RECEIVED AUGUST 17, 2009

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WSCF Analytical Lab
P.O. Box 1000
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FLUOR®

M4W41-SLF-09-229

August 14, 2009

Mr. M. A. Neely, Manager
Analytical Services
CH2M HILL Plateau Remediation Contract
PO Box 1600 MSIN R3-60
Richland, WA 99352

Dear Mike:

FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20090770 – SAF NUMBER F09-049

Reference: (1) Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, 'FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER'

(2) HNF-SD-CD-QAPP-017, Rev. 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following attachments for sample delivery group WSCF20090770:

- Cover Sheet (Attachment 1)
- Narrative (Attachment 2)
- Analytical Results (Attachment 3)
- Sample Receipt Information (Attachment 4)

Very truly yours,

Mathew Strauffer for SLF

S. L. Fitzgerald
WSCF Analytical Lab

SLF/grf

Attachments 4

cc: w/Attachments

A. J. Kopriva	S3-30
H. K. Meznarich	S3-30
J. E. Trechter	S3-30
S. J. Trent	R3-50
File/LB	

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ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20090770
Data Deliverable Date: 18-aug-2009
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F09-049	B218V3	W09GR00537	SOIL
	B218V4	W09GR00538	SOIL
	B218V5	W09GR00539	SOIL
	B218V6	W09GR00540	SOIL
	B218V7	W09GR00541	SOIL
	B218V8	W09GR00542	SOIL
	B218V9	W09GR00543	SOIL
	B218W0	W09GR00544	SOIL
	B218W1	W09GR00545	SOIL
	B218W2	W09GR00546	SOIL
	B218W3	W09GR00547	SOIL
	B218W4	W09GR00548	SOIL
	B218W5	W09GR00549	SOIL
	B218W6	W09GR00550	SOIL
	B218W7	W09GR00551	SOIL

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ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Introduction

Fifteen (15) S&GRP) samples were received at the WSCF Laboratory on August 7, 2009. Samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

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 NOT stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving.

The following generic data qualifiers (i.e., B, D, and J) may be applicable to this report, as appropriate

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wetchem analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report,* page 11, for a complete listing of approved analytical methods.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike *(Matrix Spikes apply only to Neptunium, Technetium & Tritium and Matrix Spike Duplicate applies to Neptunium),* Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 39 through 42 for QC details. Analytical Note(s):

- Gamma Energy Analysis (GEA), QC Sample B218T9 (SDG 20090766) – Duplicate Relative Percent Difference (RPD) did not meet established laboratory limits. The RPD criterion does not apply to results near or below the minimum detectable activity. No flags issued.

All other QC controls are within the established limits.

We certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by the following signatures.

Markus Stauffer for SLF

Scot L. Fitzgerald
WSCF Analytical Laboratory Manager

Andrew J. Kopriva
WSCF Client Services

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ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 36 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: M Stauffer 8/14/09

Client Services: A. Koprova 8/14/09

All results are reported on an "as received" basis unless otherwise noted in the comment section.

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Contract#: MOA-FH-CHPRC-2008
Report#: WSCF20090770
Report Date: 14-aug-2009
Report WGPP/ver. 5.2

