079777

RECEIVED JULY 7, 2008

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

Memorandum

M4W41-SLF-08-671

To:	H. Hampt	E6-35	Date:	July 7, 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 WSCF20081093

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 WSCF20081093:

- 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#: WSCF20081093
Data Deliverable Date: 10-jul-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
G08-005	B1V599	W08P002638	WATER
I08-039	B1V6V5	W08P002629	WATER
S08-005	B1V7K2	W08P002639	WATER

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ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Introduction

Three groundwater samples were received at the WSCF Laboratory on May 29, 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 4) 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 5. Additionally, a copy of a sample record sheet is included as Attachment 6.

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,* 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 14 through 15 for QC details. Analytical Note(s):

- Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V9P4 (SDG# 20081079).
- Sample results were D flagged if dilution(s) were required.
- Sample results that were less than the reportable limit, however greater than the method detection limit were B flagged.

All QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – There are no hold times associated with WSCF's radiochemical methods. A Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 18 through 19 for QC details. Analytical Note(s):

- Gross Alpha – Duplicate QC was analyzed on sample# B1TH60 (SDG# 20081067).

- Gross Beta – Duplicates were analyzed on samples B1TH60 (SDG# 20081067) and B1V599 of this SDG. Blank result slightly exceeded established laboratory limits. 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-08-671

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 14 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

GPAP
Richland, WA 99352

Attention: Steve Trent E6-35

Analytical: S. Fitzgerald 7/3/08

Client Services: P. D. Mix 7/3/2008

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#: WSCF20081093
Report Date: 3-jul-2008
Report WGPP/ver. 5.2
GPAP

w13qlog v4.2 03-jul-2008 14:05:18

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20081093

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36505	2	36919	41261	BLANK		Anions by Ion Chromatography
36505	11	36919	41261	BLANK		Anions by Ion Chromatography
36505	3	36919	41261	LCS		Anions by Ion Chromatography
36505	5	36919	41261	DUP	W08P002617	Anions by Ion Chromatography
36505	6	36919	41261	MS	W08P002617	Anions by Ion Chromatography
36505	7	36919	41261	MSD	W08P002617	Anions by Ion Chromatography
36505	7	36919	41261	SPK-RPD	W08P002617	Anions by Ion Chromatography
36505	10	36919	41261	SAMPLE	W08P002629	Anions by Ion Chromatography

w13qlog v4.2 03-jul-2008 14:05:18

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20081093

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36629	1	37046	41392	BLANK		Gross Alpha on Alpha Plateau
36629	2	37046	41392	LCS		Gross Alpha on Alpha Plateau
36629	3	37046	41392	DUP	W08P002581	Gross Alpha on Alpha Plateau
36629	5	37046	41392	SAMPLE	W08P002639	Gross Alpha on Alpha Plateau
36598	1	37015	41446	BLANK		Gross Alpha/Gross Beta (AB32)
36598	2	37015	41446	LCS		Gross Alpha/Gross Beta (AB32)
36598	3	37015	41446	DUP	W08P002638	Gross Alpha/Gross Beta (AB32)
36598	4	37015	41446	SAMPLE	W08P002638	Gross Alpha/Gross Beta (AB32)
36599	1	37016	41458	BLANK		Gross Alpha/Gross Beta (AB32)
36599	2	37016	41458	LCS		Gross Alpha/Gross Beta (AB32)
36599	3	37016	41458	DUP	W08P002581	Gross Alpha/Gross Beta (AB32)
36599	5	37016	41458	SAMPLE	W08P002639	Gross Alpha/Gross Beta (AB32)

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-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: Radiochemistry

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-508-415 LA-508-415: OPERATION OF THE PROTEAN 2-INCH ALPHA/BETA COUNTING SYSTEM FOR GROSS

HEIS	**ALPHA_GPC**	GROSS ALPHA GPC
HEIS	**BETA_GPC**	GROSS BETA GPC
HEIS	**SRTOT_SEP_PRECIP_GPC**	Strontium 89/90

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: I08-039
Sample # W08P002629
Client ID: B1V6V5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081093
Department: Inorganic
Sampled: 05/29/08
Received: 05/29/08

