% Recov	75.000	125.000				10/03/07
MS	Sulfate	14808-79-8	2.00631	101.329	% Recov	75.000	125.000				10/03/07
MSD	Chloride	16887-00-6	0.8502	85.879	% Recov	75.000	125.000				10/03/07
MSD	Fluoride	16984-48-8	0.5325	106.076	% Recov	75.000	125.000				10/03/07
MSD	Nitrogen in Nitrite	NO2-N	0.5131	103.032	% Recov	75.000	125.000				10/03/07
MSD	Nitrogen in Nitrate	NO3-N	0.43855	97.239	% Recov	75.000	125.000				10/03/07
MSD	Sulfate	14808-79-8	1.99024	100.517	% Recov	75.000	125.000				10/03/07
SPK-RPD	Chloride	16887-00-6	85.879		RPD			3.909	20.000		10/03/07
SPK-RPD	Fluoride	16984-48-8	106.076		RPD			2.645	20.000		10/03/07
SPK-RPD	Nitrogen in Nitrite	NO2-N	103.032		RPD			2.540	20.000		10/03/07
SPK-RPD	Nitrogen in Nitrate	NO3-N	97.239		RPD			2.219	20.000		10/03/07
SPK-RPD	Sulfate	14808-79-8	100.517		RPD			0.805	20.000		10/03/07

BATCH QC

BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	10/03/07
BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	10/03/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	10/03/07
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	10/03/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071930
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	10/03/07
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	10/03/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	10/03/07
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	10/03/07
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	10/03/07
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	10/03/07
LCS	Chloride	16887-00-6	199.8188	99.909	% Recov	80.000	120.000				10/03/07
LCS	Fluoride	16984-48-8	106.8554	105.797	% Recov	80.000	120.000				10/03/07
LCS	Nitrogen in Nitrite	NO2-N	100.1402	100.140	% Recov	80.000	120.000				10/03/07
LCS	Nitrogen in Nitrate	NO3-N	92.5993	101.534	% Recov	80.000	120.000				10/03/07
LCS	Sulfate	14808-79-8	398.4276	99.607	% Recov	80.000	120.000				10/03/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071930
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 09/30/07
Receive Date:10/01/07