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20090770

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
39842	1	40270	44860	BLANK		Gamma Energy Analysis-grd H2O
39842	2	40270	44860	LCS		Gamma Energy Analysis-grd H2O
39842	3	40270	44860	DUP	W09GR00532	Gamma Energy Analysis-grd H2O
39842	8	40270	44860	SAMPLE	W09GR00537	Gamma Energy Analysis-grd H2O
39842	9	40270	44860	SAMPLE	W09GR00538	Gamma Energy Analysis-grd H2O
39842	10	40270	44860	SAMPLE	W09GR00539	Gamma Energy Analysis-grd H2O
39842	11	40270	44860	SAMPLE	W09GR00540	Gamma Energy Analysis-grd H2O
39842	12	40270	44860	SAMPLE	W09GR00541	Gamma Energy Analysis-grd H2O
39842	13	40270	44860	SAMPLE	W09GR00542	Gamma Energy Analysis-grd H2O
39842	14	40270	44860	SAMPLE	W09GR00543	Gamma Energy Analysis-grd H2O
39842	15	40270	44860	SAMPLE	W09GR00544	Gamma Energy Analysis-grd H2O
39842	16	40270	44860	SAMPLE	W09GR00545	Gamma Energy Analysis-grd H2O
39842	17	40270	44860	SAMPLE	W09GR00546	Gamma Energy Analysis-grd H2O
39842	18	40270	44860	SAMPLE	W09GR00547	Gamma Energy Analysis-grd H2O
39842	19	40270	44860	SAMPLE	W09GR00548	Gamma Energy Analysis-grd H2O
39842	20	40270	44860	SAMPLE	W09GR00549	Gamma Energy Analysis-grd H2O
39842	21	40270	44860	SAMPLE	W09GR00550	Gamma Energy Analysis-grd H2O
39842	22	40270	44860	SAMPLE	W09GR00551	Gamma Energy Analysis-grd H2O
39850	1	40279	44861	BLANK		Strontium 89/90
39850	2	40279	44861	LCS		Strontium 89/90
39850	3	40279	44861	DUP	W09GR00533	Strontium 89/90
39850	10	40279	44861	SAMPLE	W09GR00537	Strontium 89/90
39850	11	40279	44861	SURR	W09GR00537	Strontium 89/90
39850	12	40279	44861	SAMPLE	W09GR00538	Strontium 89/90
39850	13	40279	44861	SURR	W09GR00538	Strontium 89/90
39850	14	40279	44861	SAMPLE	W09GR00539	Strontium 89/90
39850	15	40279	44861	SURR	W09GR00539	Strontium 89/90
39850	16	40279	44861	SAMPLE	W09GR00540	Strontium 89/90
39850	17	40279	44861	SURR	W09GR00540	Strontium 89/90
39850	18	40279	44861	SAMPLE	W09GR00541	Strontium 89/90
39850	19	40279	44861	SURR	W09GR00541	Strontium 89/90
39850	20	40279	44861	SAMPLE	W09GR00542	Strontium 89/90
39850	21	40279	44861	SURR	W09GR00542	Strontium 89/90
39848	1	40277	44862	BLANK		Strontium 89/90
39848	2	40277	44862	LCS		Strontium 89/90
39848	3	40277	44862	DUP	W09GR00543	Strontium 89/90
39848	4	40277	44862	SAMPLE	W09GR00543	Strontium 89/90
39848	5	40277	44862	SURR	W09GR00543	Strontium 89/90
39848	6	40277	44862	SAMPLE	W09GR00544	Strontium 89/90
39848	7	40277	44862	SURR	W09GR00544	Strontium 89/90
39848	8	40277	44862	SAMPLE	W09GR00545	Strontium 89/90
39848	9	40277	44862	SURR	W09GR00545	Strontium 89/90
39848	10	40277	44862	SAMPLE	W09GR00546	Strontium 89/90
39848	11	40277	44862	SURR	W09GR00546	Strontium 89/90
39848	12	40277	44862	SAMPLE	W09GR00547	Strontium 89/90
39848	13	40277	44862	SURR	W09GR00547	Strontium 89/90
39848	14	40277	44862	SAMPLE	W09GR00548	Strontium 89/90
39848	15	40277	44862	SURR	W09GR00548	Strontium 89/90
39848	16	40277	44862	SAMPLE	W09GR00549	Strontium 89/90
39848	17	40277	44862	SURR	W09GR00549	Strontium 89/90

39848	18	40277	44862	SAMPLE	W09GR00550	Strontium 89/90
39848	19	40277	44862	SURR	W09GR00550	Strontium 89/90
39848	20	40277	44862	SAMPLE	W09GR00551	Strontium 89/90
39848	21	40277	44862	SURR	W09GR00551	Strontium 89/90

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

LA-508-481 LA-508-481: GAMMA ENERGY ANALYSIS USING PROCOUNT SOFTWARE

HEIS GAMMA_GS	Gamma Emmision Spectrometry

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
SAF Number: F09-049
Sample # W09GR00537
Client ID: B218V3 GPP WSCF
Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481	U	2.93e-03	pCi/g	+-0.0197	pCi/g	1.00	0.035		08/13/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.650	pCi/g	+-0.864	pCi/g	1.00	0.35		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		97.0	Percent			1.00	0.0		08/10/09

MDL = Minimum Detection Limit 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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00538
Client ID: B218V4 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481		0.0564	pCi/g	+-0.0291	pCi/g	1.00	0.025		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.760	pCi/g	+-0.927	pCi/g	1.00	0.38		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		90.4	Percent			1.00	0.0		08/10/09

MDL=Minimum Detection Limit U - Analyzed for but not detected above limiting criteria(inorg)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00539
Client ID: B218V5 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481	U	8.10e-03	pCi/g	+-0.0234	pCi/g	1.00	0.041		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	0.182	pCi/g	+-0.890	pCi/g	1.00	0.40		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		86.0	Percent			1.00	0.0		08/10/09

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00540
Client ID: B218V6 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481	U	-2.06e-03	pCi/g	+-0.0206	pCi/g	1.00	0.039		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.750	pCi/g	+-0.870	pCi/g	1.00	0.39		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		87.9	Percent			1.00	0.0		08/10/09