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	BD	0.0686	mg/L			2.00	0.042		05/29/08
Chloride	16887-00-6	LA-533-410	D	17.3	mg/L			2.00	0.22		05/29/08
Nitrogen in Nitrite	NO2-N	LA-533-410	D	1.65	mg/L			2.00	0.020		05/29/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	7.47	mg/L			2.00	0.072		05/29/08
Sulfate	14808-79-8	LA-533-410	D	89.9	mg/L			2.00	0.15		05/29/08

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

B - The analyte < the RDL but > = the IDL/MDL (inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081093
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 05/28/08
Receive Date:05/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002617											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	9.375		RPD			1.165	20.000		05/29/08
DUP	Fluoride	16984-48-8	0.4776		RPD			9.681	20.000		05/29/08
DUP	Nitrogen in Nitrite	NO2-N	<1.98e-2		RPD			n/a	20.000	U	05/29/08
DUP	Nitrogen in Nitrate	NO3-N	<7.2e-2		RPD			n/a	20.000	U	05/29/08
DUP	Sulfate	14808-79-8	88.1789		RPD			1.622	20.000		05/29/08
MS	Chloride	16887-00-6	0.98818	99.315	% Recov	80.000	120.000				05/29/08
MS	Fluoride	16984-48-8	0.4909	99.574	% Recov	80.000	120.000				05/29/08
MS	Nitrogen in Nitrite	NO2-N	0.4406	89.553	% Recov	80.000	120.000				05/29/08
MS	Nitrogen in Nitrate	NO3-N	0.46705	104.720	% Recov	80.000	120.000				05/29/08
MS	Sulfate	14808-79-8	2.06322	105.266	% Recov	80.000	120.000				05/29/08
MSD	Chloride	16887-00-6	1.00958	101.465	% Recov	80.000	120.000				05/29/08
MSD	Fluoride	16984-48-8	0.49215	99.828	% Recov	80.000	120.000				05/29/08
MSD	Nitrogen in Nitrite	NO2-N	0.4406	89.553	% Recov	80.000	120.000				05/29/08
MSD	Nitrogen in Nitrate	NO3-N	0.4648	104.215	% Recov	80.000	120.000				05/29/08
MSD	Sulfate	14808-79-8	2.1447	109.423	% Recov	80.000	120.000				05/29/08
SPK-RPD	Chloride	16887-00-6	101.465		RPD			2.142	20.000		05/29/08
SPK-RPD	Fluoride	16984-48-8	99.828		RPD			0.255	20.000		05/29/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	89.553		RPD			0.000	20.000		05/29/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	104.215		RPD			0.483	20.000		05/29/08
SPK-RPD	Sulfate	14808-79-8	109.423		RPD			3.873	20.000		05/29/08
BATCH QC											
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	05/29/08
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	05/29/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	05/29/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	05/29/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081093
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	<9.9e-3	n/a	mg/L	0.000	0.020			U	05/29/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	05/29/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	05/29/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	05/29/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	05/29/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	05/29/08
LCS	Chloride	16887-00-6	194.3569	96.695	% Recov	80.000	120.000				05/29/08
LCS	Fluoride	16984-48-8	105.8713	106.296	% Recov	80.000	120.000				05/29/08
LCS	Nitrogen in Nitrite	NO2-N	101.7179	102.332	% Recov	80.000	120.000				05/29/08
LCS	Nitrogen in Nitrate	NO3-N	94.7535	105.165	% Recov	80.000	120.000				05/29/08
LCS	Sulfate	14808-79-8	391.383	98.834	% Recov	80.000	120.000				05/29/08

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: G08-005
Sample # W08P002638
Client ID: B1V599 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081093
Department: Radiochemistry
Sampled: 05/28/08
Received: 05/29/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		2.20e+03	pCi/L	+-220	pCi/L	1.00	3.3		06/06/08

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

B - The analyte < the RDL but > = the IDL/MDL (inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-005
Sample # W08P002639
Client ID: B1V7K2 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081093
Department: Radiochemistry
Sampled: 05/28/08
Received: 05/29/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha on Alpha Plateau											
Gross alpha on alpha plateau	12587-46-1	LA-508-415	U	1.50	pCi/L	+-1.24	pCi/L	1.00	1.9		06/09/08
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		8.70	pCi/L	+-2.78	pCi/L	1.00	3.8		06/06/08