Lab ID: W07P002157
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Silver	7440-22-4	974	97.400	% Recov	75.000	125.000				10/17/07
MS	Barium	7440-39-3	476.6	95.320	% Recov	75.000	125.000				10/17/07
MS	Beryllium	7440-41-7	495.7	99.140	% Recov	75.000	125.000				10/17/07
MS	Calcium	7440-70-2	NA	n/a	% Recov	75.000	125.000				10/17/07
MS	Cadmium	7440-43-9	977.5	97.750	% Recov	75.000	125.000				10/17/07
MS	Cobalt	7440-48-4	990.5	99.050	% Recov	75.000	125.000				10/17/07
MS	Chromium	7440-47-3	976.4	97.640	% Recov	75.000	125.000				10/17/07
MS	Copper	7440-50-8	947.5	94.750	% Recov	75.000	125.000				10/17/07
MS	Iron	7439-89-6	973.1	97.310	% Recov	75.000	125.000				10/17/07
MS	Potassium	7440-09-7	9713	97.130	% Recov	75.000	125.000				10/17/07
MS	Magnesium	7439-95-4	NA	n/a	% Recov	75.000	125.000				10/17/07
MS	Manganese	7439-96-5	988	98.800	% Recov	75.000	125.000				10/17/07
MS	Sodium	7440-23-5	NA	n/a	% Recov	75.000	125.000				10/17/07
MS	Nickel	7440-02-0	947.9	94.790	% Recov	75.000	125.000				10/17/07
MS	Antimony	7440-36-0	1013	101.300	% Recov	75.000	125.000				10/17/07
MS	Strontium	7440-24-6	480.4	96.080	% Recov	75.000	125.000				10/17/07
MS	Vanadium	7440-62-2	929.3	92.930	% Recov	75.000	125.000				10/17/07
MS	Zinc	7440-66-6	968.7	96.870	% Recov	75.000	125.000				10/17/07
MSD	Silver	7440-22-4	971.6	97.160	% Recov	75.000	125.000				10/17/07
MSD	Barium	7440-39-3	480.8	96.160	% Recov	75.000	125.000				10/17/07
MSD	Beryllium	7440-41-7	498.6	99.720	% Recov	75.000	125.000				10/17/07
MSD	Calcium	7440-70-2	NA	n/a	% Recov	75.000	125.000				10/17/07
MSD	Cadmium	7440-43-9	987.2	98.720	% Recov	75.000	125.000				10/17/07
MSD	Cobalt	7440-48-4	991.5	99.150	% Recov	75.000	125.000				10/17/07
MSD	Chromium	7440-47-3	978.1	97.810	% Recov	75.000	125.000				10/17/07
MSD	Copper	7440-50-8	961	96.100	% Recov	75.000	125.000				10/17/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071930
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 09/30/07
Receive Date:10/01/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Iron	7439-89-6	979	97.900	% Recov	75.000	125.000				10/17/07
MSD	Potassium	7440-09-7	9963	99.630	% Recov	75.000	125.000				10/17/07
MSD	Magnesium	7439-95-4	NA	n/a	% Recov	75.000	125.000				10/17/07
MSD	Manganese	7439-96-5	987	98.700	% Recov	75.000	125.000				10/17/07
MSD	Sodium	7440-23-5	NA	n/a	% Recov	75.000	125.000				10/17/07
MSD	Nickel	7440-02-0	944.9	94.490	% Recov	75.000	125.000				10/17/07
MSD	Antimony	7440-36-0	987.9	98.790	% Recov	75.000	125.000				10/17/07
MSD	Strontium	7440-24-6	482.8	96.560	% Recov	75.000	125.000				10/17/07
MSD	Vanadium	7440-62-2	939.7	93.970	% Recov	75.000	125.000				10/17/07
MSD	Zinc	7440-66-6	981.9	98.190	% Recov	75.000	125.000				10/17/07
SPK-RPD	Silver	7440-22-4	97.160		RPD			0.247	20.000		10/17/07
SPK-RPD	Barium	7440-39-3	96.160		RPD			0.877	20.000		10/17/07
SPK-RPD	Beryllium	7440-41-7	99.720		RPD			0.583	20.000		10/17/07
SPK-RPD	Calcium	7440-70-2			RPD			n/a	20.000		10/17/07
SPK-RPD	Cadmium	7440-43-9	98.720		RPD			0.987	20.000		10/17/07
SPK-RPD	Cobalt	7440-48-4	99.150		RPD			0.101	20.000		10/17/07
SPK-RPD	Chromium	7440-47-3	97.810		RPD			0.174	20.000		10/17/07
SPK-RPD	Copper	7440-50-8	96.100		RPD			1.415	20.000		10/17/07
SPK-RPD	Iron	7439-89-6	97.900		RPD			0.604	20.000		10/17/07
SPK-RPD	Potassium	7440-09-7	99.630		RPD			2.541	20.000		10/17/07
SPK-RPD	Magnesium	7439-95-4			RPD			n/a	20.000		10/17/07
SPK-RPD	Manganese	7439-96-5	98.700		RPD			0.101	20.000		10/17/07
SPK-RPD	Sodium	7440-23-5			RPD			n/a	20.000		10/17/07
SPK-RPD	Nickel	7440-02-0	94.490		RPD			0.317	20.000		10/17/07
SPK-RPD	Antimony	7440-36-0	98.790		RPD			2.509	20.000		10/17/07
SPK-RPD	Strontium	7440-24-6	96.560		RPD			0.498	20.000		10/17/07
SPK-RPD	Vanadium	7440-62-2	93.970		RPD			1.113	20.000		10/17/07
SPK-RPD	Zinc	7440-66-6	98.190		RPD			1.353	20.000		10/17/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071930
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date:
Receive Date:

BATCH QC

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Silver	7440-22-4	<5	n/a	ug/L					U	10/17/07
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	10/17/07
BLANK	Beryllium	7440-41-7	<4	n/a	ug/L					U	10/17/07
BLANK	Calcium	7440-70-2	<34	n/a	ug/L					U	10/17/07
BLANK	Cadmium	7440-43-9	<4	n/a	ug/L					U	10/17/07
BLANK	Cobalt	7440-48-4	<4	n/a	ug/L					U	10/17/07
BLANK	Chromium	7440-47-3	4.5	4.500	ug/L						10/17/07
BLANK	Copper	7440-50-8	<4	n/a	ug/L					U	10/17/07
BLANK	Iron	7439-89-6	<9	n/a	ug/L					U	10/17/07
BLANK	Potassium	7440-09-7	<45	n/a	ug/L					U	10/17/07
BLANK	Magnesium	7439-95-4	7.6	7.600	ug/L						10/17/07
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	10/17/07
BLANK	Sodium	7440-23-5	29.7	29.700	ug/L						10/17/07
BLANK	Nickel	7440-02-0	5.1	5.100	ug/L						10/17/07
BLANK	Antimony	7440-36-0	<32	n/a	ug/L					U	10/17/07
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	10/17/07
BLANK	Vanadium	7440-62-2	13.3	13.300	ug/L						10/17/07
BLANK	Zinc	7440-66-6	8.4	8.400	ug/L						10/17/07
LCS	Silver	7440-22-4	1006	100.600	% Recov	80.000	120.000				10/17/07
LCS	Barium	7440-39-3	493.8	98.760	% Recov	80.000	120.000				10/17/07
LCS	Beryllium	7440-41-7	521	104.200	% Recov	80.000	120.000				10/17/07
LCS	Calcium	7440-70-2	1092	109.200	% Recov	80.000	120.000				10/17/07
LCS	Cadmium	7440-43-9	1023	102.300	% Recov	80.000	120.000				10/17/07
LCS	Cobalt	7440-48-4	1042	104.200	% Recov	80.000	120.000				10/17/07
LCS	Chromium	7440-47-3	1027	102.700	% Recov	80.000	120.000				10/17/07
LCS	Copper	7440-50-8	1004	100.400	% Recov	80.000	120.000				10/17/07
LCS	Iron	7439-89-6	1011	101.100	% Recov	80.000	120.000				10/17/07
LCS	Potassium	7440-09-7	9936	99.360	% Recov	80.000	120.000				10/17/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20071930
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	Magnesium	7439-95-4	995.3	99.530	% Recov	80.000	120.000				10/17/07
LCS	Manganese	7439-96-5	1024	102.400	% Recov	80.000	120.000				10/17/07
LCS	Sodium	7440-23-5	1011	101.100	% Recov	80.000	120.000				10/17/07
LCS	Nickel	7440-02-0	1011	101.100	% Recov	80.000	120.000				10/17/07
LCS	Antimony	7440-36-0	1017	101.700	% Recov	80.000	120.000				10/17/07
LCS	Strontium	7440-24-6	488.3	97.660	% Recov	80.000	120.000				10/17/07
LCS	Vanadium	7440-62-2	997.3	99.730	% Recov	80.000	120.000				10/17/07
LCS	Zinc	7440-66-6	1010	101.000	% Recov	80.000	120.000				10/17/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20071930
Matrix: WATER
Test: Total Alkalinity as mg/L CaCO3

Sample Date: 10/01/07
Receive Date:10/01/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W07GR02534											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	110.9		RPD			6.626	20.000		10/08/07
Lab ID: W07P002131											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	125.7		RPD			3.363	20.000		10/08/07
BATCH QC											
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	122.3	106.348	%Recove	80.000	120.000				10/08/07
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	123.0	106.957	%Recove	80.000	120.000				10/08/07
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	122.2	106.261	%Recove	80.000	120.000				10/08/07

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S07-009
Sample # W07P002182
Client ID: B1PFP9 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20071930
Department: Organic
Sampled: 10/03/07
Received: 10/03/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
NWTPH-D TPH Diesel Range (Wa) Prep											**10/09/07**
NWTPH-D TPH Diesel Range (Wa)											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 71.0	ug/L			1.00	71		10/10/07
Kerosene	TPHKEROSENE	LA-523-493	U	< 71.0	ug/L			1.00	71		10/10/07

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

C - The Analyte was found in the Associated Blank.(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20071930
Matrix: WATER
Test: NWTPH-D TPH Diesel Range (Wa)

Sample Date: 10/03/07
Receive Date:10/03/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W07P002182											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	ortho-Terphenyl Surr	84-15-1	508.20	107.000	% Recov	70.000	130.000				10/10/07
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2559.0	107.000	% Recov	75.000	125.000				10/10/07
MSD	ortho-Terphenyl Surr	84-15-1	500.12	105.000	% Recov	70.000	130.000				10/10/07
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2515.8	106.000	% Recov	75.000	125.000				10/10/07
SPK-RPD	ortho-Terphenyl Surr	84-15-1	105.000		RPD			1.887	20.000		10/10/07
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	106.000		RPD			0.939	20.000		10/10/07
SURR	ortho-Terphenyl Surr	84-15-1	412.44	86.600	% Recov	70.000	130.000				10/10/07
BATCH QC											
BLANK	Kerosene	TPHKEROSENE	< 75	n/a	ug/L					U	10/10/07
BLANK	ortho-Terphenyl Surr	84-15-1	493.62	98.700	% Recov	70.000	130.000				10/10/07
BLANK	Total Pet. Hydrocarbons Diesel	TPHDIESEL	< 75	n/a	ug/L					U	10/10/07
LCS	ortho-Terphenyl Surr	84-15-1	469.41	93.900	% Recov	70.000	130.000				10/10/07
LCS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2284.0	91.400	% Recov	80.000	120.000				10/10/07