MDL = Minimum Detection Limit U - Analyzed for but not detected above limiting criteria(inorg)
RQ = Result Qualifier
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00541
Client ID: B218V7 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481	U	-8.01e-03	pCi/g	+-0.0176	pCi/g	1.00	0.030		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.610	pCi/g	+-0.787	pCi/g	1.00	0.37		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		92.3	Percent			1.00	0.0		08/10/09

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00542
Client ID: B218V8 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481	U	0.0133	pCi/g	+-0.0250	pCi/g	1.00	0.045		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.440	pCi/g	+-0.871	pCi/g	1.00	0.42		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		81.6	Percent			1.00	0.0		08/10/09

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00543
Client ID: B218V9 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481		0.229	pCi/g	+-0.0391	pCi/g	1.00	0.016		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.680	pCi/g	+-0.945	pCi/g	1.00	0.27		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		104	Percent			1.00	0.0		08/10/09

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00544
Client ID: B218W0 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481		0.0865	pCi/g	+-0.0306	pCi/g	1.00	0.036		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		0.710	pCi/g	+-1.02	pCi/g	1.00	0.33		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		85.8	Percent			1.00	0.0		08/10/09

MDL = Minimum Detection Limit U - Analyzed for but not detected above limiting criteria(inorg)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00545
Client ID: B218W1 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481	U	0.0132	pCi/g	+-0.0217	pCi/g	1.00	0.039		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-1.30	pCi/g	+-1.30	pCi/g	1.00	0.29		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		98.2	Percent			1.00	0.0		08/10/09

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00546
Client ID: B218W2 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481	U	0.0250	pCi/g	+-0.0230	pCi/g	1.00	0.042		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		10.3	pCi/g	+-1.85	pCi/g	1.00	0.58		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		48.5	Percent			1.00	0.0		08/10/09

MDL = Minimum Detection Limit U - Analyzed for but not detected above limiting criteria(inorg)
RQ = Result Qualifier
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00547
Client ID: B218W3 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481	U	0.0225	pCi/g	+-0.0238	pCi/g	1.00	0.039		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.860	pCi/g	+-0.860	pCi/g	1.00	0.28		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		100	Percent			1.00	0.0		08/10/09

MDL=Minimum Detection Limit U - Analyzed for but not detected above limiting criteria(inorg)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00548
Client ID: B218W4 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481	U	0.0311	pCi/g	+-0.0260	pCi/g	1.00	0.036		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.870	pCi/g	+-0.870	pCi/g	1.00	0.28		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		100	Percent			1.00	0.0		08/10/09

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RQ=Result Qualifier
TP Err=Total Propagated Error
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* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00549
Client ID: B218W5 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481		0.0369	pCi/g	+-0.0224	pCi/g	1.00	0.033		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.640	pCi/g	+-0.800	pCi/g	1.00	0.27		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		104	Percent			1.00	0.0		08/10/09

MDL = Minimum Detection Limit 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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00550
Client ID: B218W6 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481		0.0345	pCi/g	+-0.0168	pCi/g	1.00	0.017		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.670	pCi/g	+-0.851	pCi/g	1.00	0.30		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		93.1	Percent			1.00	0.0		08/10/09

MDL=Minimum Detection Limit 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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-049
Sample # W09GR00551
Client ID: B218W7 GPP WSCF

Matrix: SOIL

Group #: WSCF20090770
Department: Radiochemistry
Sampled: 08/07/09
Received: 08/07/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481	U	0.0159	pCi/g	+-0.0209	pCi/g	1.00	0.037		08/11/09
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.410	pCi/g	+-0.779	pCi/g	1.00	0.28		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		103	Percent			1.00	0.0		08/10/09

MDL=Minimum Detection Limit 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

WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.84	pCi/g
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				31	%
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.66	pCi/g
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				33	%
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.82	pCi/g
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				21	%
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	K-40				16	pCi/g
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	PB-212				0.94	pCi/g
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				12	%
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.54	pCi/g
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				19	%
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.98	pCi/g
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				21	%
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.25	pCi/g
W09GR00537	B218V3	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				22	%
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.94	pCi/g
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				36	%
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.64	pCi/g
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				41	%
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.57	pCi/g
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				33	%
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	K-40				15	pCi/g
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	PB-212				1.0	pCi/g

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				10	%
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	PB-214				1.2	pCi/g
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				36	%
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.63	pCi/g
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				17	%
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.81	pCi/g
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				23	%
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	TH-234				0.75	pCi/g
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	TH-234 Count Error				48	%
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.30	pCi/g
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				20	%
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	U-235				0.13	pCi/g
W09GR00538	B218V4	GPP	Gamma Energy Analysis-grd H2O	U-235 Count Error				48	%
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	AC-228				1.2	pCi/g
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				23	%
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.74	pCi/g
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				41	%
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	BI-214				1.1	pCi/g
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				18	%
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	CS-134				0.063	pCi/g
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	CS-134 Count Error				41	%
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	K-40				17	pCi/g
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	PB-212				1.1	pCi/g
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				12	%

