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WSCF Analytical Lab  
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Richland, Washington 99352  
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**FLUOR**®

M4W41-SLF-09-228

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 WSCF20090766 – 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 WSCF20090766:

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

Very truly yours,



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

M4W41-SLF-09-228

ATTACHMENT 1

**COVER SHEET**

Consisting of 2 pages  
Including cover page

# WSCF SAF NUMBER CROSS REFERENCE

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Group#: WSCF20090766  
Data Deliverable Date: 17-aug-2009  
Data Deliverable: Cover Sheet

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SAF#	Sample ID	WSCF#	Matrix
F09-049	B218R0	W09GR00515	SOIL
	B218R1	W09GR00516	SOIL
	B218R2	W09GR00517	SOIL
	B218R3	W09GR00518	SOIL
	B218R4	W09GR00519	SOIL
	B218R5	W09GR00520	SOIL
	B218R6	W09GR00521	SOIL
	B218R7	W09GR00522	SOIL
	B218R8	W09GR00523	SOIL
	B218R9	W09GR00524	SOIL
	B218T0	W09GR00525	SOIL
	B218T1	W09GR00526	SOIL
	B218T2	W09GR00527	SOIL
	B218T4	W09GR00528	SOIL
	B218T6	W09GR00529	SOIL
	B218T7	W09GR00530	SOIL
	B218T8	W09GR00531	SOIL
	B218T9	W09GR00532	SOIL
	B218V0	W09GR00533	SOIL
	B218V1	W09GR00534	SOIL
	B218V2	W09GR00535	SOIL

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ATTACHMENT 2

**NARRATIVE**

Consisting of 3 pages  
Including cover page

## **Introduction**

Twenty one (21) S&GRP) samples were received at the WSCF Laboratory on August 6, 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 51 through 55 for QC details. Analytical Note(s):

- Gamma Energy Analysis (GEA), QC Sample B218T9 – 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.



Scot L. Fitzgerald  
WSCF Analytical Laboratory Manager



Andrew J. Kopriva  
WSCF Client Services

M4W41-SLF-09-228

ATTACHMENT 3

**ANALYTICAL RESULTS**

Consisting of 49 pages  
Including cover page

**WSCF**  
**ANALYTICAL RESULTS REPORT**

for  
**Groundwater Remediation Program**

**Richland, WA 99354**

**Attention: Steve Trent**

Analytical: Tom Stauffer M. Stauffer 8/14/09

Client Services: AN/A A. Kopsiva 8/14/09

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

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

**Contract#: MOA-FH-CHPRC-2008**  
**Report#: WSCF20090766**  
**Report Date: 14-aug-2009**  
**Report WGPP/ver. 5.2**  
**Groundwater Remediation Program**

## W13q Worklist/Batch/QC Report for Group# WSCF20090766

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
39841	1	40266	44855	BLANK		Gamma Energy Analysis-grd H2O
39841	2	40266	44855	LCS		Gamma Energy Analysis-grd H2O
39841	3	40266	44855	DUP	W09GR00515	Gamma Energy Analysis-grd H2O
39841	4	40266	44855	SAMPLE	W09GR00515	Gamma Energy Analysis-grd H2O
39841	5	40266	44855	SAMPLE	W09GR00516	Gamma Energy Analysis-grd H2O
39841	6	40266	44855	SAMPLE	W09GR00517	Gamma Energy Analysis-grd H2O
39841	7	40266	44855	SAMPLE	W09GR00518	Gamma Energy Analysis-grd H2O
39841	8	40266	44855	SAMPLE	W09GR00519	Gamma Energy Analysis-grd H2O
39841	9	40266	44855	SAMPLE	W09GR00520	Gamma Energy Analysis-grd H2O
39841	10	40266	44855	SAMPLE	W09GR00521	Gamma Energy Analysis-grd H2O
39841	11	40266	44855	SAMPLE	W09GR00522	Gamma Energy Analysis-grd H2O
39841	12	40266	44855	SAMPLE	W09GR00523	Gamma Energy Analysis-grd H2O
39841	13	40266	44855	SAMPLE	W09GR00524	Gamma Energy Analysis-grd H2O
39841	14	40266	44855	SAMPLE	W09GR00525	Gamma Energy Analysis-grd H2O
39841	15	40266	44855	SAMPLE	W09GR00526	Gamma Energy Analysis-grd H2O
39841	16	40266	44855	SAMPLE	W09GR00527	Gamma Energy Analysis-grd H2O
39841	17	40266	44855	SAMPLE	W09GR00528	Gamma Energy Analysis-grd H2O
39841	18	40266	44855	SAMPLE	W09GR00529	Gamma Energy Analysis-grd H2O
39841	19	40266	44855	SAMPLE	W09GR00530	Gamma Energy Analysis-grd H2O
39841	20	40266	44855	SAMPLE	W09GR00531	Gamma Energy Analysis-grd H2O
39849	1	40278	44858	BLANK		Strontium 89/90
39849	2	40278	44858	LCS		Strontium 89/90
39849	3	40278	44858	DUP	W09GR00524	Strontium 89/90
39849	4	40278	44858	SAMPLE	W09GR00524	Strontium 89/90
39849	5	40278	44858	SURR	W09GR00524	Strontium 89/90
39849	6	40278	44858	SAMPLE	W09GR00525	Strontium 89/90
39849	7	40278	44858	SURR	W09GR00525	Strontium 89/90
39849	8	40278	44858	SAMPLE	W09GR00526	Strontium 89/90
39849	9	40278	44858	SURR	W09GR00526	Strontium 89/90
39849	10	40278	44858	SAMPLE	W09GR00527	Strontium 89/90
39849	11	40278	44858	SURR	W09GR00527	Strontium 89/90
39849	12	40278	44858	SAMPLE	W09GR00528	Strontium 89/90
39849	13	40278	44858	SURR	W09GR00528	Strontium 89/90
39849	14	40278	44858	SAMPLE	W09GR00529	Strontium 89/90
39849	15	40278	44858	SURR	W09GR00529	Strontium 89/90
39849	16	40278	44858	SAMPLE	W09GR00530	Strontium 89/90
39849	17	40278	44858	SURR	W09GR00530	Strontium 89/90
39849	18	40278	44858	SAMPLE	W09GR00531	Strontium 89/90
39849	19	40278	44858	SURR	W09GR00531	Strontium 89/90
39849	20	40278	44858	SAMPLE	W09GR00532	Strontium 89/90
39849	21	40278	44858	SURR	W09GR00532	Strontium 89/90
39847	1	40276	44859	BLANK		Strontium 89/90
39847	2	40276	44859	LCS		Strontium 89/90
39847	3	40276	44859	DUP	W09GR00515	Strontium 89/90
39847	4	40276	44859	SAMPLE	W09GR00515	Strontium 89/90
39847	5	40276	44859	SURR	W09GR00515	Strontium 89/90
39847	6	40276	44859	SAMPLE	W09GR00516	Strontium 89/90
39847	7	40276	44859	SURR	W09GR00516	Strontium 89/90
39847	8	40276	44859	SAMPLE	W09GR00517	Strontium 89/90
39847	9	40276	44859	SURR	W09GR00517	Strontium 89/90

39847	10	40276	44859	SAMPLE	W09GR00518	Strontium 89/90
39847	11	40276	44859	SURR	W09GR00518	Strontium 89/90
39847	12	40276	44859	SAMPLE	W09GR00519	Strontium 89/90
39847	13	40276	44859	SURR	W09GR00519	Strontium 89/90
39847	14	40276	44859	SAMPLE	W09GR00520	Strontium 89/90
39847	15	40276	44859	SURR	W09GR00520	Strontium 89/90
39847	16	40276	44859	SAMPLE	W09GR00521	Strontium 89/90
39847	17	40276	44859	SURR	W09GR00521	Strontium 89/90
39847	18	40276	44859	SAMPLE	W09GR00522	Strontium 89/90
39847	19	40276	44859	SURR	W09GR00522	Strontium 89/90
39847	20	40276	44859	SAMPLE	W09GR00523	Strontium 89/90
39847	21	40276	44859	SURR	W09GR00523	Strontium 89/90
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	4	40270	44860	SAMPLE	W09GR00532	Gamma Energy Analysis-grd H2O
39842	5	40270	44860	SAMPLE	W09GR00533	Gamma Energy Analysis-grd H2O
39842	6	40270	44860	SAMPLE	W09GR00534	Gamma Energy Analysis-grd H2O
39842	7	40270	44860	SAMPLE	W09GR00535	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	4	40279	44861	SAMPLE	W09GR00533	Strontium 89/90
39850	5	40279	44861	SURR	W09GR00533	Strontium 89/90
39850	6	40279	44861	SAMPLE	W09GR00534	Strontium 89/90
39850	7	40279	44861	SURR	W09GR00534	Strontium 89/90
39850	8	40279	44861	SAMPLE	W09GR00535	Strontium 89/90
39850	9	40279	44861	SURR	W09GR00535	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.

<b>LA-508-415</b>	<b>LA-508-415: OPERATION OF THE PROTEAN 2-INCH ALPHA/BETA COUNTING SYSTEM FOR GROSS</b>
<b>HEIS ALPHA_GPC</b>	GROSS ALPHA GPC
<b>HEIS BETA_GPC</b>	GROSS BETA GPC
<b>HEIS SRTOT_SEP_PRECIP_GS</b>	Protactinium 89/90
<b>LA-508-481</b>	<b>LA-508-481: GAMMA ENERGY ANALYSIS USING PROCOUNT SOFTWARE</b>
<b>HEIS GAMMA_GS</b>	Gamma Emission 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>.