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

B - The analyte < the RDL but > = the IDL/MDL (inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081093
Matrix: WATER
Test: Gross Alpha on Alpha Plateau

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002581											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross alpha on alpha plateau	12587-46-1	2.5		RPD			n/a	20.000		06/09/08
BATCH QC											
BLANK	Gross alpha on alpha plateau	12587-46-1-ap	U 4.4E-01	n/a	pCi/L	-100.000	100.000				06/09/08
LCS	Gross alpha on alpha plateau	12587-46-1-ap	73.4	94.832	% Recov	80.000	120.000				06/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081093
Matrix: WATER
Test: Gross Alpha/Gross Beta (AB32)

Sample Date: 05/28/08
Receive Date:05/29/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002638											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross beta	12587-47-2	2.2E+03		RPD			0.000	20.000		06/06/08
BATCH QC											
BLANK	Gross beta	12587-47-2	U-4.0E-01	n/a	pCi/L	-10.000	10.000				06/06/08
LCS	Gross beta	12587-47-2	249.0	111.002	% Recov	80.000	120.000				06/06/08
Lab ID: W08P002581											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross beta	12587-47-2	3.8E+03		RPD			5.405	20.000		06/06/08
BATCH QC											
BLANK	Gross beta	12587-47-2	1.1E+01	11.000	pCi/L	-10.000	10.000				06/06/08
LCS	Gross beta	12587-47-2	25.9	115.470	% Recov	80.000	120.000				06/06/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081093
Department: Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Gross beta method blank is flagged for having a high result. Since all the other QC checks came out fine, this batch has been approved. lmh

Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample
VALTEST - Test Validation
LOGTEST - Login for Tests
TESTDATA - Test Data Entry

This report may not be reproduced, except in its entirety without the written approval of the WSCF Laboratory.

M4W41-SLF-08-671

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

ACKNOWLEDGMENT OF SAMPLES RECEIVED

07/10/08

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081093

The following samples were received from you on 05/29/08. 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
W08P002629	B1V6V5	PNNL-GPP @IC-30	Water	05/29/08
W08P002638	B1V599	PNNL-GPP @AB-32	Water	05/28/08
W08P002639	B1V7K2	PNNL-GPP @AB-32 @ALPHA	Water	05/28/08

Test Acronym Description

Test Acronym	Description
@AB-32	Gross Alpha/Gross Beta (AB32)
@ALPHA	Gross Alpha on Alpha Plateau
@IC-30	Anions by Ion Chromatography

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

07/10/08 20081093

I08-039-46

Collector R. Ellingsworth	Contact/Requester Steve Trent	Telephone No. 509-373-5869 MSIN FAX
SAF No. I08-039	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title ISRM, MAY 2008	HWF-N-506-16	Ice Chest No. SML-600 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**
100 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V6V5 WSRF002629		W	5/29/08	0446	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R. Ellingsworth			MAY 29 2008 1315	CA Hudson			MAY 29 2008 1315
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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

G08-005-18

Collector KE Hamilton	**Contact/Requester** Steve Trent	**Telephone No.** 509-376-5869 **MSIN** **FAX**
SAF No. G08-005	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 1NR2-RB, MAY 2008	HNF-N-5060-12	**Ice Chest No.** ERC-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 ☐
100 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V599	1N08P002638	W	5/29/08	1330	1x500-mL G/P 25) 08-5248	Gross Beta	HNO3 to pH <2

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
KE Hamilton			MAY 29 2008	D. J. Sparks			MAY 29 2008
D. J. Sparks			MAY 29 2008 1420	TA RNAZION			MAY 29 2008 1420

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

S08-005-20

Collector KE Hamilton	Contact/Requester Steve Trent	Telephone No. 509-373-5869 MSIN FAX
SAF No. S08-005	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title SURV MAY 2008	HNF-N-506-R	Ice Chest No. FRC-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 ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V7K2	2639	W	5/29/08	0925	1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	HNO3 to pH <2

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
KE Hamilton	Kenn E Hamilton		MAY 29 2008 1350	D. J. Sparks			MAY 29 2008 1350
D. J. Sparks			MAY 29 2008 1420	TA FRAZIER			MAY 29 2008 1420

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