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	PB-214				1.5	pCi/g
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				38	%
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.66	pCi/g
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				17	%
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.90	pCi/g
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				22	%
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.31	pCi/g
W09GR00539	B218V5	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				19	%
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.79	pCi/g
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				37	%
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.59	pCi/g
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				44	%
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.95	pCi/g
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				17	%
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	K-40				17	pCi/g
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	PB-212				1.0	pCi/g
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				12	%
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	PB-214				1.4	pCi/g
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				36	%
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.63	pCi/g
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				18	%
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.81	pCi/g
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				24	%
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.31	pCi/g

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00540	B218V6	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				20	%
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.80	pCi/g
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				39	%
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.74	pCi/g
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				36	%
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.65	pCi/g
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				25	%
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	K-40				15	pCi/g
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	PB-212				0.95	pCi/g
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				11	%
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.63	pCi/g
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				19	%
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.85	pCi/g
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				21	%
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	SN-126				0.18	pCi/g
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	SN-126 Count Error				43	%
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.25	pCi/g
W09GR00541	B218V7	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				19	%
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	AC-228				1.1	pCi/g
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				28	%
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	BI-214				1.0	pCi/g
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				19	%
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	CS-134				0.087	pCi/g
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	CS-134 Count Error				48	%

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	K-40				19	pCi/g
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	PB-212				1.1	pCi/g
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				11	%
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	PB-214				1.5	pCi/g
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				31	%
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.82	pCi/g
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				17	%
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.99	pCi/g
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				26	%
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	TH-234				2.2	pCi/g
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	TH-234 Count Error				41	%
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.36	pCi/g
W09GR00542	B218V8	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				18	%
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.82	pCi/g
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				21	%
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.60	pCi/g
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				26	%
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.76	pCi/g
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				13	%
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	K-40				15	pCi/g
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				12	%
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	PB-212				0.85	pCi/g
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				9.8	%
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	PB-214				1.3	pCi/g

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				25	%
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.62	pCi/g
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				15	%
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.76	pCi/g
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				18	%
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	SN-126				0.17	pCi/g
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	SN-126 Count Error				25	%
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.24	pCi/g
W09GR00543	B218V9	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				15	%
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.77	pCi/g
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				33	%
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.82	pCi/g
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				32	%
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.71	pCi/g
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				24	%
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	K-40				16	pCi/g
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	PB-212				1.0	pCi/g
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				12	%
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	PB-214				1.0	pCi/g
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				50	%
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.59	pCi/g
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				17	%
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.85	pCi/g
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				22	%

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.28	pCi/g
W09GR00544	B218W0	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				18	%
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.96	pCi/g
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				28	%
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.58	pCi/g
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				42	%
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.54	pCi/g
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				25	%
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	K-40				16	pCi/g
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	PB-212				0.88	pCi/g
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				12	%
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	PB-214				0.97	pCi/g
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				43	%
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.59	pCi/g
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				20	%
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.83	pCi/g
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				20	%
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.25	pCi/g
W09GR00545	B218W1	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				20	%
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.99	pCi/g
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				28	%
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.66	pCi/g
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				43	%
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.68	pCi/g

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				24	%
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	CS-134				0.057	pCi/g
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	CS-134 Count Error				50	%
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	K-40				14	pCi/g
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	PB-212				0.90	pCi/g
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				11	%
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	PB-214				1.3	pCi/g
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				30	%
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.62	pCi/g
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				18	%
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.81	pCi/g
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				23	%
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.26	pCi/g
W09GR00546	B218W2	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				20	%
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.83	pCi/g
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				34	%
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.51	pCi/g
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				45	%
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.73	pCi/g
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				31	%
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	K-40				16	pCi/g
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	PB-212				0.93	pCi/g
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				12	%

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	PB-214				1.4	pCi/g
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				39	%
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.65	pCi/g
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				18	%
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.82	pCi/g
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				23	%
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	TH-234				2.3	pCi/g
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	TH-234 Count Error				43	%
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.28	pCi/g
W09GR00547	B218W3	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				19	%
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	AC-228				1.0	pCi/g
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				28	%
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.71	pCi/g
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				26	%
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	K-40				16	pCi/g
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	PB-212				0.99	pCi/g
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				11	%
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	PB-214				1.2	pCi/g
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				33	%
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.69	pCi/g
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				19	%
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.75	pCi/g
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				23	%
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.29	pCi/g