Report Date: 14-aug-2009  
Report#: WSCF20090766  
Report WGPMM/5.2

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00515  
**Client ID:** B218R0

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481	U	-8.27e-03	pCi/g	+/-0.0199	pCi/g	1.00	0.034		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415		0.400	pCi/g	+/-0.824	pCi/g	1.00	0.38		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		89.5	Percent			1.00	0.0		08/10/09

**MDL = Minimum Detection Limit** U - Analyzed for but not detected above limiting criteria(norg)

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00516  
**Client ID:** B218R1

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481	U	2.15e-03	pCi/g	+ -0.0206	pCi/g	1.00	0.031		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-1.00	pCi/g	+ -1.00	pCi/g	1.00	0.34		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		99.8	Percent			1.00	0.0		08/10/09

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**DF = Dilution Factor**

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Report *WGPP/ver. 5.2*

*Groundwater Remediation Program*

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #** W09GR00517  
**Client ID:** B218R2 GPP WSCF  
**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481	U	1.38e-03	pCi/g	+ -0.0138	pCi/g	1.00	0.025		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.770	pCi/g	+ -0.770	pCi/g	1.00	0.36		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		93.7	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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**TP Err** = Total Propagated Error

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Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00518  
**Client ID:** B218R3

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**GPP** WSCF  
**Matrix:** SOIL

**Test Performed**    **CAS #**    **Method**    **RQ**    **Result**    **Unit**    **TP Err**    **Unit**    **DF**    **MDL**    **PQL**    **Analysis Date**

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481		0.0510	pCi/g	+ -0.0172	pCi/g	1.00	0.018		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.600	pCi/g	+ -0.750	pCi/g	1.00	0.37		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		90.9	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**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00519  
**Client ID:** B218R4

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481		0.0607	pCi/g	+/-0.0440	pCi/g	1.00	0.046		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.190	pCi/g	+/-0.711	pCi/g	1.00	0.37		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		91.4	Percent			1.00	0.0		08/10/09

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**RQ** = Result Qualifier

**TP Err** = Total Propagated Error

**DF** = Dilution Factor

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

Report *WGPP/ver. 5.2*

*Groundwater Remediation Program*

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #** W09GR00520  
**Client ID:** B218R5

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481	U	0.0222	pCi/g	+ -0.0201	pCi/g	1.00	0.037		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	0.210	pCi/g	+ -0.746	pCi/g	1.00	0.38		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		89.1	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

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00521  
**Client ID:** B218R6

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481		0.0440	pCi/g	+ -0.0294	pCi/g	1.00	0.037		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.910	pCi/g	+ -0.910	pCi/g	1.00	0.36		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		93.7	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

Report *WGPP/ver. 5.2*

*Groundwater Remediation Program*

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00522  
**Client ID:** B218R7

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**GPP**      **Matrix:** SOIL  
**WSCF**

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481	U	0.0154	pCi/g	+ -0.0188	pCi/g	1.00	0.034		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	0.160	pCi/g	+ -0.768	pCi/g	1.00	0.39		08/10/09
Str-85 Tracer by Beta Counting	SR85	LA-508-415		84.5	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**  
**TP Err = Total Propagated Error**  
**DF = Dilution Factor**

\* - Indicates results that have NOT been validated;      + - Indicates more than six qualifier symbols  
 Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #** W09GR00523  
**Client ID:** B218R8

GPP  
WSCF

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481	U	0.0289	pCi/g	+ -0.0208	pCi/g	1.00	0.031		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415		5.90	pCi/g	+ -1.06	pCi/g	1.00	0.37		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		91.8	Percent			1.00	0.0		08/10/09

MDL = Minimum Detection Limit U - Analyzed for but not detected above limiting criteria(norg)

RQ = Result Qualifier

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DF = Dilution Factor

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00524  
**Client ID:** B218R9

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481	U	-3.60e-03	pCi/g	+ -8.78e-03	pCi/g	1.00	0.015		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.470	pCi/g	+ -0.996	pCi/g	1.00	0.42		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		84.1	Percent			1.00	0.0		08/10/09

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**DF = Dilution Factor**

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #** W09GR00525  
**Client ID:** B218T0 GPP  
 WSCF  
**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481	U	0.0223	pCi/g	+ -0.0195	pCi/g	1.00	0.036		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-1.23	pCi/g	+ -1.23	pCi/g	1.00	0.35		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		101	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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**DF = Dilution Factor**

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #** W09GR00526  
**Client ID:** B218T1 GPP  
 WSCF  
**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481	U	2.11e-03	pCi/g	+/-0.0169	pCi/g	1.00	0.030		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.530	pCi/g	+/-0.885	pCi/g	1.00	0.37		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		94.0	Percent			1.00	0.0		08/10/09

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**RQ** = Result Qualifier

**TP Err** = Total Propagated Error

**DF** = Dilution Factor

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #** W09GR00527  
**Client ID:** B218T2

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481		0.0431	pCi/g	+ -0.0276	pCi/g	1.00	0.036		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.800	pCi/g	+ -0.864	pCi/g	1.00	0.35		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		99.5	Percent			1.00	0.0		08/10/09

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**TP Err = Total Propagated Error**

**DF = Dilution Factor**

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00528  
**Client ID:** B218T4

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481		0.0656	pCi/g	+ -0.0324	pCi/g	1.00	0.029		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.820	pCi/g	+ -0.828	pCi/g	1.00	0.37		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		94.4	Percent			1.00	0.0		08/10/09

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 Report WGPP/ver. 5.2

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*Groundwater Remediation Program*

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00529  
**Client ID:** B218T6

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**GPP**      **Matrix:** SOIL  
**WSCF**

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481		0.0170	pCi/g	+ -0.0133	pCi/g	1.00	0.014		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.490	pCi/g	+ -0.892	pCi/g	1.00	0.39		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		89.0	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**

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Report *WGPP/ver. 5.2*

*Groundwater Remediation Program*



# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #** W09GR00531  
**Client ID:** B218T8

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481		0.0460	pCi/g	+ -0.0470	pCi/g	1.00	0.031		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.150	pCi/g	+ -0.778	pCi/g	1.00	0.38		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		92.7	Percent			1.00	0.0		08/10/09

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**RQ = Result Qualifier**  
**TP Err = Total Propagated Error**  
**DF = Dilution Factor**  
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*Report WGPP/ver. 5.2*  
*Groundwater Remediation Program*

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00532  
**Client ID:** B218T9

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**GPP**      **Matrix:** SOIL  
**WSCF**

**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		0.0411	pCi/g	+/-0.0282	pCi/g	1.00	0.030		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-1.10	pCi/g	+/-1.10	pCi/g	1.00	0.39		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		89.1	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

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Report *WGPP/ver. 5.2*

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #** W09GR00533  
**Client ID:** B218V0

GPP  
WSCF

**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	-3.24e-03	pCi/g	+ -0.0181	pCi/g	1.00	0.031		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-1.20	pCi/g	+ -1.20	pCi/g	1.00	0.38		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		91.2	Percent			1.00	0.0		08/10/09

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

**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

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Report *WGPP/ver. 5.2*

*Groundwater Remediation Program*

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00534  
**Client ID:** B218V1

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

GPP  
WSCF

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481		0.0374	pCi/g	+/-0.0293	pCi/g	1.00	0.033		08/11/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.400	pCi/g	+/-0.912	pCi/g	1.00	0.36		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		94.1	Percent			1.00	0.0		08/10/09

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**RQ** = Result Qualifier

**TP Err** = Total Propagated Error

**DF** = Dilution Factor

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Report *WGPP/ver. 5.2*

*Groundwater Remediation Program*

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F09-049  
**Sample #:** W09GR00535  
**Client ID:** B218V2

**Group #:** WSCF20090766  
**Department:** Radiochemistry  
**Sampled:** 08/06/09  
**Received:** 08/06/09

**Matrix:** SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Gamma Energy Analysis-grd H2O</b>											
Cesium-137	10045-97-3	LA-508-481		0.0559	pCi/g	+ -0.0360	pCi/g	1.00	0.038		08/10/09
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.310	pCi/g	+ -0.908	pCi/g	1.00	0.40		08/10/09
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		86.1	Percent			1.00	0.0		08/10/09

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**RQ = Result Qualifier**  
**TP Err = Total Propagated Error**  
**DF = Dilution Factor**  
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# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention:  
Project Number

Steve Trent  
F09-049 :F09-049

Group #:  
Department:

WSCF20090766  
Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	AC-228				0.64	pCi/g
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	AC-228 Count Error				40	%
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	BI-212				0.72	pCi/g
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	BI-212 Count Error				41	%
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	BI-214				0.98	pCi/g
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	BI-214 Count Error				19	%
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	K-40				15	pCi/g
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	PB-212				0.82	pCi/g
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	PB-212 Count Error				13	%
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	PB-214				1.1	pCi/g
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	PB-214 Count Error				40	%
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	RA-226				0.74	pCi/g
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	RA-226 Count Error				17	%
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	RA-228				0.92	pCi/g
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	RA-228 Count Error				20	%
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	SN-126				0.16	pCi/g
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	SN-126 Count Error				47	%
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	TL-208				0.27	pCi/g
W09GR00515	B218R0	Gamma Energy Analysis-grd H2O	TL-208 Count Error				20	%
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	AC-228				0.66	pCi/g
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	AC-228 Count Error				31	%
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	BI-212				0.64	pCi/g
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	BI-212 Count Error				36	%
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	BI-214				0.87	pCi/g

RQ=Result Qualifier

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Groundwater Remediation Program

WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Group #: WSCF20090766  
 Department: Radiochemistry