M4W41-SLF-07-796

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 5 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
11/15/07
tf
Moved from
20071761

ACKNOWLEDGMENT OF SAMPLES RECEIVED

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20071930

The following samples were received from you on 10/03/07. 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
W07P002181	B1PFP8	PNNL-GPP @GPP6010	Water	10/03/0
W07P002182	B1PFP9	PNNL-GPP @GPP6010 @IC-30 @TPHD-WA ALKALI	Water	10/03/0
W07P002185	B1PDX3	PNNL-GPP @GPP6010	Water	10/03/0
W07P002186	B1PDX4	PNNL-GPP @IC-30	Water	10/03/0
W07P002187	B1N567	PNNL-GPP ALKALI	Water	10/03/0

Test Acronym Description

Test Acronym	Description
@GPP6010	ICP Metals Analysis, Grd H20 P
@IC-30	Anions by Ion Chromatography
@TPHD-WA	NWTPH-D TPH Diesel Range (Wa)
ALKALI	Total Alkalinity as mg/L CaCO3

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

11/15/07 ~~20071761~~ 20071930

C.O.C. # S07-009-48

Page 1 of 1

Collector Steve Overdahl Fluor Hanford	Contact/Requester Steve Trent 10/26/07	Telephone No. 509-373-5869 MSIN FAX
SAF No. S07-009	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title SURV, SEPTEMBER 2007	HNF-N-506-5	Ice Chest No. GW-1 Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	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 Total Activity Exemption: Yes ☑ No ☐

All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.

WSCF: Batch all GW samples submitted into one SDG, daily closure.

All SDG?s are to be sent to Steve Trent, FH

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1PFP8 (F) W07P002181		W	10-3-07	1934	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1PFP9	2182	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1PFP9	↓	W	↓	↓	3x1000-mL aG	TPH-Diesel Range - WTPH-D	HCl to pH <2 Cool~4C
B1PFP9	↓	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1PFP9	↓	W	↓	↓	1x500-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C

ICED
Initial
Date

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Steve Overdahl Fluor Hanford	[signature]		OCT 03 2007 1355	TAFRAZIER	[signature]		OCT 03 2007 1355
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I07-066-37

Collector: Steve Overdahl, Fluor Hanford	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: I07-066	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 100NR2IAM-LOI SEPTEMBER 2007	HNF-N-506-5	Ice Chest No.: GW-1 Temp.
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: CERCLA	Priority: 45 Days	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** Total Activity Exemption: Yes ☑ No ☐
All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.
WSCF: Batch all GW samples submitted into one SDG, daily closure.
All SDG?s are to be sent to Steve Trent, FH

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1PDX3 (F)	2185	W	10-3-07	0934	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1PDX4	2186	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C

ICED Initial Date

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Steve Overdahl, Fluor Hanford	OCT 03 2007 1355	TA Frazier	OCT 03 2007 1355
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PNNL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **W07-005-368**

Page 1 of 1

Collector: Steve Overdahl, Fluor Hanford	Contact/Requester: Dot Stewart	Telephone No.: 509-376-5056 MSIN FAX
SAF No.: W07-005	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: RCRA, MAY 2007	HNF-N-506-5	Ice Chest No.: GW-1 Temp.
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: RCRA	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
All Labs except WSCF: Batch all samples submitted under A, G, I, S, and W 07 SAFs into one SDG, not to exceed SDG closure of 14 days.
WSCF: Batch all GW samples submitted into one SDG, daily closure.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1N567	2187	W	10.3.07	1040	1x500-mL G/P	310.1_ALKALINITY: Alkalinity (1)	Cool 4C

ICED
Initial
Date

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Steve Overdahl, Fluor Hanford	[signature]		OCT 03 2007 1355	TA Bularim	[signature]		OCT 03 2007 1355
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solid
SE	= Sediment	DL	= Drum Liqui
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wine
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time