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00548	B218W4	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				18	%
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.80	pCi/g
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				27	%
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.76	pCi/g
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				38	%
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.93	pCi/g
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				16	%
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	CS-134				0.076	pCi/g
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	CS-134 Count Error				40	%
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	K-40				16	pCi/g
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	PB-212				0.95	pCi/g
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				12	%
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	PB-214				1.1	pCi/g
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				41	%
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.71	pCi/g
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				17	%
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.88	pCi/g
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				22	%
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.32	pCi/g
W09GR00549	B218W5	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				17	%
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.66	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				20	%
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.47	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				26	%

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.68	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				14	%
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	CS-134				0.048	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	CS-134 Count Error				40	%
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	K-40				15	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				12	%
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	PB-212				0.75	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				9.7	%
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	PB-214				0.82	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				24	%
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.55	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				16	%
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.78	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				17	%
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	SN-126				0.39	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	SN-126 Count Error				27	%
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	TH-234				1.0	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	TH-234 Count Error				35	%
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.26	pCi/g
W09GR00550	B218W6	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				14	%
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	AC-228				0.68	pCi/g
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	AC-228 Count Error				36	%
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	BI-212				0.53	pCi/g
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	BI-212 Count Error				43	%
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	BI-214				0.87	pCi/g

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-049 :F09-049

Group #: WSCF20090770
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	BI-214 Count Error				18	%
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	K-40				14	pCi/g
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	PB-212				0.98	pCi/g
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	PB-212 Count Error				10	%
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	PB-214				1.4	pCi/g
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	PB-214 Count Error				33	%
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	RA-226				0.67	pCi/g
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	RA-226 Count Error				18	%
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	RA-228				0.75	pCi/g
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	RA-228 Count Error				22	%
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	SN-126				0.17	pCi/g
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	SN-126 Count Error				41	%
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	TH-234				1.0	pCi/g
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	TH-234 Count Error				37	%
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	TL-208				0.35	pCi/g
W09GR00551	B218W7	GPP	Gamma Energy Analysis-grd H2O	TL-208 Count Error				17	%

RQ=Result Qualifier

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20090770
Matrix: SOLID
Test: Gamma Energy Analysis-grd H2O

Sample Date: 08/06/09
Receive Date:08/06/09

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W09GR00532											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Cesium-137	10045-97-3	2.75e-2		RPD			39.627	20.000 *		08/13/09
BATCH QC											
BLANK	Cesium-137	10045-97-3	U-1.554e-3	n/a	pCi/g	-10.000	1000.000				08/11/09
LCS	Cesium-137	10045-97-3	6575	108.858	% Recov	80.000	120.000				08/11/09

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20090770
Matrix: SOLID
Test: Strontium 89/90

Sample Date: 08/06/09
Receive Date:08/06/09

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W09GR00533											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	88.8	88.800	% Recov	30.000	105.000				08/10/09
DUP	Strontium-89/90	SR-RAD	U-1.1E-01		RPD			n/a	20.000		08/10/09
Lab ID: W09GR00537											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	97	97.000	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00538											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	90.4	90.400	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00539											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	86.0	86.000	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00540											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	87.9	87.900	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00541											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	92.3	92.300	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00542											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	81.6	81.600	% Recov	30.000	105.000				08/10/09

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20090770
Matrix: SOLID
Test: Strontium 89/90

Sample Date: 08/07/09
Receive Date:08/07/09

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	81.6	81.600	% Recov	30.000	105.000				08/10/09
BLANK	Strontium-89/90	10098-97-2	U0.17	n/a	pCi/g	-10.000	300.000				08/10/09
LCS	Sr-85 Tracer by Beta Counting	SR85	89.1	89.100	% Recov	30.000	105.000				08/10/09
LCS	Strontium-89/90	10098-97-2	73	104.286	% Recov	80.000	120.000				08/10/09
Lab ID: W09GR00543											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	97.4	97.400	% Recov	30.000	105.000				08/10/09
DUP	Strontium-89/90	SR-RAD	U6.0E-03		RPD			n/a	20.000		08/10/09
SURR	Sr-85 Tracer by Beta Counting	SR85	104.3	104.300	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00544											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	85.8	85.800	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00545											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	98.2	98.200	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00546											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	48.5	48.500	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00547											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	100.2	100.200	% Recov	30.000	105.000				08/10/09

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20090770
Matrix: SOLID
Test: Strontium 89/90

Sample Date: 08/07/09
Receive Date:08/07/09

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W09GR00548											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	100.4	100.400	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00549											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	104.0	104.000	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00550											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	93.1	93.100	% Recov	30.000	105.000				08/10/09
Lab ID: W09GR00551											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	103.1	103.100	% Recov	30.000	105.000				08/10/09
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	104.6	104.600	% Recov	30.000	105.000				08/10/09
BLANK	Strontium-89/90	10098-97-2	U-1.2	n/a	pCi/g	-10.000	300.000				08/10/09
LCS	Sr-85 Tracer by Beta Counting	SR85	96.7	96.700	% Recov	30.000	105.000				08/10/09
LCS	Strontium-89/90	10098-97-2	72.3	103.286	% Recov	80.000	120.000				08/10/09