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

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	BI-214 Count Error				18	%
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	K-40				13	pCi/g
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	PB-212				0.77	pCi/g
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	PB-212 Count Error				11	%
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	PB-214				1.1	pCi/g
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	PB-214 Count Error				30	%
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	RA-226				0.52	pCi/g
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	RA-226 Count Error				18	%
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	RA-228				0.65	pCi/g
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	RA-228 Count Error				23	%
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	TH-234				1.6	pCi/g
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	TH-234 Count Error				45	%
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	TL-208				0.26	pCi/g
W09GR00516	B218R1	Gamma Energy Analysis-grd H2O	TL-208 Count Error				18	%
W09GR00517	B218R2	Gamma Energy Analysis-grd H2O	AC-228				0.56	pCi/g
W09GR00517	B218R2	Gamma Energy Analysis-grd H2O	AC-228 Count Error				33	%
W09GR00517	B218R2	Gamma Energy Analysis-grd H2O	BI-212				0.38	pCi/g
W09GR00517	B218R2	Gamma Energy Analysis-grd H2O	BI-212 Count Error				35	%
W09GR00517	B218R2	Gamma Energy Analysis-grd H2O	BI-214				0.74	pCi/g
W09GR00517	B218R2	Gamma Energy Analysis-grd H2O	BI-214 Count Error				21	%
W09GR00517	B218R2	Gamma Energy Analysis-grd H2O	K-40				12	pCi/g
W09GR00517	B218R2	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00517	B218R2	Gamma Energy Analysis-grd H2O	PB-212				0.68	pCi/g
W09GR00517	B218R2	Gamma Energy Analysis-grd H2O	PB-212 Count Error				12	%

RQ=Result Qualifier

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 Groundwater Remediation Program

WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention:  
Project Number

Steve Trent  
F09-049 :F09-049

Group #:  
Department:

WSCF20090766  
Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00517	B218R2	GPP	Gamma Energy Analysis-grd H2O				0.83	pCi/g
W09GR00517	B218R2	GPP	Gamma Energy Analysis-grd H2O				48	%
W09GR00517	B218R2	GPP	Gamma Energy Analysis-grd H2O				0.55	pCi/g
W09GR00517	B218R2	GPP	Gamma Energy Analysis-grd H2O				18	%
W09GR00517	B218R2	GPP	Gamma Energy Analysis-grd H2O				0.61	pCi/g
W09GR00517	B218R2	GPP	Gamma Energy Analysis-grd H2O				20	%
W09GR00517	B218R2	GPP	Gamma Energy Analysis-grd H2O				0.19	pCi/g
W09GR00517	B218R2	GPP	Gamma Energy Analysis-grd H2O				21	%
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				0.83	pCi/g
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				19	%
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				0.62	pCi/g
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				20	%
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				0.91	pCi/g
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				12	%
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				15	pCi/g
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				12	%
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				0.97	pCi/g
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				9.0	%
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				1.2	pCi/g
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				22	%
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				0.66	pCi/g
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				15	%
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				0.85	pCi/g
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				17	%
W09GR00518	B218R3	GPP	Gamma Energy Analysis-grd H2O				0.12	pCi/g

RQ=Result Qualifier

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Groundwater Remediation Program

WGPPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

**Attention:**  
**Project Number**

Steve Trent  
F09-049 :F09-049

**Group #:** WSCF20090766  
**Department:** Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00518	B218R3	Gamma Energy Analysis-grd H2O	SN-126 Count Error				49	%
W09GR00518	B218R3	Gamma Energy Analysis-grd H2O	TH-234				1.1	pCi/g
W09GR00518	B218R3	Gamma Energy Analysis-grd H2O	TH-234 Count Error				37	%
W09GR00518	B218R3	Gamma Energy Analysis-grd H2O	TL-208				0.27	pCi/g
W09GR00518	B218R3	Gamma Energy Analysis-grd H2O	TL-208 Count Error				14	%
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	AC-228				1.0	pCi/g
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	AC-228 Count Error				30	%
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	BI-212				0.77	pCi/g
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	BI-212 Count Error				42	%
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	BI-214				0.93	pCi/g
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	BI-214 Count Error				23	%
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	CS-134				0.10	pCi/g
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	CS-134 Count Error				42	%
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	K-40				16	pCi/g
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	PB-212				1.2	pCi/g
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	PB-212 Count Error				10	%
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	PB-214				1.8	pCi/g
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	PB-214 Count Error				31	%
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	RA-226				0.83	pCi/g
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	RA-226 Count Error				18	%
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	RA-228				0.97	pCi/g
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	RA-228 Count Error				22	%
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	TH-234				1.5	pCi/g
W09GR00519	B218R4	Gamma Energy Analysis-grd H2O	TH-234 Count Error				46	%

**RQ=Result Qualifier**

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*Groundwater Remediation Program*

WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

**Attention:**  
**Project Number**

Steve Trent  
F09-049 :F09-049

**Group #:** WSCF20090766  
**Department:** Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00519	B218R4	GPP	Gamma Energy Analysis-grd H2O		TL-208		0.31	pCi/g
W09GR00519	B218R4	GPP	Gamma Energy Analysis-grd H2O		TL-208 Count Error		21	%
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		AC-228		0.74	pCi/g
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		AC-228 Count Error		33	%
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		BI-212		0.60	pCi/g
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		BI-212 Count Error		34	%
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		BI-214		0.78	pCi/g
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		BI-214 Count Error		20	%
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		K-40		14	pCi/g
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		K-40 Count Error		13	%
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		PB-212		0.81	pCi/g
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		PB-212 Count Error		12	%
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		RA-226		0.61	pCi/g
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		RA-226 Count Error		17	%
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		RA-228		0.86	pCi/g
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		RA-228 Count Error		22	%
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		TL-208		0.25	pCi/g
W09GR00520	B218R5	GPP	Gamma Energy Analysis-grd H2O		TL-208 Count Error		20	%
W09GR00521	B218R6	GPP	Gamma Energy Analysis-grd H2O		AC-228		0.92	pCi/g
W09GR00521	B218R6	GPP	Gamma Energy Analysis-grd H2O		AC-228 Count Error		32	%
W09GR00521	B218R6	GPP	Gamma Energy Analysis-grd H2O		BI-212		0.66	pCi/g
W09GR00521	B218R6	GPP	Gamma Energy Analysis-grd H2O		BI-212 Count Error		45	%
W09GR00521	B218R6	GPP	Gamma Energy Analysis-grd H2O		BI-214		0.54	pCi/g
W09GR00521	B218R6	GPP	Gamma Energy Analysis-grd H2O		BI-214 Count Error		28	%
W09GR00521	B218R6	GPP	Gamma Energy Analysis-grd H2O		K-40		15	pCi/g

**RQ=Result Qualifier**

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*Groundwater Remediation Program*

WGPPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Group #: WSCF20090766  
 Department: Radiochemistry

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

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	PB-212				1.0	pCi/g
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	PB-212 Count Error				11	%
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	PB-214				0.98	pCi/g
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	PB-214 Count Error				45	%
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	RA-226				0.63	pCi/g
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	RA-226 Count Error				19	%
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	RA-228				0.74	pCi/g
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	RA-228 Count Error				26	%
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	TL-208				0.27	pCi/g
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	TL-208 Count Error				19	%
W09GR00521	B218R6	Gamma Energy Analysis-grd H2O	AC-228				0.54	pCi/g
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	AC-228 Count Error				37	%
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	Bi-212				0.50	pCi/g
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	Bi-212 Count Error				43	%
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	Bi-214				0.53	pCi/g
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	Bi-214 Count Error				26	%
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	K-40				13	pCi/g
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	PB-212				0.69	pCi/g
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	PB-212 Count Error				12	%
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	PB-214				0.85	pCi/g
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	PB-214 Count Error				35	%
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	RA-226				0.49	pCi/g
W09GR00522	B218R7	Gamma Energy Analysis-grd H2O	RA-226 Count Error				18	%

RQ=Result Qualifier

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 Groundwater Remediation Program

WGPEPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention:  
Project Number

Steve Trent  
F09-049 :F09-049

Group #:  
Department:

WSCF20090766  
Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00522	B218R7	GPP	Gamma Energy Analysis-grd H20				0.76	pCi/g
W09GR00522	B218R7	GPP	Gamma Energy Analysis-grd H20	RA-228			23	%
W09GR00522	B218R7	GPP	Gamma Energy Analysis-grd H20	RA-228 Count Error			0.17	pCi/g
W09GR00522	B218R7	GPP	Gamma Energy Analysis-grd H20	TL-208			24	%
W09GR00522	B218R8	GPP	Gamma Energy Analysis-grd H20	TL-208 Count Error			0.75	pCi/g
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	AC-228			32	%
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	AC-228 Count Error			0.62	pCi/g
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	BI-212			30	%
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	BI-212 Count Error			0.62	pCi/g
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	BI-214			21	%
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	BI-214 Count Error			0.054	pCi/g
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	CS-134			41	%
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	CS-134 Count Error			14	pCi/g
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	K-40			13	%
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	K-40 Count Error			0.75	pCi/g
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	PB-212			13	%
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	PB-212 Count Error			0.50	pCi/g
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	RA-226			18	%
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	RA-226 Count Error			0.68	pCi/g
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	RA-228			22	%
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	RA-228 Count Error			0.23	pCi/g
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	TL-208			19	%
W09GR00523	B218R8	GPP	Gamma Energy Analysis-grd H20	TL-208 Count Error			0.73	pCi/g
W09GR00524	B218R9	GPP	Gamma Energy Analysis-grd H20	AC-228			21	%
W09GR00524	B218R9	GPP	Gamma Energy Analysis-grd H20	AC-228 Count Error			0.54	pCi/g
W09GR00524	B218R9	GPP	Gamma Energy Analysis-grd H20	BI-212				

RQ=Result Qualifier

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Groundwater Remediation Program

WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention:  
Project Number

Steve Trent  
F09-049 :F09-049

Group #:  
Department:

WSCF20090766  
Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	BI-212 Count Error			23		%
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	BI-214			0.67		pCi/g
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	BI-214 Count Error			13		%
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	CS-134			0.044		pCi/g
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	CS-134 Count Error			37		%
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	K-40			13		pCi/g
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	K-40 Count Error			12		%
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	PB-212			0.90		pCi/g
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	PB-212 Count Error			9.2		%
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	PB-214			0.60		pCi/g
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	PB-214 Count Error			14		%
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	RA-226			0.55		pCi/g
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	RA-226 Count Error			15		%
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	RA-228			0.73		pCi/g
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	RA-228 Count Error			18		%
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	SN-126			0.22		pCi/g
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	SN-126 Count Error			29		%
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	TH-234			0.86		pCi/g
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	TH-234 Count Error			31		%
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	TL-208			0.24		pCi/g
W09GR00524	B218R9	Gamma Energy Analysis-grd H2O	TL-208 Count Error			14		%
W09GR00525	B218T0	Gamma Energy Analysis-grd H2O	AC-228			0.78		pCi/g
W09GR00525	B218T0	Gamma Energy Analysis-grd H2O	AC-228 Count Error			33		%
W09GR00525	B218T0	Gamma Energy Analysis-grd H2O	BI-212			0.48		pCi/g
W09GR00525	B218T0	Gamma Energy Analysis-grd H2O	BI-212 Count Error			33		%

RQ = Result Qualifier

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Groundwater Remediation Program

WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

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

**Group #:** WSCF20090766  
**Department:** Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				0.69	pCi/g
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				22	%
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				14	pCi/g
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				13	%
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				0.79	pCi/g
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				12	%
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				1.2	pCi/g
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				43	%
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				0.58	pCi/g
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				18	%
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				0.75	pCi/g
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				21	%
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				0.27	pCi/g
W09GR00525	B218T0	GPP	Gamma Energy Analysis-grd H20				17	%
W09GR00526	B218T1	GPP	Gamma Energy Analysis-grd H20				0.74	pCi/g
W09GR00526	B218T1	GPP	Gamma Energy Analysis-grd H20				29	%
W09GR00526	B218T1	GPP	Gamma Energy Analysis-grd H20				0.83	pCi/g
W09GR00526	B218T1	GPP	Gamma Energy Analysis-grd H20				23	%
W09GR00526	B218T1	GPP	Gamma Energy Analysis-grd H20				14	pCi/g
W09GR00526	B218T1	GPP	Gamma Energy Analysis-grd H20				13	%
W09GR00526	B218T1	GPP	Gamma Energy Analysis-grd H20				0.90	pCi/g
W09GR00526	B218T1	GPP	Gamma Energy Analysis-grd H20				12	%
W09GR00526	B218T1	GPP	Gamma Energy Analysis-grd H20				1.0	pCi/g
W09GR00526	B218T1	GPP	Gamma Energy Analysis-grd H20				44	%
W09GR00526	B218T1	GPP	Gamma Energy Analysis-grd H20				0.71	pCi/g

**RQ=Result Qualifier**

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**Groundwater Remediation Program**

WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF TENTATIVELY IDENTIFIED PEAK REPORT

Attention:  
Project Number

Steve Trent  
F09-049 :F09-049

Group #:  
Department:

WSCF20090766  
Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00526	B218T1	Gamma Energy Analysis-grd H2O	RA-226 Count Error				17	%
W09GR00526	B218T1	Gamma Energy Analysis-grd H2O	RA-228				0.79	pCi/g
W09GR00526	B218T1	Gamma Energy Analysis-grd H2O	RA-228 Count Error				22	%
W09GR00526	B218T1	Gamma Energy Analysis-grd H2O	SN-126				0.18	pCi/g
W09GR00526	B218T1	Gamma Energy Analysis-grd H2O	SN-126 Count Error				37	%
W09GR00526	B218T1	Gamma Energy Analysis-grd H2O	TL-208				0.27	pCi/g
W09GR00526	B218T1	Gamma Energy Analysis-grd H2O	TL-208 Count Error				18	%
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	AC-228				0.85	pCi/g
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	AC-228 Count Error				32	%
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	BI-212				0.50	pCi/g
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	BI-212 Count Error				43	%
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	BI-214				0.76	pCi/g
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	BI-214 Count Error				21	%
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	K-40				15	pCi/g
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	PB-212				0.96	pCi/g
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	PB-212 Count Error				10	%
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	PB-214				1.4	pCi/g
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	PB-214 Count Error				31	%
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	RA-226				0.69	pCi/g
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	RA-226 Count Error				17	%
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	RA-228				0.77	pCi/g
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	RA-228 Count Error				21	%
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	SN-126				0.23	pCi/g
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	SN-126 Count Error				36	%

**RQ = Result Qualifier**

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Groundwater Remediation Program

WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention:  
Project Number

Steve Trent  
F09-049 :F09-049

Group #:  
Department:

WSCF20090766  
Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	TH-234				1.4	pCi/g
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	TH-234 Count Error				42	%
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	TL-208				0.24	pCi/g
W09GR00527	B218T2	Gamma Energy Analysis-grd H2O	TL-208 Count Error				21	%
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	AC-228				0.79	pCi/g
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	AC-228 Count Error				30	%
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	BI-212				0.51	pCi/g
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	BI-212 Count Error				44	%
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	BI-214				0.86	pCi/g
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	BI-214 Count Error				19	%
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	K-40				14	pCi/g
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	PB-212				0.87	pCi/g
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	PB-212 Count Error				12	%
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	PB-214				1.2	pCi/g
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	PB-214 Count Error				39	%
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	RA-226				0.62	pCi/g
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	RA-226 Count Error				18	%
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	RA-228				0.75	pCi/g
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	RA-228 Count Error				21	%
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	TL-208				0.26	pCi/g
W09GR00528	B218T4	Gamma Energy Analysis-grd H2O	TL-208 Count Error				20	%
W09GR00529	B218T6	Gamma Energy Analysis-grd H2O	AC-228				0.69	pCi/g
W09GR00529	B218T6	Gamma Energy Analysis-grd H2O	AC-228 Count Error				20	%
W09GR00529	B218T6	Gamma Energy Analysis-grd H2O	BI-212				0.50	pCi/g

RQ=Result Qualifier

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Groundwater Remediation Program

WGPPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent  
Project Number F09-049

F09-049 :F09-049

Group #: WSCF20090766  
Department: Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				25	%
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				0.70	pCi/g
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				14	%
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				0.038	pCi/g
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				46	%
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				14	pCi/g
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				12	%
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				0.78	pCi/g
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				9.1	%
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				1.0	pCi/g
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				26	%
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				0.55	pCi/g
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				15	%
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				0.80	pCi/g
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				16	%
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				0.14	pCi/g
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				26	%
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				0.24	pCi/g
W09GR00529	B218T6	GPP	Gamma Energy Analysis-grd H2O				15	%
W09GR00530	B218T7	GPP	Gamma Energy Analysis-grd H2O				0.96	pCi/g
W09GR00530	B218T7	GPP	Gamma Energy Analysis-grd H2O				26	%
W09GR00530	B218T7	GPP	Gamma Energy Analysis-grd H2O				0.66	pCi/g
W09GR00530	B218T7	GPP	Gamma Energy Analysis-grd H2O				30	%
W09GR00530	B218T7	GPP	Gamma Energy Analysis-grd H2O				0.70	pCi/g
W09GR00530	B218T7	GPP	Gamma Energy Analysis-grd H2O				22	%

RQ=Result Qualifier

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Groundwater Remediation Program

WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

**Attention:**  
**Project Number**

Steve Trent  
F09-049

**Group #:** WSCF20090766  
**Department:** Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	CS-134				0.052	pCi/g
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	CS-134 Count Error				45	%
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	K-40				14	pCi/g
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	PB-212				1.0	pCi/g
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	PB-212 Count Error				10	%
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	PB-214				1.1	pCi/g
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	PB-214 Count Error				31	%
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	RA-226				0.54	pCi/g
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	RA-226 Count Error				21	%
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	RA-228				0.86	pCi/g
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	RA-228 Count Error				18	%
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	SN-126				0.20	pCi/g
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	SN-126 Count Error				39	%
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	TH-234				0.89	pCi/g
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	TH-234 Count Error				50	%
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	TL-208				0.27	pCi/g
W09GR00530	B218T7	Gamma Energy Analysis-grd H2O	TL-208 Count Error				20	%
W09GR00531	B218T8	Gamma Energy Analysis-grd H2O	AC-228				0.65	pCi/g
W09GR00531	B218T8	Gamma Energy Analysis-grd H2O	AC-228 Count Error				39	%
W09GR00531	B218T8	Gamma Energy Analysis-grd H2O	BI-212				0.70	pCi/g
W09GR00531	B218T8	Gamma Energy Analysis-grd H2O	BI-212 Count Error				31	%
W09GR00531	B218T8	Gamma Energy Analysis-grd H2O	BI-214				0.69	pCi/g
W09GR00531	B218T8	Gamma Energy Analysis-grd H2O	BI-214 Count Error				22	%
W09GR00531	B218T8	Gamma Energy Analysis-grd H2O	K-40				15	pCi/g

**RQ=Result Qualifier**

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*Groundwater Remediation Program*

WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

**Attention:**  
**Project Number**

Steve Trent  
F09-049 :F09-049

**Group #:** WSCF20090766  
**Department:** Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00531	B21878	Gamma Energy Analysis-grd H20	K-40 Count Error				13	%
W09GR00531	B21878	Gamma Energy Analysis-grd H20	PB-212				0.92	pCi/g
W09GR00531	B21878	Gamma Energy Analysis-grd H20	PB-212 Count Error				12	%
W09GR00531	B21878	Gamma Energy Analysis-grd H20	PB-214				1.1	pCi/g
W09GR00531	B21878	Gamma Energy Analysis-grd H20	PB-214 Count Error				41	%
W09GR00531	B21878	Gamma Energy Analysis-grd H20	RA-226				0.54	pCi/g
W09GR00531	B21878	Gamma Energy Analysis-grd H20	RA-226 Count Error				18	%
W09GR00531	B21878	Gamma Energy Analysis-grd H20	RA-228				0.79	pCi/g
W09GR00531	B21878	Gamma Energy Analysis-grd H20	RA-228 Count Error				21	%
W09GR00531	B21878	Gamma Energy Analysis-grd H20	TL-208				0.26	pCi/g
W09GR00531	B21878	Gamma Energy Analysis-grd H20	TL-208 Count Error				20	%
W09GR00532	B21879	Gamma Energy Analysis-grd H20	AC-228				0.81	pCi/g
W09GR00532	B21879	Gamma Energy Analysis-grd H20	AC-228 Count Error				29	%
W09GR00532	B21879	Gamma Energy Analysis-grd H20	BI-212				0.64	pCi/g
W09GR00532	B21879	Gamma Energy Analysis-grd H20	BI-212 Count Error				36	%
W09GR00532	B21879	Gamma Energy Analysis-grd H20	BI-214				0.75	pCi/g
W09GR00532	B21879	Gamma Energy Analysis-grd H20	BI-214 Count Error				22	%
W09GR00532	B21879	Gamma Energy Analysis-grd H20	K-40				14	pCi/g
W09GR00532	B21879	Gamma Energy Analysis-grd H20	K-40 Count Error				13	%
W09GR00532	B21879	Gamma Energy Analysis-grd H20	PB-212				0.81	pCi/g
W09GR00532	B21879	Gamma Energy Analysis-grd H20	PB-212 Count Error				14	%
W09GR00532	B21879	Gamma Energy Analysis-grd H20	PB-214				1.3	pCi/g
W09GR00532	B21879	Gamma Energy Analysis-grd H20	PB-214 Count Error				35	%
W09GR00532	B21879	Gamma Energy Analysis-grd H20	RA-226				0.50	pCi/g
W09GR00532	B21879	Gamma Energy Analysis-grd H20	RA-226 Count Error				20	%