M4W41-SLF-09-229

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 18 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
08/17/09

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 302222/ES10
Group#: 20090770
Project#: F09-049
Proj Mgr: STEVE TRENT
Phone: 373-5869

The following samples were received from you on 08/07/09. 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
W09GR00537	B218V3	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00538	B218V4	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00539	B218V5	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00540	B218V6	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00541	B218V7	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00542	B218V8	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00543	B218V9	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00544	B218W0	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00545	B218W1	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00546	B218W2	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00547	B218W3	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00548	B218W4	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00549	B218W5	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00550	B218W6	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09
W09GR00551	B218W7	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/07/09

Test Acronym Description

Test Acronym	Description

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 302222/ES10
Group#: 20090770
Project#: F09-049
Proj Mgr: STEVE TRENT
Phone: 373-5869

Test Acronym Description

Test Acronym	Description
@GEA-GPP	Gamma Energy Analysis-grd H2O
@SR89_90	Strontium 89/90

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F09-049-024

COLLECTOR Fulton 08/18/09

COMPANY CONTACT WIDRIG, DL

TELEPHONE NO. 376-2858

PROJECT COORDINATOR WIDRIG, DL

PRICE CODE 8N

DATA TURNAROUND 7 ~~45~~ Days / 45 Days 7/20/09

SAMPLING LOCATION BCCA SU-2-3

PROJECT DESIGNATION BC Controlled Area Remediation - Verification Soil Sampling

SAF NO. F09-049

AIR QUALITY ☐

ICE CHEST NO. —

FIELD LOGBOOK NO. HNF-N-585-3

ACTUAL SAMPLE DEPTH N/A

COA 302222ES10

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SHIPPED TO Waste Sampling & Characterization 20090770

OFFSITE PROPERTY NO. N/A

BILL OF LADING/AIR BILL NO. N/A

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218V3	SOIL	8-7-09	826	✓	✓
W09G200537					

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C Fulton	8-7-09 0935	Victor Ismas	8/7/09 0935
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F09-049-025	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Fulton	WIDRIG, DL	376-2858	WIDRIG, DL		
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY** ☐	7 ~~45~~ Days / 45 Days
BCCA SU-2-4	BC Controlled Area Remediation - Verification Soil Sampling		F09-049		7/29/09
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
—	HNF-N-585-3	N/A	302222ES10	GOVERNMENT VEHICLE	
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Waste Sampling & Characterization	N/A		N/A		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	
VOLUME	500mL	120mL	
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B218V4 538	SOIL	8-7-09	0829	✓	✓								

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CFulton	8-7-09 0935	Victor Silva	8/7/09 0935
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F09-049-027	PAGE 1 OF 1
COLLECTOR: Fulton	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WIDRIG, DL	PRICE CODE: 8N	DATA TURNAROUND: 7 ~~45~~ Days / 45 Days
SAMPLING LOCATION: BCCA SU-2-5	PROJECT DESIGNATION: BC Controlled Area Remediation - Verification Soil Sampling		SAF NO.: F09-049	AIR QUALITY: ☐	AJR 7/29/09
ICE CHEST NO.: —	FIELD LOGBOOK NO.: HNF-N.585-3	ACTUAL SAMPLE DEPTH: N/A	COA: 302222ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
W1=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218V5 539	SOIL	8-7-09	0822	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C Fulton / [signature]	8-7-09 0935	Victor Tsiles [signature]	8/7/09 0935

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F09-049-028	PAGE 1 OF 1
COLLECTOR: Fulton	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WIDRIG, DL	PRICE CODE: 8N	DATA TURNAROUND: 7 ~~45~~ Days / 45 Days 002 7/29/09
SAMPLING LOCATION: BCCA SU-2-6	PROJECT DESIGNATION: BC Controlled Area Remediation - Verification Soil Sampling		SAF NO.: F09-049	AIR QUALITY: ☐	
ICE CHEST NO.: —	FIELD LOGBOOK NO.: HNF-N-595-3	ACTUAL SAMPLE DEPTH: N/A	COA: 302222ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218V6 540	SOIL	8-7-09	0823	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C Fulton / [signature]	8-7-09 0935	Victor Bimes [signature]	8/7/09 0935