**RQ=Result Qualifier**

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*Groundwater Remediation Program*

WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

**Attention:**  
**Project Number**

Steve Trent  
F09-049 :F09-049

**Group #:** WSCF20090766  
**Department:** Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00532	B218T9	GPP	Gamma Energy Analysis-grd H2O				0.70	pCi/g
W09GR00532	B218T9	GPP	Gamma Energy Analysis-grd H2O				22	%
W09GR00532	B218T9	GPP	Gamma Energy Analysis-grd H2O				0.24	pCi/g
W09GR00532	B218T9	GPP	Gamma Energy Analysis-grd H2O				21	%
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				0.69	pCi/g
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				26	%
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				0.73	pCi/g
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				18	%
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				13	pCi/g
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				13	%
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				0.77	pCi/g
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				11	%
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				1.1	pCi/g
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				31	%
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				0.55	pCi/g
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				18	%
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				0.72	pCi/g
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				22	%
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				0.11	pCi/g
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				49	%
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				1.6	pCi/g
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				48	%
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				0.23	pCi/g
W09GR00533	B218V0	GPP	Gamma Energy Analysis-grd H2O				18	%
W09GR00534	B218V1	GPP	Gamma Energy Analysis-grd H2O				0.72	pCi/g

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WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention:  
Project Number

Steve Trent  
F09-049 :F09-049

Group #:  
Department:

WSCF20090766  
Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	AC-228 Count Error			34	%	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	BI-212			0.66	pCi/g	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	BI-212 Count Error			33	%	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	BI-214			0.76	pCi/g	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	BI-214 Count Error			17	%	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	K-40			16	pCi/g	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	K-40 Count Error			13	%	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	PB-212			0.83	pCi/g	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	PB-212 Count Error			12	%	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	PB-214			0.97	pCi/g	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	PB-214 Count Error			44	%	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	RA-226			0.60	pCi/g	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	RA-226 Count Error			18	%	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	RA-228			0.73	pCi/g	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	RA-228 Count Error			21	%	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	TL-208			0.24	pCi/g	
W09GR00534	B218V1	Gamma Energy Analysis-grd H20	TL-208 Count Error			19	%	
W09GR00535	B218V2	Gamma Energy Analysis-grd H20	AC-228			0.70	pCi/g	
W09GR00535	B218V2	Gamma Energy Analysis-grd H20	AC-228 Count Error			32	%	
W09GR00535	B218V2	Gamma Energy Analysis-grd H20	BI-212			0.56	pCi/g	
W09GR00535	B218V2	Gamma Energy Analysis-grd H20	BI-212 Count Error			43	%	
W09GR00535	B218V2	Gamma Energy Analysis-grd H20	BI-214			0.69	pCi/g	
W09GR00535	B218V2	Gamma Energy Analysis-grd H20	BI-214 Count Error			21	%	
W09GR00535	B218V2	Gamma Energy Analysis-grd H20	K-40			14	pCi/g	
W09GR00535	B218V2	Gamma Energy Analysis-grd H20	K-40 Count Error			13	%	

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Groundwater Remediation Program

WGPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Group #: WSCF20090766  
 Department: Radiochemistry

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

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	PB-212				0.90	pCi/g
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	PB-212 Count Error				10	%
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	PB-214				1.2	pCi/g
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	PB-214 Count Error				38	%
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	RA-226				0.53	pCi/g
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	RA-226 Count Error				21	%
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	RA-228				0.71	pCi/g
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	RA-228 Count Error				22	%
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	SN-126				0.16	pCi/g
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	SN-126 Count Error				41	%
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	TH-234				1.1	pCi/g
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	TH-234 Count Error				40	%
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	TL-208				0.28	pCi/g
W09GR00535	B218V2	Gamma Energy Analysis-grd H2O	TL-208 Count Error				19	%

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Groundwater Remediation Program

WGPPE v 5.2 Report#: WSCF20090766 Report Date: 14-aug-2009

# WSCF ANALYTICAL COMMENT REPORT

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

**Group #:** WSCF20090766  
**Department:** Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Cs-137/GEA dup is flagged for poor RPD but the sample activity is near detection. RPD criterion does not apply. lmh

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

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# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20090766  
 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	
<b>Lab ID: W09GR00515</b>												
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>												
DUP	Cesium-137	10045-97-3	U-1.047e-2		RPD			n/a	20.000		08/11/09	
<b>BATCH QC</b>												
BLANK	Cesium-137	10045-97-3	U2.847e-3	n/a	pCi/g	-10.000	1000.000				08/11/09	
LCS	Cesium-137	10045-97-3	6484	107.351	% Recov	80.000	120.000				08/11/09	
<b>Lab ID: W09GR00532</b>												
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>												
DUP	Cesium-137	10045-97-3	2.75e-2		RPD			39.627	20.000 •		08/13/09	
<b>BATCH QC</b>												
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: WSCF20090766  
 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
<b>Lab ID: W09GR00524</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Sr-85 Tracer by Beta Counting	SR85	95.3	95.300	% Recov	30.000	105.000				08/10/09
DUP	Strontium-89/90	SR-RAD	U-1.1		RPD			n/a	20.000		08/10/09
SURR	Sr-85 Tracer by Beta Counting	SR85	84.1	84.100	% Recov	30.000	105.000				08/10/09
<b>Lab ID: W09GR00525</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	100.7	100.700	% Recov	30.000	105.000				08/10/09
<b>Lab ID: W09GR00526</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	94	94.000	% Recov	30.000	105.000				08/10/09
<b>Lab ID: W09GR00527</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	99.5	99.500	% Recov	30.000	105.000				08/10/09
<b>Lab ID: W09GR00528</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	94.4	94.400	% Recov	30.000	105.000				08/10/09
<b>Lab ID: W09GR00529</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	89	89.000	% Recov	30.000	105.000				08/10/09
<b>Lab ID: W09GR00530</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20090766  
 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
SURR	Sr-85 Tracer by Beta Counting	SR85	98.4	98.400	% Recov	30,000	105,000				08/10/09
<b>Lab ID: W09GR00531</b> <b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	92.7	92.700	% Recov	30,000	105,000				08/10/09
<b>Lab ID: W09GR00532</b> <b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	89.1	89.100	% Recov	30,000	105,000				08/10/09
<b>BATCH QC</b>											
BLANK	Sr-85 Tracer by Beta Counting	SR85	85	85,000	% Recov	30,000	105,000				08/10/09
BLANK	Strontium-89/90	10098-97-2	U-1.0E-01	n/a	pCi/g	-10,000	300,000				08/10/09
LCS	Sr-85 Tracer by Beta Counting	SR85	99.2	99.200	% Recov	30,000	105,000				08/10/09
LCS	Strontium-89/90	10098-97-2	71.9	102.714	% Recov	80,000	120,000				08/10/09
<b>Lab ID: W09GR00515</b> <b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Sr-85 Tracer by Beta Counting	SR85	96.6	96.600	% Recov	30,000	105,000				08/10/09
DUP	Strontium-89/90	SR-RAD	U-2.8E-01		RPD			n/a	20,000		08/10/09
SURR	Sr-85 Tracer by Beta Counting	SR85	89.5	89.500	% Recov	30,000	105,000				08/10/09
<b>Lab ID: W09GR00516</b> <b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	99.8	99.800	% Recov	30,000	105,000				08/10/09
<b>Lab ID: W09GR00517</b> <b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	93.7	93.700	% Recov	30,000	105,000				08/10/09

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20090766  
 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
<b>Lab ID: W09GR00518</b> <b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	90.9	90.900	% Recov	30.000	105.000		105.000		08/10/09
<b>Lab ID: W09GR00519</b> <b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	91.4	91.400	% Recov	30.000	105.000		105.000		08/10/09
<b>Lab ID: W09GR00520</b> <b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	89.1	89.100	% Recov	30.000	105.000		105.000		08/10/09
<b>Lab ID: W09GR00521</b> <b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	93.7	93.700	% Recov	30.000	105.000		105.000		08/10/09
<b>Lab ID: W09GR00522</b> <b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	84.5	84.500	% Recov	30.000	105.000		105.000		08/10/09
<b>Lab ID: W09GR00523</b> <b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	91.8	91.800	% Recov	30.000	105.000		105.000		08/10/09
<b>BATCH QC</b>											
BLANK	Sr-85 Tracer by Beta Counting	SR85	89.4	89.400	% Recov	30.000	105.000		105.000		08/10/09
BLANK	Strontium-89/90	10098-97-2	U-3.8E-01	n/a	pCi/g	-10.000	300.000		300.000		08/10/09
LCS	Sr-85 Tracer by Beta Counting	SR85	94.8	94.800	% Recov	30.000	105.000		105.000		08/10/09
LCS	Strontium-89/90	10098-97-2	69.5	99.286	% Recov	80.000	120.000		120.000		08/10/09

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20090766  
 Matrix: SOLID  
 Test: Strontium 89/90

Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W09GR00533</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
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
SURR	Sr-85 Tracer by Beta Counting	SR85	91.2	91.200	% Recov	30.000	105.000				08/10/09
<b>Lab ID: W09GR00534</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	94.1	94.100	% Recov	30.000	105.000				08/10/09
<b>Lab ID: W09GR00535</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	86.1	86.100	% Recov	30.000	105.000				08/10/09
<b>BATCH QC</b>											
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

M4W41-SLF-09-228

ATTACHMENT 4

**SAMPLE RECEIPT INFORMATION**

Consisting of 24 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

08/17/09  
td

Groundwater Remediation Program

Richland, WA 99354  
Attn: Steve Trent

Customer Code: GPP  
PO#: 302222/ES10  
Group#: 20090766  
Project#: F09-049  
Proj Mgr: STEVE TRENT  
Phone: 373-5869



The following samples were received from you on 08/06/09. 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
W09GR00515	B218R0	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00516	B218R1	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00517	B218R2	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00518	B218R3	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00519	B218R4	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00520	B218R5	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00521	B218R6	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00522	B218R7	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00523	B218R8	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00524	B218R9	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00525	B218T0	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00526	B218T1	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00527	B218T2	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00528	B218T4	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00529	B218T6	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09

Groundwater Remediation Program

Richland, WA 99354  
 Attn: Steve Trent

Customer Code: GPP  
 PO#: 302222/ES10  
 Group#: 20090766  
 Project#: F09-049  
 Proj Mgr: STEVE TRENT  
 Phone: 373-5869

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W09GR00530	B218T7	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00531	B218T8	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00532	B218T9	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00533	B218V0	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00534	B218V1	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09
W09GR00535	B218V2	GPP @GEA-GPP @SR89_90	Solid, or handle as if solid	08/06/09

Test Acronym Description

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

COMPANY CONTACT  
WIDRIG, DL

TELEPHONE NO.  
376-2858

PROJECT COORDINATOR  
WIDRIG, DL

PRICE CODE  
8N

AIR QUALITY

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

DATA TURNAROUND  
45 Days / 45 Days

PROJECT DESIGNATION  
BC Controlled Area Remediation - Verification Soil Sampling

FIELD LOGBOOK NO.  
HMF-N-5863

ACTUAL SAMPLE DEPTH  
NA

SAF NO.  
F09-049

COA  
302222ES10

BILL OF LADING/AIR BILL NO.  
N/A

OFFSITE PROPERTY NO.  
N/A

PRESERVATION  
None

TYPE OF CONTAINER  
Square Bottle - Poly

NO. OF CONTAINER(S)  
1

VOLUME  
500ml

SAMPLE ANALYSIS  
Gamma Spectroscopy (Cesium-137)  
Strontium-89,90 - Total Sr;

SAMPLE NO.  
B218R0

MATRIX\*  
SOIL

SAMPLE DATE  
8-6-09

SAMPLE TIME  
0853

SPECIAL HANDLING AND/OR STORAGE  
W09GR00515

COLLECTOR  
F. H. H. 08/17/09

SAMPLING LOCATION  
BCCA SU-1-1

ICE CHEST NO.

SHIPPED TO  
Waste Sampling & Characterization 20090766

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)

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
F. H. H.	8-10-09 1400	TAFAZINA	8/16/09 1400

LABORATORY SECTION

RECEIVED BY

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

TITLE

DISPOSED BY

DATE/TIME

DATE/TIME

SPECIAL INSTRUCTIONS

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

ORIGINAL

59 of 79

COMPANY CONTACT  
WIDRIG, DL  
TELEPHONE NO.  
376-2858

PROJECT COORDINATOR  
WIDRIG, DL

PRICE CODE  
8N

AIR QUALITY

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

DATA  
TURNAROUND  
-45 Days / 45 Days  
7 day  
OK 1/29/09

PROJECT DESIGNATION  
BC Controlled Area Remediation - Verification Soil Sampling

FIELD LOGBOOK NO.  
HNF-N-5853

ACTUAL SAMPLE DEPTH  
N/A

SAF NO.  
F09-049

COA  
302222ES10

BILL OF LADING/AIR BILL NO.  
N/A

OFFSITE PROPERTY NO.  
N/A

COMPANY CONTACT  
WIDRIG, DL

PROJECT DESIGNATION  
BC Controlled Area Remediation - Verification Soil Sampling

FIELD LOGBOOK NO.  
HNF-N-5853

ACTUAL SAMPLE DEPTH  
N/A

COLLECTOR  
Fujita

SAMPLING LOCATION  
BCCA SU-1-2

ICE CHEST NO.

SHIPPED TO  
Waste Sampling & Characterization

PRECISION  
None

TYPE OF CONTAINER  
G/P

NO. OF CONTAINER(S)  
1

VOLUME  
500mL

PRESERVATION  
None

SAMPLE ANALYSIS  
Strontium-89,90 - Total Sr;  
Gamma Spectroscopy (Cesium-137)

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B218R1	5/6 SOIL	8-6-09	0858 ✓

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Fujita	8-6-09 1400	TA FIAZ/EN Gou...	8-6-09 1400

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

SPECIAL INSTRUCTIONS

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



COMPANY CONTACT  
WIDRIG, DL  
TELEPHONE NO.  
376-2858

PROJECT COORDINATOR  
WIDRIG, DL

PRICE CODE  
8N

AIR QUALITY

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

DATA  
TURNAROUND  
-45 Days / 45 Days  
7 Day  
Date 7/24/09

PROJECT DESIGNATION  
BC Controlled Area Remediation - Verification Soil Sampling

FIELD LOGBOOK NO.  
HNF-N-S953

ACTUAL SAMPLE DEPTH  
NA

COA  
302222ES10

OFFSITE PROPERTY NO.  
N/A

BILL OF LADING/AIR BILL NO.  
N/A

COLLECTOR  
Fujita

SAMPLING LOCATION  
BCCA SU-1-3

ICE CHEST NO.  
-

SHIPPED TO  
Waste Sampling & Characterization

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
A=Air DL=Drum L=Liquid O=Oil S=Soil SF=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	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)	None	Square Bottle - Poly	1	500ml	Gamma Spectroscopy (Cesium-137)
		None		1	120ml	Strontium-89,90 - Total Sr

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	SIGN/ PRINT NAMES	RECEIVED BY/STORED IN	DATE/TIME
B218R2	517 SOIL	8-6-09	0904		TA F. NAZARIN	8/6/09 1400

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C. Fujita	8-6-09 1400	TA F. NAZARIN	8/6/09 1900

SPECIAL INSTRUCTIONS

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

ORIGINAL

COLLECTOR  
**Fulton**

COMPANY CONTACT  
WIDRIG, DL  
376-2858

PROJECT COORDINATOR  
WIDRIG, DL

PRICE CODE  
8N

DATA  
TURNAROUND  
7-45 Days / 45 Days  
10/27/07

SAMPLING LOCATION  
BCCA SU-1-4

PROJECT DESIGNATION  
BC Controlled Area Remediation - Verification Soil Sampling

SAF NO.  
F09-049

AIR QUALITY

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

ICE CHEST NO.

FIELD LOGBOOK NO.  
ANS-N-585-3

COA  
302222ES10

SHIPPED TO

BILL OF LADING/AIR BILL NO.  
N/A

Waste Sampling & Characterization

**MATRIX\***  
A=Air  
DL=Drum  
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)

None

PRESERVATION

TYPE OF CONTAINER  
Square Bottle - Poly

None

NO. OF CONTAINER(S)  
1

1

VOLUME  
500mL

120mL

SPECIAL HANDLING AND/OR STORAGE

SAMPLE ANALYSIS  
Gamma Spectroscopy (Cesium-137)  
Strontium-89,90 -- Total Sr;

SAMPLE NO.  
B218R3

MATRIX\*  
518 SOIL

SAMPLE DATE  
8-6-09

SAMPLE TIME  
0916

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM  
*[Signature]* 8-6-09 1400

RECEIVED BY/STORED IN  
TAFARZEN JELANI 8/6/09 1400

\*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GK1 applies to this SAF.

RELINQUISHED BY/REMOVED FROM

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

TITLE

DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

**ORIGINAL**

CH2MHill Plateau Remediation Company

COLLECTOR: *Fulton*

SAMPLING LOCATION: BCCA SU-1-5

ICE CHEST NO.:

SHIPPED TO: Waste Sampling & Characterization

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

COMPANY CONTACT: WIDRIG, DL 376-2858

PROJECT COORDINATOR: WIDRIG, DL

PHONE NO.:

PROJECT DESIGNATION: BC Controlled Area Remediation - Verification Soil Sampling

SAF NO.:

PRICE CODE: 8N

DATA TURNAROUND: 7 Days / 45 Days

FIELD LOGBOOK NO.:

ACTUAL SAMPLE DEPTH: N/A

OFFSITE PROPERTY NO.:

COA: 302222ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

BILL OF LADING/AIR BILL NO.:

N/A

F09-049-005

PAGE 1 OF 1

PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS	SAMPLE DATE	SAMPLE TIME
None	Square Bottle - Poly	1	500mL	Gamma Spectroscopy (Cesium-137)	8-6-09	0920 ✓
None	G/P	1	120mL	Strontium-89,90 - Total Sr		✓

SPECIAL INSTRUCTIONS

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

ORIGINAL

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>Fulton</i>	8-6-09 1400	<i>TAFRAZIEA Jenera</i>	8/6/09 1400

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSAL METHOD

TITLE

DISPOSED BY

DATE/TIME

DATE/TIME

CH2MH11 Plateau Remediation Company  
**COLLECTOR** Futor  
**SAMPLING LOCATION**  
 BCCA SU-1-6  
**ICE CHEST NO.**  
**SHIPPED TO**  
 Waste Sampling & Characterization