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F09-049-029	PAGE 1 OF 1

COLLECTOR Fulton	**COMPANY CONTACT** WIDRIG, DL	**TELEPHONE NO.** 376-2858	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION BCCA SU-2-7	**PROJECT DESIGNATION** BC Controlled Area Remediation - Verification Soil Sampling		**SAF NO.** F09-049
ICE CHEST NO. —	**FIELD LOGBOOK NO.** HNF-N-585-3	**ACTUAL SAMPLE DEPTH** N/A	**COA** 302222ES10
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 7 ~~45~~ Days / 45 Days 1527 7/29/09

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum
Liquids
DS=Drum
Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218V7 541	SOIL	8-7-09	0829	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C Fulton / [signature]	8-7-09 0935	Victor [signature]	8/7/09 0935

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F09-049-030

COLLECTOR: Fulton	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WIDRIG, DL
SAMPLING LOCATION: BCCA SU-2-8	PROJECT DESIGNATION: BC Controlled Area Remediation - Verification Soil Sampling		SAF NO.: F09-049
ICE CHEST NO.: —	FIELD LOGBOOK NO.: HNF-N-595-3	ACTUAL SAMPLE DEPTH: N/A	COA: 302222ES10
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: 8N

AIR QUALITY: ☐

DATA TURNAROUND: 7 ~~15~~ Days / 45 Days 7/29/09

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218V8 542	SOIL	8-7-09	0830	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C Fulton	8-7-09 0935	Victor Sims	8/7/09 0935

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F09-049-031	PAGE 1 OF 1

COLLECTOR: Fu Hun	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WIDRIG, DL
PRICE CODE: 8N	DATA TURNAROUND: 7 ~~15~~ Days / 45 Days 7/24/09	AIR QUALITY: ☐	SAMPLING LOCATION: BCCA SU-2-9
PROJECT DESIGNATION: BC Controlled Area Remediation - Verification Soil Sampling	SAF NO.: F09-049	ICE CHEST NO.:	FIELD LOGBOOK NO.: HNF-N-595-3
ACTUAL SAMPLE DEPTH: N/A	COA: 302222ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	SHIPPED TO: Waste Sampling & Characterization
OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218V9 543	SOIL	8-7-09	0840	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C Fu Hun	8-7-09 0935	Victor Bins	8/7/09 0935

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F09-049-032

COLLECTOR Fulton

SAMPLING LOCATION BCCA SU-2-10

ICE CHEST NO. —

COMPANY CONTACT WIDRIG, DL

TELEPHONE NO. 376-2858

PROJECT COORDINATOR WIDRIG, DL

PRICE CODE 8N

DATA TURNAROUND 7 ~~15~~ Days / 45 Days 102 7/29/09

AIR QUALITY ☐

PROJECT DESIGNATION BC Controlled Area Remediation - Verification Soil Sampling

SAF NO. F09-049

FIELD LOGBOOK NO. HNF-N-583-3

ACTUAL SAMPLE DEPTH N/A

COA 302222ES10

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SHIPPED TO Waste Sampling & Characterization

OFFSITE PROPERTY NO. N/A

BILL OF LADING/AIR BILL NO. N/A

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218W0 544	SOIL	8-7-09	0834	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CFulton	8-7-09 0935	Victor Bins	8/7/09 0935
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

☐ ORIGINAL

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F09-049-033

COLLECTOR Fulton

SAMPLING LOCATION BCCA SU-2-11

ICE CHEST NO. —

COMPANY CONTACT WIDRIG, DL

TELEPHONE NO. 376-2858

PROJECT COORDINATOR WIDRIG, DL

PRICE CODE 8N

DATA TURNAROUND 7 ~~15~~ Days / 45 Days

AIR QUALITY ☐

PROJECT DESIGNATION BC Controlled Area Remediation - Verification Soil Sampling

SAF NO. F09-049

FIELD LOGBOOK NO. HNF-N-595-3

ACTUAL SAMPLE DEPTH N/A

COA 302222ES10

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SHIPPED TO Waste Sampling & Characterization

OFFSITE PROPERTY NO. N/A

BILL OF LADING/AIR BILL NO. N/A

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	
VOLUME	500mL	120mL	
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;	

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME										
B218W1	545	SOIL	8-07-09	0933	✓	✓								

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CFulton	8-7-09 0935	Victor Sims	8/7/09 0935
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F09-049-034

COLLECTOR Fulton

COMPANY CONTACT WIDRIG, DL

TELEPHONE NO. 376-2858

PROJECT COORDINATOR WIDRIG, DL

PRICE CODE 8N

DATA TURNAROUND 7 ~~15~~ Days / 45 Days 7/29/09

SAMPLING LOCATION BCCA SU-2-12

PROJECT DESIGNATION BC Controlled Area Remediation - Verification Soil Sampling

SAF NO. F09-049

AIR QUALITY ☐

ICE CHEST NO. —

FIELD LOGBOOK NO. HNF-N-585-3

ACTUAL SAMPLE DEPTH N/A

COA 302222ES10

METHOD OF SHIPMENT GOVERNMENT VEHICLE

SHIPPED TO Waste Sampling & Characterization

OFFSITE PROPERTY NO. N/A

BILL OF LADING/AIR BILL NO. N/A

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None	
TYPE OF CONTAINER	Square Bottle - Poly	G/P	
NO. OF CONTAINER(S)	1	1	
VOLUME	500mL	120mL	
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;	