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**  
**COMPANY CONTACT** WIDRIG, DL 376-2858  
**PROJECT DESIGNATION** BC Controlled Area Remediation - Verification Soil Sampling  
**FIELD LOGBOOK NO.** HMF-N-585-3  
**OFFSITE PROPERTY NO.** N/A  
**TELEPHONE NO.** 376-2858  
**PROJECT COORDINATOR** WIDRIG, DL  
**SAF NO.** F09-049  
**COA** 302222ES10  
**PRICE CODE** 8N  
**AIR QUALITY**   
**METHOD OF SHIPMENT** GOVERNMENT VEHICLE  
**BILL OF LADING/AIR BILL NO.** N/A  
**DATE** 7/24/09  
**PAGE 1 OF 1**

**PRESERVATION** None  
**TYPE OF CONTAINER** Square Bottle - Poly  
**NO. OF CONTAINER(S)** 1  
**VOLUME** 500mL  
**SAMPLE ANALYSIS** Gamma Spectrometry (Cesium-137)  
**SPECIAL HANDLING AND/OR STORAGE**  
**SAMPLE NO.** B218R5  
**MATRIX\*** 520 SOIL  
**SAMPLE DATE** 8-6-09  
**SAMPLE TIME** 0925

CHAIN OF POSSESSION	SIGN / PRINT NAMES	RECEIVED BY / STORED IN	DATE/TIME
RELINQUISHED BY / REMOVED FROM Futor		JA FADZIE R. Velazquez	8/6/09 1400
RELINQUISHED BY / REMOVED FROM			
RELINQUISHED BY / REMOVED FROM			
RELINQUISHED BY / REMOVED FROM			
RELINQUISHED BY / REMOVED FROM			
RELINQUISHED BY / REMOVED FROM			
RELINQUISHED BY / REMOVED FROM			

**SPECIAL INSTRUCTIONS**

\*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GK1 applies to this SAF.

 ORIGINAL

**COLLECTOR**  
Fulton

**SAMPLING LOCATION**  
BCCA SU-1-7

**ICE CHEST NO.**  
—

**SHIPPED TO**  
Waste Sampling & Characterization

**COMPANY CONTACT**  
WIDRIG, DL  
376-2858

**PROJECT COORDINATOR**  
WIDRIG, DL

**PROJECT DESIGNATION**  
BC Controlled Area Remediation - Verification Soil Sampling

**FIELD LOGBOOK NO.**  
N/A

**OFFSITE PROPERTY NO.**  
N/A

**TELEPHONE NO.**  
376-2858

**SAF NO.**  
F09-049

**COA**  
302222ES10

**PRICE CODE**  
8N

**AIR QUALITY**

**METHOD OF SHIPMENT**  
GOVERNMENT VEHICLE

**ACTUAL SAMPLE DEPTH**  
N/A

**BILL OF LADING/AIR BILL NO.**  
N/A

**DATA TURNAROUND**  
7 AS Days / 45 Days  
8/2 7/29/09

**MATRIX\***  
A=Air  
DL=Drum  
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

**TYPE OF CONTAINER**  
Square Bottle - Poly

**NO. OF CONTAINER(S)**  
1

**VOLUME**  
500mL

**SAMPLE ANALYSIS**  
Gamma Spectroscopy (Caesium-137)  
Strontium-89,90 - Total Sr;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B218R6	SOIL	8-6-09	0940

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.	
<i>Fulton</i>	8-6-09 1400	<i>TA FARRER</i>	8/6/09 1400	<p><b>ORIGINAL</b></p>	
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		

**COLLECTOR**  
Futur

**COMPANY CONTACT**  
WIDRIG, DL  
TELEPHONE NO. 376-2858

**PROJECT COORDINATOR**  
WIDRIG, DL

**PRICE CODE** 8N

**DATA TURNAROUND**  
7 Days / 45 Days  
ADP 7/25/09

**SAMPLING LOCATION**  
BCCA SU-1-8

**PROJECT DESIGNATION**  
BC Controlled Area Remediation - Verification Soil Sampling

**AIR QUALITY**

**METHOD OF SHIPMENT**  
GOVERNMENT VEHICLE

**ICE CHEST NO.**

**FIELD LOGBOOK NO.**  
HNF-N-595-3

**ACTUAL SAMPLE DEPTH**  
N/A

**SAF NO.**  
F09-049

**COA**  
302222ES10

**BILL OF LADING/AIR BILL NO.**  
N/A

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
A=Air DL=Drum L=Liquid DS=Drum S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	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)	None Square Bottle - Poly G/P	1	500ml	Strontium Spectroscopy (Caesium-137)
		None	1	120ml	

**SPECIAL HANDLING AND/OR STORAGE**

**SAMPLE NO.** B218R7

**MATRIX\*** 522 SOIL

**SAMPLE DATE** 8-6-09

**SAMPLE TIME** 0945

**CHAIN OF POSSESSION**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Ch2M Hill Plateau Remediation Company	8-6-09 1400	JAF FAZLER	8/6/09 1403
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**

**DISPOSAL METHOD**

**FINAL SAMPLE DISPOSITION**

**TITLE**

**DISPOSED BY**

**DATE/TIME**





COLLECTOR

COMPANY CONTACT

TELEPHONE NO.

PROJECT COORDINATOR

PRICE CODE

DATA TURNAROUND

*Fulton*

8N

7 Days / 45 Days  
7/25/09

SAMPLING LOCATION

PROJECT DESIGNATION

PROJECT COORDINATOR

SAF NO.

AIR QUALITY

METHOD OF SHIPMENT

BCCA SU-1-10

BC Controlled Area Remediation - Verification Soil Sampling

WIDRIG, DL

376-2858

WIDRIG, DL

AIR QUALITY

7 Days / 45 Days  
7/25/09

ICE CHEST NO.

FIELD LOGBOOK NO.

ACTUAL SAMPLE DEPTH

COA

GOVERNMENT VEHICLE

METHOD OF SHIPMENT

7 Days / 45 Days  
7/25/09

SHIPPED TO

OFFSITE PROPERTY NO.

N/A

N/A

N/A

GOVERNMENT VEHICLE

7 Days / 45 Days  
7/25/09

MATRIX\*

POSSIBLE SAMPLE HAZARDS/ REMARKS

PRESERVATION

TYPE OF CONTAINER

NO. OF CONTAINER(S)

VOLUME

SAMPLE ANALYSIS

SAMPLE DATE

SAMPLE TIME

MATRIX\*

B218T0

525 SOIL

8-6-09 1015

None

1

500mL

Gamma Spectrometry (Cesium 137)

8-6-09 1015

None

None

SPECIAL HANDLING AND/OR STORAGE

RECEIVED BY/REMOVED FROM

RECEIVED BY/STORED IN

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/REMOVED FROM

RELINQUISHED BY/STORED IN

LABORATORY SECTION

RECEIVED BY

RECEIVED BY/STORED IN

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

TITLE

SPECIAL INSTRUCTIONS

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

SPECIAL INSTRUCTIONS

DATE/TIME

**COLLECTOR** *Fulton*

**COMPANY CONTACT** WIDRIG, DL  
**TELEPHONE NO.** 376-2858

**PROJECT COORDINATOR** WIDRIG, DL

**PRICE CODE** 8N

**DATA TURNAROUND** 7 <sup>45</sup>Days / 45 Days *102 7/29/09*

**SAMPLING LOCATION** BCCA SU-1-11

**PROJECT DESIGNATION** BC Controlled Area Remediation - Verification Soil Sampling

**AIR QUALITY**

**METHOD OF SHIPMENT** GOVERNMENT VEHICLE

**ICE CHEST NO.**

**FIELD LOGBOOK NO.** *HNF-N-585-3*

**ACTUAL SAMPLE DEPTH** *N/A*

**COA** 302222ES10

**BILL OF LADING/AIR BILL NO.** N/A

**SHIPPED TO** Waste Sampling & Characterization

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
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	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)	None	Square Bottle - Poly	1	500ml	Gamma Spectroscopy (Cesium-137)
		None		1	120ml	Strontium Spectroscopy (Total Sr)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B218T1	SOIL	8-6-09	1020

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM <i>Fulton</i>		J A F RAZIA Jareza	8/6/09 1400
RELINQUISHED BY/REMOVED FROM			8/6/09 1400
RELINQUISHED BY/REMOVED FROM			
LABORATORY SECTION	RECEIVED BY		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		

**SPECIAL INSTRUCTIONS**

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

**ORIGINAL**

**COLLECTOR**  
Fulton  
WIDRIG, DL

**COMPANY CONTACT**  
WIDRIG, DL

**PROJECT COORDINATOR**  
WIDRIG, DL

**PRICE CODE** 8N  
**AIR QUALITY**   
**DATA TURNAROUND** 7 Days / 45 Days  
8/2 7/2/01

**SAMPLING LOCATION**  
BCA SU-1-12

**PROJECT DESIGNATION**  
BC Controlled Area Remediation - Verification Soil Sampling

**SAF NO.** F09-049  
**COA** 302222ES10  
**METHOD OF SHIPMENT** GOVERNMENT VEHICLE

**ICE CHEST NO.**

**FIELD LOGBOOK NO.** HNF-N-5853  
**ACTUAL SAMPLE DEPTH** 2 ft

**BILL OF LADING/AIR BILL NO.** N/A

**SHIPPED TO**  
Waste Sampling & Characterization

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

**PRESERVATION** None  
**TYPE OF CONTAINER** Square Bottle - Poly  
**NO. OF CONTAINER(S)** 1

**VOLUME** 500mL  
**SAMPLE ANALYSIS** Gamma Spectrometry (Cesium-137)  
Strontium-89,90 -- Total Sr;

**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**

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B218T2	SOIL	8-6-09	1025

**CHAIN OF POSSESSION**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
C. Fulton	8-1-09 1400	TR. F. RAZIEN	8/6/09 1400
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**

RECEIVED BY

DISPOSAL METHOD

TITLE

DISPOSED BY

DATE/TIME

DATE/TIME

**COLLECTOR** Fulton

**SAMPLING LOCATION**  
 BCCA SU-1-13

**ICE CHEST NO.**

**COMPANY CONTACT**  
 WIDRIG, DL

**TELEPHONE NO.**  
 376-2858

**PROJECT COORDINATOR**  
 WIDRIG, DL

**PRICE CODE** 8N

**DATA TURNAROUND**  
 7 AS Days / 45 Days

**PROJECT DESIGNATION**  
 BC Controlled Area Remediation - Verification Soil Sampling

**SAF NO.** F09-049

**AIR QUALITY**

**METHOD OF SHIPMENT**  
 GOVERNMENT VEHICLE

**FIELD LOGBOOK NO.**  
 ANF-N-585-3

**ACTUAL SAMPLE DEPTH**  
 N/A

**COA** 302222ES10

**BILL OF LADING/AIR BILL NO.**  
 N/A

**SHIPPED TO**  
 Waste Sampling & Characterization

**PRESERVATION** None

**TYPE OF CONTAINER** Square Bottle - Poly

**NO. OF CONTAINER(S)** 1

**VOLUME** 500mL

**SAMPLE ANALYSIS** Gamma Spectroscopy (Cesium-137)

**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**

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B218T4	SOIL	8-6-09	1235

**CHAIN OF POSSESSION**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<u>Fulton</u>	8-6-09 1400	<u>[Signature]</u>	8/6/09 1400
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**



**COLLECTOR**  
Fulton

**SAMPLING LOCATION**  
BCCA SU-1-15

**ICE CHEST NO.**

**COMPANY CONTACT**  
WIDRIG, DL  
376-2858

**PROJECT DESIGNATION**  
BC Controlled Area Remediation - Verification Soil Sampling

**FIELD LOGBOOK NO.**  
HNF-N-SS-3

**ACTUAL SAMPLE DEPTH**  
N/A

**PROJECT COORDINATOR**  
WIDRIG, DL

**SAF NO.**  
F09-049

**PRICE CODE**  
8N

**AIR QUALITY**

**METHOD OF SHIPMENT**  
GOVERNMENT VEHICLE

**COA**  
302222ES10

**DATA TURNAROUND**  
7 Days / 45 Days  
A02 7/25/09

**BILL OF LADING/AIR BILL NO.**  
N/A

**SHIPPED TO**  
Waste Sampling & Characterization

**MATRIX\***  
A=Air  
DL=Drum  
L=Liquid  
DS=Drum  
S=Solid  
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)

**PRESERVATION**  
None

**TYPE OF CONTAINER**  
Square Bottle - Poly

**NO. OF CONTAINER(S)**  
1

**VOLUME**  
500ml

**SAMPLE ANALYSIS**  
Gamma Spectroscopy (Cesium-137)

**SPECIAL HANDLING AND/OR STORAGE**

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B2187	S30 SOIL	8-6-09	1300

**CHAIN OF POSSESSION**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Fulton	8-6-09 14:00	V. Stojanovic	8/6/09 14:00
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**

**DISPOSAL METHOD**

**FINAL SAMPLE DISPOSITION**

**TITLE**

**DISPOSED BY**

**DATE/TIME**

**COLLECTOR** FULTON  
**SAMPLING LOCATION** BCCA 5U-1-16  
**ICE CHEST NO.**  
**COMPANY CONTACT** WIDRIG, DL 376-2858  
**PROJECT DESIGNATION** BC Controlled Area Remediation - Verification Soil Sampling  
**FIELD LOGBOOK NO.** HNF-N-SSS-3  
**OFFSITE PROPERTY NO.** N/A  
**PROJECT COORDINATOR** WIDRIG, DL  
**SAF NO.** F09-049  
**COA** 302222E510  
**BILL OF LADING/AIR BILL NO.** N/A  
**PRICE CODE** 8N  
**AIR QUALITY**  
**METHOD OF SHIPMENT** GOVERNMENT VEHICLE  
**DATA TURNAROUND** 7 45 Days / 45 Days  
 19-2 7/29/09

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
A=Air DL=Drum L=Liquid DS=Drum S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	Waste Sampling & Characterization  Contains Radioactive Material at concentrations that may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	None	Square Bottle - Poly	1	500mL	Gamma Spectroscopy (Cesium-137)
		None	G/P	1	120mL	Strontium 89,90 - Total Sr

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B218T8	S31 SOIL	8-6-09	1256

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM FULTON		V. WIDRIG	8/6/09 1400
RELINQUISHED BY/REMOVED FROM			

RECEIVED BY	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

**LABORATORY SECTION** RECEIVED BY  
**FINAL SAMPLE DISPOSITION** DISPOSAL METHOD

**SPECIAL INSTRUCTIONS**

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

ORIGINAL

**COLLECTOR**  
Fulton

**SAMPLING LOCATION**  
BCCA SU-1-17

**ICE CHEST NO.**  
—

**SHIPPED TO**  
Waste Sampling & Characterization

**COMPANY CONTACT**  
WIDRIG, DL

**TELEPHONE NO.**  
376-2858

**PROJECT COORDINATOR**  
WIDRIG, DL

**PRICE CODE**  
8N

**PROJECT DESIGNATION**  
BC Controlled Area Remediation - Verification Soil Sampling

**SAF NO.**  
F09-049

**AIR QUALITY**

**DATA TURNAROUND**  
7 Days / 45 Days  
A22 7/25/09

**FIELD LOGBOOK NO.**  
HNF-2-585-3

**ACTUAL SAMPLE DEPTH**  
N/A

**COA**  
302222ES10

**METHOD OF SHIPMENT**  
GOVERNMENT VEHICLE

**OFFSITE PROPERTY NO.**  
N/A

**BILL OF LADING/AIR BILL NO.**  
N/A

MATRIX*	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
A=Air DL=Drum L=Liquids DS=Drum S=Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	None	Square Bottle - Poly	1	500mL	Gamma Spectrometry (Caesium-137)
<b>POSSIBLE SAMPLE HAZARDS/ REMARKS</b> 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)	None	G/P	1	120mL	Strontium-89,90 - Total Sr;

**SPECIAL HANDLING AND/OR STORAGE**

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B21879	532 SOIL	8-6-09	1250 ✓

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	DATE/TIME
RELINQUISHED BY/REMOVED FROM Fulton/Quinn	RECEIVED BY/STORED IN MD Kestyn	DATE/TIME 8-6-09 1400
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	DATE/TIME
LABORATORY SECTION	RECEIVED BY	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DATE/TIME

**SPECIAL INSTRUCTIONS**

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

Original

**COLLECTOR**  
Fulton

**SAMPLING LOCATION**  
BCCA SU-2-1

**ICE CHEST NO.**  
N/A

**SHIPPED TO**  
Waste Sampling & Characterization

**COMPANY CONTACT**  
WIDRIG, DL 376-2858

**PROJECT DESIGNATION**  
BC Controlled Area Remediation - Verification Soil Sampling

**FIELD LOGBOOK NO.**  
HNF-N-585-3

**PROJECT COORDINATOR**  
WIDRIG, DL

**SAF NO.**  
F09-049

**COA**  
30222ZES10

**PRICE CODE**  
8N

**AIR QUALITY**

**METHOD OF SHIPMENT**  
GOVERNMENT VEHICLE

**DATA TURNAROUND**  
7-85 Days / 45 Days  
AD 2 7/29/09

BILL OF LADING/AIR BILL NO.  
N/A

MATRIX*	POSSIBLE SAMPLE HAZARDS/REMARKS	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS	SAMPLE DATE	SAMPLE TIME
A=Air DL=Drum L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	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)	None	Square Bottle - Poly	1	500ml	Gamma Spectroscopy (Cesium-137)	8-6-09	1326
		None	C/P	1	120ml	Sr-90 .. Total Sr		

SAMPLE NO.	MATRIX*	SPECIAL HANDLING AND/OR STORAGE	SIGN/PRINT NAMES	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
B218V0	S33 SOIL			MW Kesler	8-6-09 1400	MW Kesler	8-6-09 1400

CHAIN OF POSSESSION	RECEIVED BY	DATE/TIME	REMOVED FROM	DATE/TIME
RELINQUISHED BY/REMOVED FROM CF Fulton/D... RELINQUISHED BY/REMOVED FROM		8-6-09 1400		
RELINQUISHED BY/REMOVED FROM				
RELINQUISHED BY/REMOVED FROM				
RELINQUISHED BY/REMOVED FROM				
RELINQUISHED BY/REMOVED FROM				

**SPECIAL INSTRUCTIONS**

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

*Original*

**COLLECTOR**  
Fulton

**SAMPLING LOCATION**  
BCCA SU-2-2

**ICE CHEST NO.**

**COMPANY CONTACT**  
WIDRIG, DL

**TELEPHONE NO.**  
376-2858

**PROJECT COORDINATOR**  
WIDRIG, DL

**PRICE CODE**  
8N

**DATA TURNAROUND**  
7 Days / 45 Days  
7/25/09

**PROJECT DESIGNATION**  
BC Controlled Area Remediation - Verification Soil Sampling

**SAF NO.**  
F09-049

**AIR QUALITY**

**METHOD OF SHIPMENT**  
GOVERNMENT VEHICLE

**FIELD LOGBOOK NO.**  
N/A

**ACTUAL SAMPLE DEPTH**  
N/A

**COA**  
302222ES10

**BILL OF LADING/AIR BILL NO.**  
N/A

**SHIPPED TO**  
Waste Sampling & Characterization

**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)

**PRESERVATION**  
None

**TYPE OF CONTAINER**  
Square Bottle - Poly

**NO. OF CONTAINER(S)**  
1

**VOLUME**  
500mL

**SAMPLE ANALYSIS**  
Gamma Spectroscopy (Cesium-137)  
Strontium-89,90 - Total Sr

**SPECIAL HANDLING AND/OR STORAGE**

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B218V1	534 SOIL	8-6-09	1330

**CHAIN OF POSSESSION**

RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN	DATE/TIME
Fulton	8-6-09 1400	MIW Kessler	8-6-09 1400
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**

**DISPOSAL METHOD**

**DISPOSED BY**

**TITLE**

**DATE/TIME**