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218W2	546	SOIL	8-7-09	0837	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C Fulton / [signature]	8-7-09 0935	V. Ortiz / [signature]	8/7/09 0935

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD | DISPOSED BY | DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F09-049-035

COLLECTOR Fulton	**COMPANY CONTACT** WIDRIG, DL	**TELEPHONE NO.** 376-2858	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION BCCA SU-2-13	**PROJECT DESIGNATION** BC Controlled Area Remediation - Verification Soil Sampling		**SAF NO.** F09-049
ICE CHEST NO. —	**FIELD LOGBOOK NO.** HNF-N-585-3	**ACTUAL SAMPLE DEPTH** N/A	**COA** 302222ES10
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 7 ~~30~~ Days / 45 Days ADP 7/29/09

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy {Cesium-137}	Strontium-89,90 -- Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218W3 547	SOIL	8-7-09	0842	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C Fulton	8-7-09 0935	Victor Burns	8/7/09 0935

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F09-049-036	PAGE 1 OF 1

COLLECTOR: Fulton	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WIDRIG, DL
PRICE CODE: 8N	DATA TURNAROUND: 7 ~~15~~ Days / 45 Days 7/29/09		
SAMPLING LOCATION: BCCA SU-2-14	PROJECT DESIGNATION: BC Controlled Area Remediation - Verification Soil Sampling	SAF NO.: F09-049	AIR QUALITY: ☐
ICE CHEST NO.: —	FIELD LOGBOOK NO.: HNF-N-585-3	ACTUAL SAMPLE DEPTH: N/A	COA: 302222ES10
METHOD OF SHIPMENT: GOVERNMENT VEHICLE			
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218W4	548	SOIL	8-7-09	0835	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CFulton	8-7-09 0935	V. Co. 75M5	8/7/09 0935

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F09-049-037

COLLECTOR Fulton	**COMPANY CONTACT** WIDRIG, DL	**TELEPHONE NO.** 376-2858	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION BCCA SU-2-15	**PROJECT DESIGNATION** BC Controlled Area Remediation - Verification Soil Sampling		**SAF NO.** F09-049
ICE CHEST NO. —	**FIELD LOGBOOK NO.** HNF-N-585-3	**ACTUAL SAMPLE DEPTH** N/A	**COA** 302222ES10
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 7 ~~60~~ Days / 45 Days 7/29/09

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218W5 549	SOIL	8-7-09	0844	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
CFulton/[signature]	8-7-09 0935	Victor Sims/[signature]	8/7/09 0935
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F09-049-038

COLLECTOR Fulton	**COMPANY CONTACT** WIDRIG, DL	**TELEPHONE NO.** 376-2858	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION BCCA SU-2-16	**PROJECT DESIGNATION** BC Controlled Area Remediation - Verification Soil Sampling		**SAF NO.** F09-049
ICE CHEST NO. —	**FIELD LOGBOOK NO.** HNF-N-595-3	**ACTUAL SAMPLE DEPTH** N/A	**COA** 302222ES10
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND ~~7~~ 45 Days / 45 ~~120~~ Days 7/29/09

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*
A=Air
DL=Drum
Liquids
DS=Drum
Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218W6 550	SOIL	8-7-09	0841	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C Fulton	8-7-09 0935	Victor Bins	8/7/09 0935

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(01/06)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F09-049-039	PAGE 1 OF 1
COLLECTOR: Fulton	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WIDRIG, DL	PRICE CODE: 8N	DATA TURNAROUND: 7 ~~45~~ Days / 45 Days 6 6 7/29/09
SAMPLING LOCATION: BCCA SU-2-17	PROJECT DESIGNATION: BC Controlled Area Remediation - Verification Soil Sampling		SAF NO.: F09-049	AIR QUALITY: ☐	
ICE CHEST NO.: —	FIELD LOGBOOK NO.: HNF-N-585-3	ACTUAL SAMPLE DEPTH: N/A	COA: 302222ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None	None
TYPE OF CONTAINER	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1
VOLUME	500mL	120mL
SAMPLE ANALYSIS	Gamma Spectroscopy (Cesium-137)	Strontium-89,90 -- Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B218W7 551	SOIL	8-7-09	0838	✓	✓

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C Fulton / [signature]	8-7-09 0935	Victor [signature]	8/7/09 0935

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

ORIGINAL

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME