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# FLUOR

## Memorandum

M4W41-SLF-08-643

To: H. Hampt E6-35

Date: June 26, 2008

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

cc: w/Attachments

T. F. Dale S3-30  
A. J. Kopriva S3-30  
H. K. Meznarich S3-30  
P. D. Mix S3-30

J. E. Trechter S3-30  
S. J. Trent E6-35  
File/LB

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20080847 – SAF NUMBER F08-066

Reference: (1) Groundwater Protection Program-Letter of Instruction, FH-EIS-2003-MEM-001, October 31, 2002  
(2) HNF-SD-CD-QAPP-017, Rev. 8, Waste Sampling & Characterization Facility Quality Assurance Plan

*This letter contains the following information for sample delivery group WSCF20080847:*

- Cover Sheet (Attachment 1)
- Narrative (Attachment 2)
- Issue Resolution Form (Attachment 3)
- Analytical Results (Attachment 4)
- Sample Receipt Information (Attachment 5)
- Sample Record Sheet (Attachment 6)

SLF/grf

Attachments 6

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ATTACHMENT 1

**COVER SHEET**

Consisting of 2 pages  
Including cover page

## WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20080847  
Data Deliverable Date: 12-jun-2008  
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F08-066	B1TFD7	W08GR01085	SOIL
	B1TFD9	W08GR01079	SOIL
	B1TFF0	W08GR01076	SOIL
	B1TFF2	W08GR01075	SOIL
	B1TFF3	W08GR01084	SOIL
	B1TFF5	W08GR01078	SOIL
	B1TFF6	W08GR01086	SOIL
	B1TFF8	W08GR01080	SOIL
	B1TFF9	W08GR01087	SOIL
	B1TFH1	W08GR01082	SOIL

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**ATTACHMENT 2**

**NARRATIVE**

**Consisting of 4 pages  
Including cover page**

### **Introduction**

Fifteen (15) S&GRP samples were received at the WSCF Laboratory on April 28, 2008. With the exception of conductivity testing, ten of the samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter. VOA analysis of the Methanol Blank and associated high VOA concentration samples was not required.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A copy of Issue Resolution Form #08-048, documenting cancellation of conductivity testing (specific conductance) is included as Attachment 3. A Data Summary Report (Attachment 4) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 5. Additionally, copies of the sample record sheets are included as Attachment 6.

It should be noted that the attached chain of custody was stamped “ICED” by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the sample container.

### **Analytical Methodology for Requested Analyses**

Refer to *WSCF Method References Report*, pages 17 through 19, for a complete listing of approved analytical methods.

### **Inorganic Comments**

**Anions** – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See pages 25 through 26 for QC details. Analytical Note(s):

- Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TFP4 (SDG# 20080882, SAF# F08-031)
- Samples were D flagged if dilution(s) were required.
- Sample results that were less than the reportable limit, however greater than the method detection limit were B flagged.
- Nitrate-N – Duplicate Relative Percent Difference (RPD) exceeded established laboratory limits. No flags issued.

All other QC controls are within the established limits.

**Conductivity** – Copy of IRF # 08-048, documenting cancellation of analysis is included as Attachment 3.

**ICP-MS Metals** – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See pages 27 through 29 for QC details. Analytical Note(s):

- Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1V261 (SDG# 20080786, SAF# F08-046) and B1TTM7 (SDG# 20080787, SAF# F07-026).
- Barium (B1V261) – Spike RPD slightly exceeded established laboratory limits. Sample results were X flagged.

All other QC controls are within the established limits.

**pH** – Duplicate QC was analyzed with this delivery group per the GRP Letter of Instruction. See page 30 for QC details.

All QC controls are within the established limits.

#### **Organic Comments**

*All samples are corrected for moisture and reported on a dry weight basis.*

**PCB** – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See pages 53 through 54 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TDF2 (SDG# 20080801, SAF# F08-043).

All QC controls are within the established limits.

**Semi-VOA** – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GPP Letter of Instruction. See pages 55 through 59 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V2L5 (SDG# 20080801, SAF# F08-043).

All QC controls are within the established limits.

**TPHD-WA** – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 60 through 61 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TFC6 (SDG# 20080813, SAF# F08-066).

All QC controls are within the established limits.

**VOA** – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample, were analyzed with this delivery group per the GRP Letter of Instruction. See pages 62 through 65 for QC details. Analytical Note(s):

- VOA analysis of the Methanol Blanks (B1TFF1, B1TFF4, B1TFF7, B1TFD8 and B1TFH0) and associated high VOA concentration samples was not required.

All QC controls are within the established limits.

**Radiochemistry Comments**

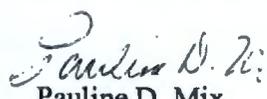
**Rad Chem** – There are no hold times associated with WSCF’s radiochemical methods. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 81 through 92 for QC details. Analytical Note(s):

- Strontium-89/90 and 85 (tracer) – Duplicates were analyzed on samples B1TFN9 (SDG# 20080882, SAF# F08-031) and B1TFF2 of this SDG.
- Uranium-233/234 and 235 (B1TFF2) – Duplicate Relative Percent Differences (RPDs) exceeded established laboratory limits. No flags issued.
- Uranium-232 (tracer) – Surrogate recovery was less than established laboratory limits. No flags issued.

All other QC controls are within the established limits.

I certify that this data package is in compliance with the LOI, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Analytical Manager and Client Services as verified by the following signatures.

  
Scot L. Fitzgerald  
WSCF Analytical Laboratory Manager

  
Pauline D. Mix  
WSCF Client Services

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ATTACHMENT 3

**ISSUE RESOLUTION FORM**

Consisting of 2 pages  
Including cover page

**ISSUE RESOLUTION FORM**

**PNNL TRACKING NUMBER:** 08-048

Date : SAF No. see below (soil matrix)

SDG: see below

LOGIN No.:

TEST: Conductivity (COND)

Sample No.(s)	<b>B1V2L5 (W08GR01038)</b>	<b>WSCF20080801</b>	<b>F08-043</b>
	<b>B1TFD2 (W08GR01066)</b>	<b>WSCF20080830</b>	<b>F08-066</b>
	<b>B1TFF2 (W08GR01075)</b>	<b>WSCF20080847</b>	<b>F08-066</b>
	<b>B1TFF5 (W08GR01078)</b>	<b>WSCF20080847</b>	<b>F08-066</b>
	<b>B1TFD9 (W08GR01079)</b>	<b>WSCF20080847</b>	<b>F08-066</b>
	<b>B1TFF8 (W08GR01080)</b>	<b>WSCF20080847</b>	<b>F08-066</b>
	<b>B1TFH1 (W08GR01082)</b>	<b>WSCF20080847</b>	<b>F08-066</b>
	<b>B1VB30 (W08GR01097)</b>	<b>WSCF20080850</b>	<b>F08-043</b>

Submitted By: PD Mix

Submitted To: H Hampt

Phone No. 372-1488

Phone No. 376-4319

Fax No. 372-0456

Fax No

**ISSUE**

Although conductivity has been requested for the GRP samples identified above; the WSCF Laboratory is not able to perform Conductivity testing on soil samples at this time.

**PROPOSED RESOLUTION**

Proposed resolution is to cancel requests for conductivity on GRP soil samples submitted to the WSCF Laboratory.

**GRP COMMENTS**

Accept proposed resolution.

Heidi Hampt 4/29/08

Signature and Date

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ATTACHMENT 4

**ANALYTICAL RESULTS**

Consisting of 84 pages  
Including cover page

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

for

**Groundwater Remediation Program**

**Richland, WA 99354**

**Attention: Steve Trent**

Analytical:

ADRIUS 6/26/08

Client Services:

P.D. Mix 6/28/2008

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

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Contract#: FH-EIS-2003-MEM-001

Report#: WSCF20080847

Report Date: 25-jun-2008

Report WGPP/ver. 5.2

Groundwater Remediation Program

Department: Inorganic

## W13q Worklist/Batch/QC Report for Group# WSCF20080847

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
				SAMPLE	W08GR01075	Percent Solids
				SAMPLE	W08GR01078	Percent Solids
				SAMPLE	W08GR01079	Percent Solids
				SAMPLE	W08GR01080	Percent Solids
				SAMPLE	W08GR01082	Percent Solids
36177	1	36594	40927	BLANK		ICP-200.8 MS All possible meta
36177	2	36594	40927	LCS		ICP-200.8 MS All possible meta
36177	4	36594	40927	MS	W08GR01020	ICP-200.8 MS All possible meta
36177	5	36594	40927	MSD	W08GR01020	ICP-200.8 MS All possible meta
36177	5	36594	40927	SPK-RPD	W08GR01020	ICP-200.8 MS All possible meta
36177	7	36594	40927	MS	W08GR01023	ICP-200.8 MS All possible meta
36177	8	36594	40927	MSD	W08GR01023	ICP-200.8 MS All possible meta
36177	8	36594	40927	SPK-RPD	W08GR01023	ICP-200.8 MS All possible meta
36177	16	36594	40927	SAMPLE	W08GR01075	ICP-200.8 MS All possible meta
36177	17	36594	40927	SAMPLE	W08GR01078	ICP-200.8 MS All possible meta
36177	18	36594	40927	SAMPLE	W08GR01079	ICP-200.8 MS All possible meta
36177	19	36594	40927	SAMPLE	W08GR01080	ICP-200.8 MS All possible meta
36177	20	36594	40927	SAMPLE	W08GR01082	ICP-200.8 MS All possible meta
			40998	DUP	W08GR01075	pH Soil and Waste Measurement
			40998	SAMPLE	W08GR01075	pH Soil and Waste Measurement
			40998	SAMPLE	W08GR01078	pH Soil and Waste Measurement
			40998	SAMPLE	W08GR01079	pH Soil and Waste Measurement
			40998	SAMPLE	W08GR01080	pH Soil and Waste Measurement
			40998	SAMPLE	W08GR01082	pH Soil and Waste Measurement
36438	2	36852	41194	BLANK		Anions by Ion Chromatography
36438	16	36852	41194	BLANK		Anions by Ion Chromatography
36438	3	36852	41194	LCS		Anions by Ion Chromatography
36438	8	36852	41194	SAMPLE	W08GR01075	Anions by Ion Chromatography
36438	9	36852	41194	SAMPLE	W08GR01078	Anions by Ion Chromatography
36438	10	36852	41194	SAMPLE	W08GR01079	Anions by Ion Chromatography
36438	11	36852	41194	SAMPLE	W08GR01080	Anions by Ion Chromatography
36438	12	36852	41194	SAMPLE	W08GR01082	Anions by Ion Chromatography
36438	5	36852	41194	DUP	W08GR01134	Anions by Ion Chromatography
36438	6	36852	41194	MS	W08GR01134	Anions by Ion Chromatography
36438	7	36852	41194	MSD	W08GR01134	Anions by Ion Chromatography
36438	7	36852	41194	SPK-RPD	W08GR01134	Anions by Ion Chromatography

Department: Organic

## W13q Worklist/Batch/QC Report for Group# WSCF20080847

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			40959	BLANK		NWTPH-D TPH Diesel Range (Wa)
			40959	LCS		NWTPH-D TPH Diesel Range (Wa)
			40959	MS	W08GR01053	NWTPH-D TPH Diesel Range (Wa)
			40959	MSD	W08GR01053	NWTPH-D TPH Diesel Range (Wa)
			40959	SPK-RPD	W08GR01053	NWTPH-D TPH Diesel Range (Wa)
			40959	SAMPLE	W08GR01075	NWTPH-D TPH Diesel Range (Wa)
			40959	SURR	W08GR01075	NWTPH-D TPH Diesel Range (Wa)
			40959	SAMPLE	W08GR01078	NWTPH-D TPH Diesel Range (Wa)
			40959	SURR	W08GR01078	NWTPH-D TPH Diesel Range (Wa)
			40959	SAMPLE	W08GR01079	NWTPH-D TPH Diesel Range (Wa)
			40959	SURR	W08GR01079	NWTPH-D TPH Diesel Range (Wa)
			40959	SAMPLE	W08GR01080	NWTPH-D TPH Diesel Range (Wa)
			40959	SURR	W08GR01080	NWTPH-D TPH Diesel Range (Wa)
			40959	SAMPLE	W08GR01082	NWTPH-D TPH Diesel Range (Wa)
			40959	SURR	W08GR01082	NWTPH-D TPH Diesel Range (Wa)
			40961	BLANK		PCBs complete list
			40961	LCS		PCBs complete list
			40961	MS	W08GR01033	PCBs complete list
			40961	MSD	W08GR01033	PCBs complete list
			40961	SPK-RPD	W08GR01033	PCBs complete list
			40961	SAMPLE	W08GR01075	PCBs complete list
			40961	SURR	W08GR01075	PCBs complete list
			40961	SAMPLE	W08GR01078	PCBs complete list
			40961	SURR	W08GR01078	PCBs complete list
			40961	SAMPLE	W08GR01079	PCBs complete list
			40961	SURR	W08GR01079	PCBs complete list
			40961	SAMPLE	W08GR01080	PCBs complete list
			40961	SURR	W08GR01080	PCBs complete list
			40961	SAMPLE	W08GR01082	PCBs complete list
			40961	SURR	W08GR01082	PCBs complete list
			40965	BLANK		SW-846 8270C Semi-Vols
			40965	LCS		SW-846 8270C Semi-Vols
			40965	MS	W08GR01038	SW-846 8270C Semi-Vols
			40965	MSD	W08GR01038	SW-846 8270C Semi-Vols
			40965	SPK-RPD	W08GR01038	SW-846 8270C Semi-Vols
			40965	SAMPLE	W08GR01075	SW-846 8270C Semi-Vols
			40965	SURR	W08GR01075	SW-846 8270C Semi-Vols
			40965	SAMPLE	W08GR01078	SW-846 8270C Semi-Vols
			40965	SURR	W08GR01078	SW-846 8270C Semi-Vols
			40965	SAMPLE	W08GR01079	SW-846 8270C Semi-Vols
			40965	SURR	W08GR01079	SW-846 8270C Semi-Vols
			40965	SAMPLE	W08GR01080	SW-846 8270C Semi-Vols
			40965	SURR	W08GR01080	SW-846 8270C Semi-Vols
			40965	SAMPLE	W08GR01082	SW-846 8270C Semi-Vols
			40965	SURR	W08GR01082	SW-846 8270C Semi-Vols
			41214	BLANK		VOA Ground Water Protection
			41214	LCS		VOA Ground Water Protection
			41214	MS	W08GR01076	VOA Ground Water Protection
			41214	MSD	W08GR01076	VOA Ground Water Protection

41214	SAMPLE	W08GR01076	VOA Ground Water Protection
41214	SPK-RPD	W08GR01076	VOA Ground Water Protection
41214	SURR	W08GR01076	VOA Ground Water Protection
41214	SAMPLE	W08GR01084	VOA Ground Water Protection
41214	SURR	W08GR01084	VOA Ground Water Protection
41214	SAMPLE	W08GR01085	VOA Ground Water Protection
41214	SURR	W08GR01085	VOA Ground Water Protection
41214	SAMPLE	W08GR01086	VOA Ground Water Protection
41214	SURR	W08GR01086	VOA Ground Water Protection
41214	SAMPLE	W08GR01087	VOA Ground Water Protection
41214	SURR	W08GR01087	VOA Ground Water Protection

Department: Radiochemistry

## W13q Worklist/Batch/QC Report for Group# WSCF20080847

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36168	1	36585	41090	BLANK		Gamma Energy Analysis-grd H2O
36168	2	36585	41090	LCS		Gamma Energy Analysis-grd H2O
36168	3	36585	41090	DUP	W08GR01075	Gamma Energy Analysis-grd H2O
36168	4	36585	41090	SAMPLE	W08GR01075	Gamma Energy Analysis-grd H2O
36168	5	36585	41090	SAMPLE	W08GR01078	Gamma Energy Analysis-grd H2O
36168	6	36585	41090	SAMPLE	W08GR01079	Gamma Energy Analysis-grd H2O
36168	7	36585	41090	SAMPLE	W08GR01080	Gamma Energy Analysis-grd H2O
36189	1	36606	41108	BLANK		Strontium 89/90
36189	2	36606	41108	LCS		Strontium 89/90
36189	3	36606	41108	DUP	W08GR01075	Strontium 89/90
36189	4	36606	41108	SAMPLE	W08GR01075	Strontium 89/90
36189	5	36606	41108	SURR	W08GR01075	Strontium 89/90
36189	6	36606	41108	SAMPLE	W08GR01078	Strontium 89/90
36189	7	36606	41108	SURR	W08GR01078	Strontium 89/90
36189	8	36606	41108	SAMPLE	W08GR01080	Strontium 89/90
36189	9	36606	41108	SURR	W08GR01080	Strontium 89/90
36189	10	36606	41108	SAMPLE	W08GR01082	Strontium 89/90
36189	11	36606	41108	SURR	W08GR01082	Strontium 89/90
36226	1	36642	41111	BLANK		Strontium 89/90
36226	2	36642	41111	LCS		Strontium 89/90
36226	12	36642	41111	SAMPLE	W08GR01079	Strontium 89/90
36226	13	36642	41111	SURR	W08GR01079	Strontium 89/90
36226	3	36642	41111	DUP	W08GR01131	Strontium 89/90
36383	1	36798	41156	BLANK		Uranium Isotopics by AEA
36383	2	36798	41156	LCS		Uranium Isotopics by AEA
36383	3	36798	41156	DUP	W08GR01075	Uranium Isotopics by AEA
36383	10	36798	41156	SAMPLE	W08GR01075	Uranium Isotopics by AEA
36383	11	36798	41156	SURR	W08GR01075	Uranium Isotopics by AEA
36383	12	36798	41156	SAMPLE	W08GR01078	Uranium Isotopics by AEA
36383	13	36798	41156	SURR	W08GR01078	Uranium Isotopics by AEA
36383	14	36798	41156	SAMPLE	W08GR01079	Uranium Isotopics by AEA
36383	15	36798	41156	SURR	W08GR01079	Uranium Isotopics by AEA
36171	1	36588	41160	BLANK		Gamma Energy Analysis-grd H2O
36171	2	36588	41160	LCS		Gamma Energy Analysis-grd H2O
36171	3	36588	41160	DUP	W08GR01082	Gamma Energy Analysis-grd H2O
36171	4	36588	41160	SAMPLE	W08GR01082	Gamma Energy Analysis-grd H2O
36381	1	36796	41226	BLANK		Plutonium Isotopics by AEA
36381	2	36796	41226	LCS		Plutonium Isotopics by AEA
36381	3	36796	41226	DUP	W08GR01075	Plutonium Isotopics by AEA
36381	10	36796	41226	SAMPLE	W08GR01075	Plutonium Isotopics by AEA
36381	11	36796	41226	SURR	W08GR01075	Plutonium Isotopics by AEA
36381	12	36796	41226	SAMPLE	W08GR01078	Plutonium Isotopics by AEA
36381	13	36796	41226	SURR	W08GR01078	Plutonium Isotopics by AEA
36381	14	36796	41226	SAMPLE	W08GR01079	Plutonium Isotopics by AEA
36381	15	36796	41226	SURR	W08GR01079	Plutonium Isotopics by AEA
36553	1	36985	41332	BLANK		Americium by AEA

36553	2	36985	41332	LCS		Americium by AEA
36553	3	36985	41332	DUP	W08GR01075	Americium by AEA
36553	4	36985	41332	SAMPLE	W08GR01075	Americium by AEA
36553	5	36985	41332	SURR	W08GR01075	Americium by AEA
36553	6	36985	41332	SAMPLE	W08GR01078	Americium by AEA
36553	7	36985	41332	SURR	W08GR01078	Americium by AEA
36553	8	36985	41332	SAMPLE	W08GR01079	Americium by AEA
36553	9	36985	41332	SURR	W08GR01079	Americium by AEA
36554	1	36970	41364	BLANK		Neptunium by AEA
36554	2	36970	41364	LCS		Neptunium by AEA
36554	3	36970	41364	DUP	W08GR01075	Neptunium by AEA
36554	5	36970	41364	MS	W08GR01075	Neptunium by AEA
36554	6	36970	41364	MSD	W08GR01075	Neptunium by AEA
36554	4	36970	41364	SAMPLE	W08GR01075	Neptunium by AEA
36554	6	36970	41364	SPK-RPD	W08GR01075	Neptunium by AEA
36554	8	36970	41364	MS	W08GR01078	Neptunium by AEA
36554	7	36970	41364	SAMPLE	W08GR01078	Neptunium by AEA
36554	10	36970	41364	MS	W08GR01079	Neptunium by AEA
36554	9	36970	41364	SAMPLE	W08GR01079	Neptunium by AEA
36665	1	37081	41442	BLANK		Americium by AEA
36665	2	37081	41442	LCS		Americium by AEA
36665	3	37081	41442	DUP	W08GR01080	Americium by AEA
36665	4	37081	41442	SAMPLE	W08GR01080	Americium by AEA
36665	5	37081	41442	SURR	W08GR01080	Americium by AEA
36665	6	37081	41442	SAMPLE	W08GR01082	Americium by AEA
36665	7	37081	41442	SURR	W08GR01082	Americium by AEA
36664	1	37080	41443	BLANK		Plutonium Isotopics by AEA
36664	2	37080	41443	LCS		Plutonium Isotopics by AEA
36664	3	37080	41443	DUP	W08GR01080	Plutonium Isotopics by AEA
36664	4	37080	41443	SAMPLE	W08GR01080	Plutonium Isotopics by AEA
36664	5	37080	41443	SURR	W08GR01080	Plutonium Isotopics by AEA
36664	6	37080	41443	SAMPLE	W08GR01082	Plutonium Isotopics by AEA
36664	7	37080	41443	SURR	W08GR01082	Plutonium Isotopics by AEA
36625	1	37044	41491	BLANK		Neptunium by AEA
36625	2	37044	41491	LCS		Neptunium by AEA
36625	3	37044	41491	DUP	W08GR01080	Neptunium by AEA
36625	5	37044	41491	MS	W08GR01080	Neptunium by AEA
36625	6	37044	41491	MSD	W08GR01080	Neptunium by AEA
36625	4	37044	41491	SAMPLE	W08GR01080	Neptunium by AEA
36625	6	37044	41491	SPK-RPD	W08GR01080	Neptunium by AEA
36625	8	37044	41491	MS	W08GR01082	Neptunium by AEA
36625	7	37044	41491	SAMPLE	W08GR01082	Neptunium by AEA
36625	10	37044	41491	MS	W08GR01097	Neptunium by AEA
36807	1	37226	41589	BLANK		Uranium Isotopics by AEA
36807	2	37226	41589	LCS		Uranium Isotopics by AEA
36807	3	37226	41589	DUP	W08GR01080	Uranium Isotopics by AEA
36807	4	37226	41589	SAMPLE	W08GR01080	Uranium Isotopics by AEA
36807	5	37226	41589	SURR	W08GR01080	Uranium Isotopics by AEA
36807	6	37226	41589	SAMPLE	W08GR01082	Uranium Isotopics by AEA
36807	7	37226	41589	SURR	W08GR01082	Uranium Isotopics by AEA

# WSCF

## METHOD REFERENCES REPORT

Department: Inorganic

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

<b>LA-212-411</b>	<b>Determination of Soil pH Measurement</b> EPA SW-846 9045D SOIL AND WASTE pH HEIS 150.1_PH pH
<b>LA-505-412</b>	<b>LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY</b> EPA-600/R-94-111 200.8 DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS HEIS 200.8_METALS_ICPMS Inductively Coupled Plasma - Mass Spectrometry HEIS RADISOTOPES_ICPMS Radioisotopes by ICP/MS
<b>LA-519-412</b>	<b>LA-519-412: TOTAL RESIDUE/% SOLIDS DRIED AT 103 - 105 C</b> EPA-600/4-79-020 160.1 Residual, Filterable EPA-600/4-79-020 160.3 RESIDUE, TOTAL HEIS 160.1_TDS Residual, Filterable Standard Methods 2540B Total Solids Dried at 103-105 C
<b>LA-533-410</b>	<b>LA-533-410: ANION ANALYSIS BY ION CHROMATOGRAPHY</b> EPA-600/R-94-111 300.0 DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY HEIS 300.0_ANIONS_IC Determination of Inorganic Anions by Ion Chromatography

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <http://www2.rl.gov/phmc/as-dol>.

# WSCF

## METHOD REFERENCES REPORT

Department: Organic

The results provided in this report were generated using the following WSCF Laboratory procedures. For your convenience, this table provides a listing of the regulatory or industry methods that are referenced by each of these WSCF procedures. Please note that the most recent version of the regulatory or industry method is listed here even though the WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

<b>LA-523-427</b>	<b>LA-523-427: POLYCHLORINATED BIPHENYLS (PCBs) BY GAS CHROMATOGRAPHY</b>
<b>EPA SW-846 3510C</b>	<b>SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION</b>
<b>EPA SW-846 3545</b>	<b>PRESSURIZED FLUID EXTRACTION (PFE)</b>
<b>EPA SW-846 3665A</b>	<b>SULFURIC ACID/PERMANGANATE CLEANUP</b>
<b>EPA SW-846 8000B</b>	<b>DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS</b>
<b>EPA SW-846 8082A</b>	<b>POLYCHLORINATED BIPHENYLS (PCBs) BY GAS CHROMATOGRAPHY</b>
<b>HEIS 8082_PCB_GC</b>	<b>Polychlorinated Biphenyls (PCBs) by Gas Chromatography</b>
<b>LA-523-455</b>	<b>LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846</b>
<b>EPA SW-846 8000B</b>	<b>DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS</b>
<b>EPA SW-846 8260B</b>	<b>VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)</b>
<b>HEIS 8260_VOA_GCMS</b>	<b>Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)</b>
<b>LA-523-456</b>	<b>LA-523-456: SEMIVOLATILE SAMPLE ANALYSIS BY SW-846, METHOD 8270C</b>
<b>EPA SW-846 8000B</b>	<b>DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS</b>
<b>EPA SW-846 8270C</b>	<b>SEMIVOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)</b>
<b>HEIS 8270_SVOA_GCMS</b>	<b>Semivolatile Organoc Compounds By Gas Chromatography/Mass Spectrometry (GC/MS)</b>
<b>LA-523-493</b>	<b>NWTPH-Diesel and/or Gasoline</b>
<b>HEIS WTPH_DIESEL (HEIS)</b>	<b>Total Petroleum Hydrocarbons in Diesel</b>
<b>WDOE TPHD</b>	<b>Total Petroleum Hydrocarbons in Diesel</b>

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>.

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# 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>
	HEIS ALPHA_GPC                      GROSS ALPHA GPC
	HEIS BETA_GPC                      GROSS BETA GPC
	HEIS SRTOT_SEP_PRECIP_GPC      Francium 89/90
<b>LA-508-471</b>	<b>LA-508-471: ALPHA ENERGY ANALYZER DATA ACQUISITION AND SYSTEM CHECKOUT USING ALP</b>
	HEIS PUIISO_IE_PRECIP_AEA      Plutonium by Alpha Energy Analysis
	HEIS RAISO_AEA                      Radium-226
<b>LA-508-481</b>	<b>LA-508-481: GAMMA ENERGY ANALYSIS USING PROCOUNT SOFTWARE</b>
	HEIS GAMMA_GS                      Gamma Emmision Spectrometry

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at <http://www2.rl.gov/phmc/as-dol>.

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #:** W08GR01075  
**Client ID:** B1TF2

**GPP**      **TRENT**  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Inorganic  
**Sampled:** 04/17/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography Prep</b>											
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.300	mg/kg			50.00	0.30		05/22/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.500	mg/kg			50.00	0.50		05/22/08
Nitrogen in Nitrate	NO3-N	LA-533-410	BD	1.53	mg/kg			50.00	0.25		05/22/08
Sulfate	14808-79-8	LA-533-410	BD	8.47	mg/kg			50.00	3.5		05/22/08
<b>ICP-200.8 MS All possible meta Prep</b>											
<b>ICP-200.8 MS All possible meta</b>											
Nickel	7440-02-0	LA-505-412		9.54	mg/kg			0.98	0.197		05/01/08
Silver	7440-22-4	LA-505-412	U	< 0.0985	mg/kg			0.98	0.0985		05/01/08
Barium	7440-39-3	LA-505-412	X	80.2	mg/kg			0.98	0.197		05/01/08
Beryllium	7440-41-7	LA-505-412		0.280	mg/kg			0.98	0.0492		05/01/08
Cadmium	7440-43-9	LA-505-412		0.100	mg/kg			0.98	0.0985		05/01/08
Chromium	7440-47-3	LA-505-412		6.38	mg/kg			0.98	0.492		05/01/08
Copper	7440-50-8	LA-505-412		13.2	mg/kg			0.98	0.0985		05/01/08
Zinc	7440-66-6	LA-505-412		33.3	mg/kg			0.98	0.788		05/01/08
Lead	7439-92-1	LA-505-412		2.92	mg/kg			0.98	0.0985		05/01/08
Mercury	7439-97-6	LA-505-412	U	< 0.0492	mg/kg			0.98	0.0492		05/01/08
Arsenic	7440-38-2	LA-505-412		2.03	mg/kg			0.98	0.394		05/01/08
Selenium	7782-49-2	LA-505-412	U	< 0.296	mg/kg			0.98	0.296		05/01/08
<b>Total solids</b>											
Total solids	TS	LA-519-412		97.2	Percent			1.00	0.0		04/30/08
<b>pH Measurement</b>											
pH Measurement	PH	LA-212-411		9.08	unitless			1.00	0.010		05/08/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

\* - Indicates results that have NOT been validated;

+ - Indicates more than six qualifier symbols

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01078  
**Client ID:** B1TFF5

**GPP**      **TRENT**  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Inorganic  
**Sampled:** 04/21/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography Prep</b>											
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.294	mg/kg			49.00	0.29		05/22/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.490	mg/kg			49.00	0.49		05/22/08
Nitrogen in Nitrate	NO3-N	LA-533-410	8D	1.69	mg/kg			49.00	0.24		05/22/08
Sulfate	14808-79-8	LA-533-410	8D	5.26	mg/kg			49.00	3.4		05/22/08
<b>ICP-200.8 MS All possible meta Prep</b>											
<b>ICP-200.8 MS All possible meta</b>											
Nickel	7440-02-0	LA-505-412		10.1	mg/kg			1.00	0.200		05/01/08
Silver	7440-22-4	LA-505-412	U	< 0.100	mg/kg			1.00	0.100		05/01/08
Barium	7440-39-3	LA-505-412	X	73.9	mg/kg			1.00	0.200		05/01/08
Beryllium	7440-41-7	LA-505-412		0.240	mg/kg			1.00	0.0501		05/01/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	mg/kg			1.00	0.100		05/01/08
Chromium	7440-47-3	LA-505-412		10.8	mg/kg			1.00	0.501		05/01/08
Copper	7440-50-8	LA-505-412		8.99	mg/kg			1.00	0.100		05/01/08
Zinc	7440-66-6	LA-505-412		34.0	mg/kg			1.00	0.802		05/01/08
Lead	7439-92-1	LA-505-412		4.57	mg/kg			1.00	0.100		05/01/08
Mercury	7439-97-6	LA-505-412	U	< 0.0501	mg/kg			1.00	0.0501		05/01/08
Arsenic	7440-38-2	LA-505-412		3.83	mg/kg			1.00	0.401		05/01/08
Selenium	7782-49-2	LA-505-412	U	< 0.301	mg/kg			1.00	0.301		05/01/08
<b>Total solids</b>											
Total solids	TS	LA-519-412		96.8	Percent			1.00	0.0		04/30/08
<b>pH Measurement</b>											
pH Measurement	PH	LA-212-411		9.03	unitless			1.00	0.010		05/08/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

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Groundwater Remediation Program

# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01079  
**Client ID:** B1TFD9

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Inorganic  
**Sampled:** 04/17/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography Prep</b>											
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.294	mg/kg			49.00	0.29		05/22/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.490	mg/kg			49.00	0.49		05/22/08
Nitrogen in Nitrate	NO3-N	LA-533-410	BD	2.42	mg/kg			49.00	0.24		05/22/08
Sulfate	14808-79-8	LA-533-410	BD	5.74	mg/kg			49.00	3.4		05/22/08
<b>ICP-200.8 MS All possible meta Prep</b>											
<b>ICP-200.8 MS All possible meta</b>											
Nickel	7440-02-0	LA-505-412		9.10	mg/kg			0.98	0.196		05/01/08
Silver	7440-22-4	LA-505-412	U	< 0.0981	mg/kg			0.98	0.0981		05/01/08
Barium	7440-39-3	LA-505-412	X	106	mg/kg			0.98	0.196		05/01/08
Beryllium	7440-41-7	LA-505-412		0.320	mg/kg			0.98	0.0490		05/01/08
Cadmium	7440-43-9	LA-505-412	U	< 0.0981	mg/kg			0.98	0.0981		05/01/08
Chromium	7440-47-3	LA-505-412		7.88	mg/kg			0.98	0.490		05/01/08
Copper	7440-50-8	LA-505-412		11.0	mg/kg			0.98	0.0981		05/01/08
Zinc	7440-68-6	LA-505-412		37.6	mg/kg			0.98	0.784		05/01/08
Lead	7439-92-1	LA-505-412		4.22	mg/kg			0.98	0.0981		05/01/08
Mercury	7439-97-6	LA-505-412	U	< 0.0490	mg/kg			0.98	0.0490		05/01/08
Arsenic	7440-38-2	LA-505-412		2.53	mg/kg			0.98	0.392		05/01/08
Selenium	7782-49-2	LA-505-412	U	< 0.294	mg/kg			0.98	0.294		05/01/08
<b>Total solids</b>											
Total solids	TS	LA-519-412		92.9	Percent			1.00	0.0		04/30/08
<b>pH Measurement</b>											
pH Measurement	PH	LA-212-411		8.86	unitless			1.00	0.010		05/08/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

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# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01080  
**Client ID:** B1TFF8

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Inorganic  
**Sampled:** 04/22/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography Prep</b>											
<b>Anions by Ion Chromatography</b>											
Fluoride	18984-48-8	LA-533-410	DU	< 0.300	mg/kg			50.00	0.30		05/22/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.500	mg/kg			50.00	0.50		05/22/08
Nitrogen in Nitrate	NO3-N	LA-533-410	8D	2.44	mg/kg			50.00	0.25		05/22/08
Sulfate	14808-79-8	LA-533-410	BD	5.43	mg/kg			50.00	3.5		05/22/08
<b>ICP-200.8 MS All possible meta Prep</b>											
<b>ICP-200.8 MS All possible meta</b>											
Nickel	7440-02-0	LA-505-412		11.5	mg/kg			0.80	0.160		05/01/08
Silver	7440-22-4	LA-505-412	U	< 0.0800	mg/kg			0.80	0.0800		05/01/08
Barium	7440-39-3	LA-505-412	X	80.3	mg/kg			0.80	0.160		05/01/08
Beryllium	7440-41-7	LA-505-412		0.270	mg/kg			0.80	0.0400		05/01/08
Cadmium	7440-43-9	LA-505-412		0.0800	mg/kg			0.80	0.0800		05/01/08
Chromium	7440-47-3	LA-505-412		12.1	mg/kg			0.80	0.400		05/01/08
Copper	7440-50-8	LA-505-412		9.93	mg/kg			0.80	0.0800		05/01/08
Zinc	7440-66-6	LA-505-412		34.6	mg/kg			0.80	0.640		05/01/08
Lead	7439-92-1	LA-505-412		5.30	mg/kg			0.80	0.0800		05/01/08
Mercury	7439-97-6	LA-505-412	U	< 0.0400	mg/kg			0.80	0.0400		05/01/08
Arsenic	7440-38-2	LA-505-412		3.80	mg/kg			0.80	0.320		05/01/08
Selenium	7782-49-2	LA-505-412	U	< 0.240	mg/kg			0.80	0.240		05/01/08
<b>Total solids</b>											
Total solids	TS	LA-519-412		95.3	Percent			1.00	0.0		04/30/08
<b>pH Measurement</b>											
pH Measurement	PH	LA-212-411		8.73	unitless			1.00	0.010		05/08/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01082  
**Client ID:** B1TFH1

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Inorganic  
**Sampled:** 04/23/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Anions by Ion Chromatography Prep</b>											
<b>Anions by Ion Chromatography</b>											
Fluoride	16984-48-8	LA-533-410	DU	< 0.300	mg/kg			50.00	0.30		05/22/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.500	mg/kg			50.00	0.50		05/22/08
Nitrogen in Nitrate	NO3-N	LA-533-410	BD	0.688	mg/kg			50.00	0.25		05/22/08
Sulfate	14808-79-8	LA-533-410	DU	< 3.50	mg/kg			50.00	3.5		05/22/08
<b>ICP-200.8 MS All possible meta Prep</b>											
<b>ICP-200.8 MS All possible meta</b>											
Nickel	7440-02-0	LA-505-412		11.1	mg/kg			1.00	0.200		05/01/08
Silver	7440-22-4	LA-505-412	U	< 0.0999	mg/kg			1.00	0.0999		05/01/08
Barium	7440-39-3	LA-505-412	X	87.5	mg/kg			1.00	0.200		05/01/08
Beryllium	7440-41-7	LA-505-412		0.290	mg/kg			1.00	0.0500		05/01/08
Cadmium	7440-43-9	LA-505-412	U	< 0.0999	mg/kg			1.00	0.0999		05/01/08
Chromium	7440-47-3	LA-505-412		12.0	mg/kg			1.00	0.500		05/01/08
Copper	7440-50-8	LA-505-412		10.6	mg/kg			1.00	0.0999		05/01/08
Zinc	7440-66-6	LA-505-412		36.9	mg/kg			1.00	0.799		05/01/08
Lead	7439-92-1	LA-505-412		5.55	mg/kg			1.00	0.0999		05/01/08
Mercury	7439-97-6	LA-505-412	U	< 0.0500	mg/kg			1.00	0.0500		05/01/08
Arsenic	7440-38-2	LA-505-412		3.93	mg/kg			1.00	0.400		05/01/08
Selenium	7782-49-2	LA-505-412	U	< 0.300	mg/kg			1.00	0.300		05/01/08
<b>Total solids</b>											
Total solids	TS	LA-519-412		94.3	Percent			1.00	0.0		04/30/08
<b>pH Measurement</b>											
pH Measurement	PH	LA-212-411		8.90	unitless			1.00	0.010		05/08/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

• - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative.(inorg)

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Anions by Ion Chromatography

Sample Date: 02/19/08  
 Receive Date: 05/01/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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**Lab ID: W08GR01134**  
**BATCH QC ASSOCIATED WITH SAMPLE**

DUP	Fluoride	16984-48-8	<0.3		RPD			n/a	20.000	U	05/22/08
DUP	Nitrogen in Nitrite	NO2-N	<0.5		RPD			n/a	20.000	U	05/22/08
DUP	Nitrogen in Nitrate	NO3-N	0.787		RPD			83.119	20.000		05/22/08
DUP	Sulfate	14808-79-8	<3.5		RPD			n/a	20.000	U	05/22/08
MS	Fluoride	16984-48-8	0.470604	94.499	% Recov	80.000	120.000				05/22/08
MS	Nitrogen in Nitrite	NO2-N	0.472936	95.158	% Recov	80.000	120.000				05/22/08
MS	Nitrogen in Nitrate	NO3-N	0.450412	100.092	% Recov	80.000	120.000				05/22/08
MS	Sulfate	14808-79-8	1.910832	96.507	% Recov	80.000	120.000				05/22/08
MSD	Fluoride	16984-48-8	0.472274	94.834	% Recov	80.000	120.000				05/22/08
MSD	Nitrogen in Nitrite	NO2-N	0.471064	94.781	% Recov	80.000	120.000				05/22/08
MSD	Nitrogen in Nitrate	NO3-N	0.445202	98.934	% Recov	80.000	120.000				05/22/08
MSD	Sulfate	14808-79-8	1.916812	96.809	% Recov	80.000	120.000				05/22/08
SPK-RPD	Fluoride	16984-48-8	94.834		RPD			0.354	20.000		05/22/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	94.781		RPD			0.397	20.000		05/22/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	98.934		RPD			1.164	20.000		05/22/08
SPK-RPD	Sulfate	14808-79-8	96.809		RPD			0.312	20.000		05/22/08

**BATCH QC**

BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	05/22/08
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	05/22/08
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	05/22/08
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	05/22/08
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	05/22/08
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	05/22/08
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	05/22/08
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	05/22/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080847  
Matrix: SOLID  
Test: Anions by Ion Chromatography

Sample Date:  
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	Fluoride	16984-48-8	106.918	107.347	% Recov	80.000	120.000				05/22/08
LCS	Nitrogen in Nitrite	NO2-N	99.243	99.842	% Recov	80.000	120.000				05/22/08
LCS	Nitrogen in Nitrate	NO3-N	92.5205	102.686	% Recov	80.000	120.000				05/22/08
LCS	Sulfate	14808-79-8	387.1743	97.771	% Recov	80.000	120.000				05/22/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: ICP-200.8 MS All possible meta

Sample Date: 04/11/08  
 Receive Date: 04/11/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01020 BATCH QC ASSOCIATED WITH SAMPLE											
MS	Silver	7440-22-4	190.8	95.400	% Recov	70.000	130.000				05/01/08
MS	Arsenic	7440-38-2	193.78	96.890	% Recov	70.000	130.000				05/01/08
MS	Barium	7440-39-3	233.79	116.895	% Recov	70.000	130.000				05/01/08
MS	Beryllium	7440-41-7	187.88	93.940	% Recov	70.000	130.000				05/01/08
MS	Cadmium	7440-43-9	191.4	95.700	% Recov	70.000	130.000				05/01/08
MS	Chromium	7440-47-3	190.9	95.450	% Recov	70.000	130.000				05/01/08
MS	Copper	7440-50-8	185.06	92.530	% Recov	70.000	130.000				05/01/08
MS	Mercury	7439-97-6	1.98	99.000	% Recov	70.000	130.000				05/01/08
MS	Nickel	7440-02-0	184.94	92.470	% Recov	70.000	130.000				05/01/08
MS	Lead	7439-92-1	195.21	97.605	% Recov	70.000	130.000				05/01/08
MS	Selenium	7782-49-2	190.3	95.150	% Recov	70.000	130.000				05/01/08
MS	Zinc	7440-66-6	185.26	92.630	% Recov	70.000	130.000				05/01/08
MSD	Silver	7440-22-4	184.4	92.200	% Recov	70.000	130.000				05/01/08
MSD	Arsenic	7440-38-2	186.58	93.290	% Recov	70.000	130.000				05/01/08
MSD	Barium	7440-39-3	180.09	90.045	% Recov	70.000	130.000				05/01/08
MSD	Beryllium	7440-41-7	181.78	90.890	% Recov	70.000	130.000				05/01/08
MSD	Cadmium	7440-43-9	185.4	92.700	% Recov	70.000	130.000				05/01/08
MSD	Chromium	7440-47-3	181.3	90.650	% Recov	70.000	130.000				05/01/08
MSD	Copper	7440-50-8	178.56	89.280	% Recov	70.000	130.000				05/01/08
MSD	Mercury	7439-97-6	1.91	95.500	% Recov	70.000	130.000				05/01/08
MSD	Nickel	7440-02-0	181.94	90.970	% Recov	70.000	130.000				05/01/08
MSD	Lead	7439-92-1	188.81	94.405	% Recov	70.000	130.000				05/01/08
MSD	Selenium	7782-49-2	184.6	92.300	% Recov	70.000	130.000				05/01/08
MSD	Zinc	7440-66-6	177.96	88.980	% Recov	70.000	130.000				05/01/08
SPK-RPD	Silver	7440-22-4	92.200		RPD			3.412	20.000		05/01/08
SPK-RPD	Arsenic	7440-38-2	93.290		RPD			3.786	20.000		05/01/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: ICP-200.8 MS All possible meta

Sample Date: 04/11/08  
 Receive Date: 04/11/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Barium	7440-39-3	90.045		RPD			25.950	20.000 *		05/01/08
SPK-RPD	Beryllium	7440-41-7	90.890		RPD			3.300	20.000		05/01/08
SPK-RPD	Cadmium	7440-43-9	92.700		RPD			3.185	20.000		05/01/08
SPK-RPD	Chromium	7440-47-3	90.850		RPD			5.159	20.000		05/01/08
SPK-RPD	Copper	7440-50-8	89.280		RPD			3.575	20.000		05/01/08
SPK-RPD	Mercury	7439-97-6	95.500		RPD			3.599	20.000		05/01/08
SPK-RPD	Nickel	7440-02-0	90.970		RPD			1.635	20.000		05/01/08
SPK-RPD	Lead	7439-92-1	94.405		RPD			3.333	20.000		05/01/08
SPK-RPD	Selenium	7782-49-2	92.300		RPD			3.041	20.000		05/01/08
SPK-RPD	Zinc	7440-66-6	88.980		RPD			4.020	20.000		05/01/08

Lab ID: W08GR01023  
 BATCH QC ASSOCIATED WITH SAMPLE

MS	Silver	7440-22-4	185	92.500	% Recov	70.000	130.000				05/01/08
MS	Arsenic	7440-38-2	183	91.500	% Recov	70.000	130.000				05/01/08
MS	Cadmium	7440-43-9	185.5	92.750	% Recov	70.000	130.000				05/01/08
MS	Chromium	7440-47-3	172.37	86.185	% Recov	70.000	130.000				05/01/08
MS	Lead	7439-92-1	188.94	94.470	% Recov	70.000	130.000				05/01/08
MSD	Silver	7440-22-4	187.5	93.750	% Recov	70.000	130.000				05/01/08
MSD	Arsenic	7440-38-2	185.9	92.950	% Recov	70.000	130.000				05/01/08
MSD	Cadmium	7440-43-9	188.1	94.050	% Recov	70.000	130.000				05/01/08
MSD	Chromium	7440-47-3	179.47	89.735	% Recov	70.000	130.000				05/01/08
MSD	Lead	7439-92-1	191.84	95.920	% Recov	70.000	130.000				05/01/08
SPK-RPD	Silver	7440-22-4	93.750		RPD			1.342	20.000		05/01/08
SPK-RPD	Arsenic	7440-38-2	92.950		RPD			1.572	20.000		05/01/08
SPK-RPD	Cadmium	7440-43-9	94.050		RPD			1.392	20.000		05/01/08
SPK-RPD	Chromium	7440-47-3	89.735		RPD			4.036	20.000		05/01/08
SPK-RPD	Lead	7439-92-1	95.920		RPD			1.523	20.000		05/01/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: ICP-200.8 MS All possible meta

Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>BATCH QC</b>											
BLANK	Silver	7440-22-4	<0.1	n/a	ug/L					U	05/01/08
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	05/01/08
BLANK	Barium	7440-39-3	<0.2	n/a	ug/L					U	05/01/08
BLANK	Beryllium	7440-41-7	<5e-2	n/a	ug/L					U	05/01/08
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L					U	05/01/08
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L					U	05/01/08
BLANK	Copper	7440-50-8	<0.1	n/a	ug/L					U	05/01/08
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	05/01/08
BLANK	Nickel	7440-02-0	<0.2	n/a	ug/L					U	05/01/08
BLANK	Lead	7439-92-1	<0.1	n/a	ug/L					U	05/01/08
BLANK	Selenium	7782-49-2	<0.3	n/a	ug/L					U	05/01/08
BLANK	Zinc	7440-66-6	<0.8	n/a	ug/L					U	05/01/08
LCS	Silver	7440-22-4	109.2	108.119	% Recov	98.000	134.000				05/01/08
LCS	Arsenic	7440-38-2	134.4	101.818	% Recov	75.000	134.000				05/01/08
LCS	Barium	7440-39-3	318.1	99.718	% Recov	87.000	121.000				05/01/08
LCS	Beryllium	7440-41-7	87.87	98.179	% Recov	70.000	153.000				05/01/08
LCS	Cadmium	7440-43-9	66.13	99.444	% Recov	95.000	124.000				05/01/08
LCS	Chromium	7440-47-3	68.72	94.266	% Recov	77.000	125.000				05/01/08
LCS	Copper	7440-50-8	67.33	98.292	% Recov	84.000	122.000				05/01/08
LCS	Mercury	7439-97-6	7.73	93.357	% Recov	71.000	132.000				05/01/08
LCS	Nickel	7440-02-0	55.74	100.252	% Recov	90.000	121.000				05/01/08
LCS	Lead	7439-92-1	133.7	102.846	% Recov	92.000	123.000				05/01/08
LCS	Selenium	7782-49-2	172.5	107.143	% Recov	52.000	157.000				05/01/08
LCS	Zinc	7440-66-6	184.5	104.237	% Recov	85.000	130.000				05/01/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: ICP-200.8 MS All possible meta

Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Thallium	7440-28-0	<0.1	n/a	ug/L					U	05/01/08
BLANK	Zinc	7440-86-8	<0.8	n/a	ug/L					U	05/01/08
LCS	Silver	7440-22-4	109.2	108.119	% Recov	98.000	134.000				05/01/08
LCS	Arsenic	7440-38-2	134.4	101.818	% Recov	75.000	134.000				05/01/08
LCS	Barium	7440-39-3	318.1	99.718	% Recov	87.000	121.000				05/01/08
LCS	Beryllium	7440-41-7	87.87	98.179	% Recov	70.000	153.000				05/01/08
LCS	Cadmium	7440-43-9	66.13	99.444	% Recov	95.000	124.000				05/01/08
LCS	Cobalt	7440-48-4	73.61	100.698	% Recov	88.000	119.000				05/01/08
LCS	Chromium	7440-47-3	68.72	94.266	% Recov	77.000	125.000				05/01/08
LCS	Copper	7440-50-8	87.33	98.292	% Recov	84.000	122.000				05/01/08
LCS	Mercury	7439-97-8	7.73	93.357	% Recov	71.000	132.000				05/01/08
LCS	Manganese	7439-98-5	458.4	101.192	% Recov	83.000	118.000				05/01/08
LCS	Nickel	7440-02-0	55.74	100.252	% Recov	90.000	121.000				05/01/08
LCS	Lead	7439-92-1	133.7	102.846	% Recov	92.000	123.000				05/01/08
LCS	Antimony	7440-36-0	140.4	155.654	% Recov	114.000	260.000				05/01/08
LCS	Selenium	7782-49-2	172.5	107.143	% Recov	52.000	157.000				05/01/08
LCS	Thallium	7440-28-0	126.2	94.887	% Recov	92.000	123.000				05/01/08
LCS	Zinc	7440-86-8	184.5	104.237	% Recov	85.000	130.000				05/01/08

**REVISED**  
 7-18-08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080847  
Matrix: SOLID  
Test: pH Soil and Waste Measurement

Sample Date: 04/17/08  
Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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Lab ID: W08GR01075  
BATCH QC ASSOCIATED WITH SAMPLE

DUP	pH Soil and Waste Measurement	PH	9.10		RPD			0.220	3.000		05/08/08
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# WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent  
Project Number F08-066

Group #: WSCF20080847  
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS: Barium spike RPD over 20% but still pass. X-flag  ORGANICS: All samples are corrected for moisture and reported on a dry weight basis. cgc  U-235 duplicate is flagged for poor RPD but the sample activity is low level. RPD does not apply to low level samples. Imh U-234 duplicate is flagged for poor RPD due to the inhomogeneity of the sample. Imh U-232 Tracer recovery is low. Since all the other tracer came out fine, this batch has been approved. Imh

Lab Areas: VALGROUP - Group Validation  
LOGSAMP - Login for Sample

VALTEST - Test Validation  
LOGTEST - Login for Tests

TESTDATA - Test Data Entry

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wgppc/5.2 Report#: WSCF20080847

Report Date: 25-jun-2008

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01075  
**Client ID:** BITFF2

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/17/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>NWTPH-D TPH Diesel Range (Wa) Prep</b>											
<b>NWTPH-D TPH Diesel Range (Wa)</b>											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 3.10e+03	ug/kg			1.00	3.1e+03		05/05/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 3.10e+03	ug/kg			1.00	3.1e+03		05/05/08
<b>PCBs complete list Prep</b>											
<b>PCBs complete list</b>											
Aroclor-1016	12674-11-2	LA-523-427	U	< 9.90	ug/kg			1.00	9.9		05/06/08
Aroclor-1221	11104-28-2	LA-523-427	U	< 20.0	ug/kg			1.00	20		05/06/08
Aroclor-1232	11141-16-5	LA-523-427	U	< 9.90	ug/kg			1.00	9.9		05/06/08
Aroclor-1242	53469-21-9	LA-523-427	U	< 9.90	ug/kg			1.00	9.9		05/06/08
Aroclor-1248	12672-29-8	LA-523-427	U	< 9.90	ug/kg			1.00	9.9		05/06/08
Aroclor-1254	11097-69-1	LA-523-427	U	< 9.90	ug/kg			1.00	9.9		05/06/08
Aroclor-1260	11096-82-5	LA-523-427	U	< 9.90	ug/kg			1.00	9.9		05/06/08
Aroclor-1262	37324-23-5	LA-523-427	U	< 9.90	ug/kg			1.00	9.9		05/06/08
Aroclor-1268	11100-14-4	LA-523-427	U	< 9.90	ug/kg			1.00	9.9		05/06/08
<b>SW-846 8270C Semi-Vols Prep</b>											
<b>SW-846 8270C Semi-Vols</b>											
4-Nitrophenol	100-02-7	LA-523-456	U	< 200	ug/kg			1.00	2.0e+02		05/06/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 240	ug/kg			1.00	2.4e+02		05/06/08
Phenol	108-95-2	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08
Pyrene	129-00-0	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative.(inorg)

\* - 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:** F08-066  
**Sample #** W08GR01075  
**Client ID:** B1TFF2

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/17/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Acenaphthene	83-32-9	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 200	ug/kg			1.00	2.0e+02		05/06/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08
1,2,4-Trimethylbenzene	95-63-6	LA-523-456	U	< 180	ug/kg			1.00	1.8e+02		05/06/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

- Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

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Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01076  
**Client ID:** BITFF0

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/17/08  
**Received:** 04/28/08

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

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>VOA Ground Water Protection</b>											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Trichloroethene	79-01-6	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Benzene	71-43-2	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Toluene	108-88-3	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Chlorobenzene	108-90-7	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Ethylbenzene	100-41-4	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Styrene	100-42-5	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
2-Hexanone	591-78-6	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Acetone	67-84-1	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Chloroform	67-86-3	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Bromomethane	74-83-9	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Chloromethane	74-87-3	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Chloroethane	75-00-3	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

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Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01076  
**Client ID:** B1TFF0

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/17/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Methylenechloride	75-09-2	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Carbon disulfide	75-15-0	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Bromoform	75-25-2	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
2-Butanone	78-93-3	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Hexane	110-54-3	LA-523-455	U	< 0.970	ug/kg			1.00	0.97		04/30/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 1.90	ug/kg			1.00	1.9		04/30/08
Acetonitrile	75-05-8	LA-523-455	U	< 1.90	ug/kg			1.00	1.9		04/30/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative.(inorg)

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+ - Indicates more than six qualifier symbols

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Groundwater Remediation Program

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# WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent  
SAF Number: F08-066  
Sample #: W08GR01078  
Client ID: BITFF5

GPP TRENT  
WSCF

Matrix: SOIL

Group #: WSCF20080847  
Department: Organic  
Sampled: 04/21/08  
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>NWTPH-D TPH Diesel Range (Wa) Prep</b>											<b>04/30/08</b>
<b>NWTPH-D TPH Diesel Range (Wa)</b>											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 3.10e+03	ug/kg			1.00	3.1e+03		05/05/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 3.10e+03	ug/kg			1.00	3.1e+03		05/05/08
<b>PCBs complete list Prep</b>											<b>04/30/08</b>
<b>PCBs complete list</b>											
Aroclor-1016	12674-11-2	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/08/08
Aroclor-1221	11104-28-2	LA-523-427	U	< 20.0	ug/kg			1.00	20		05/08/08
Aroclor-1232	11141-16-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/08/08
Aroclor-1242	53469-21-9	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/08/08
Aroclor-1248	12672-29-6	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/08/08
Aroclor-1254	11097-89-1	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/08/08
Aroclor-1260	11096-82-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/08/08
Aroclor-1262	37324-23-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/08/08
Aroclor-1268	11100-14-4	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/08/08
<b>SW-846 8270C Semi-Vols Prep</b>											<b>04/30/08</b>
<b>SW-846 8270C Semi-Vols</b>											
4-Nitrophenol	100-02-7	LA-523-456	U	< 210	ug/kg			1.00	2.1e+02		05/08/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 250	ug/kg			1.00	2.5e+02		05/08/08
Phenol	108-95-2	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/08/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/08/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/08/08
Pyrene	129-00-0	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/08/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/08/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/08/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative (inorg)

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Groundwater Remediation Program

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01078  
**Client ID:** B1TFF5

**GPP**      **TRENT**  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/21/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Acenaphthene	83-32-9	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 210	ug/kg			1.00	2.1e+02		05/06/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 140	ug/kg			1.00	1.4e+02		05/06/08
1,2,4-Trimethylbenzene	95-63-6	LA-523-456	U	< 190	ug/kg			1.00	1.9e+02		05/06/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

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B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01079  
**Client ID:** BITFD9

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/17/08  
**Received:** 04/28/08

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

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>NWTPH-D TPH Diesel Range (Wa) Prep</b>											
<b>NWTPH-D TPH Diesel Range (Wa)</b>											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 3.20e +03	ug/kg			1.00	3.2e +03		05/05/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 3.20e +03	ug/kg			1.00	3.2e +03		05/05/08
<b>PCBs complete list Prep</b>											
<b>PCBs complete list</b>											
Aroclor-1016	12674-11-2	LA-523-427	U	< 11.0	ug/kg			1.00	11		05/06/08
Aroclor-1221	11104-28-2	LA-523-427	U	< 21.0	ug/kg			1.00	21		05/06/08
Aroclor-1232	11141-18-5	LA-523-427	U	< 11.0	ug/kg			1.00	11		05/06/08
Aroclor-1242	53469-21-9	LA-523-427	U	< 11.0	ug/kg			1.00	11		05/06/08
Aroclor-1248	12672-29-8	LA-523-427	U	< 11.0	ug/kg			1.00	11		05/06/08
Aroclor-1254	11097-69-1	LA-523-427	U	< 11.0	ug/kg			1.00	11		05/06/08
Aroclor-1260	11096-82-5	LA-523-427	U	< 11.0	ug/kg			1.00	11		05/06/08
Aroclor-1262	37324-23-5	LA-523-427	U	< 11.0	ug/kg			1.00	11		05/06/08
Aroclor-1268	11100-14-4	LA-523-427	U	< 11.0	ug/kg			1.00	11		05/06/08
<b>SW-846 8270C Semi-Vols Prep</b>											
<b>SW-846 8270C Semi-Vols</b>											
4-Nitrophenol	100-02-7	LA-523-456	U	< 210	ug/kg			1.00	2.1e +02		05/06/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 260	ug/kg			1.00	2.6e +02		05/06/08
Phenol	108-95-2	LA-523-456	U	< 150	ug/kg			1.00	1.5e +02		05/06/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 150	ug/kg			1.00	1.5e +02		05/06/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 150	ug/kg			1.00	1.5e +02		05/06/08
Pyrene	129-00-0	LA-523-456	U	< 150	ug/kg			1.00	1.5e +02		05/06/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 150	ug/kg			1.00	1.5e +02		05/06/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 150	ug/kg			1.00	1.5e +02		05/06/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

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

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

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Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01079  
**Client ID:** B1TFD9

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/17/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Acenaphthene	83-32-9	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 210	ug/kg			1.00	2.1e+02		05/06/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
1,2,4-Trimethylbenzene	95-63-6	LA-523-456	U	< 190	ug/kg			1.00	1.9e+02		05/06/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

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

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

D - Analyte was identified at a secondary dilution factor

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Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01080  
**Client ID:** B1TFF8

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/22/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>NWTPH-D TPH Diesel Range (Wa) Prep</b>											
<b>NWTPH-D TPH Diesel Range (Wa)</b>											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493		5.60e+03	ug/kg			1.00	3.1e+03		05/05/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 3.10e+03	ug/kg			1.00	3.1e+03		05/05/08
<b>PCBs complete list Prep</b>											
<b>PCBs complete list</b>											
Aroclor-1018	12674-11-2	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1221	11104-28-2	LA-523-427	U	< 21.0	ug/kg			1.00	21		05/06/08
Aroclor-1232	11141-16-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1242	53469-21-9	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1248	12672-29-6	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1254	11097-69-1	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1260	11096-82-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1262	37324-23-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1268	11100-14-4	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
<b>SW-846 8270C Semi-Vols Prep</b>											
<b>SW-846 8270C Semi-Vols</b>											
4-Nitrophenol	100-02-7	LA-523-456	U	< 210	ug/kg			1.00	2.1e+02		05/06/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 250	ug/kg			1.00	2.5e+02		05/06/08
Phenol	108-95-2	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
Pyrene	129-00-0	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (Inorg)

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

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

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative.(Inorg)

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

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# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01080  
**Client ID:** BITFF8

**GPP**      **TRENT**  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/22/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Aceraphthene	83-32-9	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/08/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 210	ug/kg			1.00	2.1e+02		05/08/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/08/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/08/08
1,2,4-Trimethylbenzene	95-63-6	LA-523-456	U	< 190	ug/kg			1.00	1.9e+02		05/08/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01082  
**Client ID:** B1TFH1

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/23/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>NWTPH-D TPH Diesel Range (Wa) Prep</b>											
<b>NWTPH-D TPH Diesel Range (Wa)</b>											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 3.20e+03	ug/kg			1.00	3.2e+03		05/05/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 3.20e+03	ug/kg			1.00	3.2e+03		05/05/08
<b>PCBs complete list Prep</b>											
<b>PCBs complete list</b>											
Aroclor-1016	12674-11-2	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1221	11104-28-2	LA-523-427	U	< 21.0	ug/kg			1.00	21		05/06/08
Aroclor-1232	11141-16-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1242	53469-21-9	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1248	12672-29-6	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1254	11097-69-1	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1260	11096-82-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1262	37324-23-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1268	11100-14-4	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
<b>SW-846 8270C Semi-Vols Prep</b>											
<b>SW-846 8270C Semi-Vols</b>											
4-Nitrophenol	100-02-7	LA-523-456	U	< 210	ug/kg			1.00	2.1e+02		05/06/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 250	ug/kg			1.00	2.5e+02		05/06/08
Phenol	108-95-2	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
Pyrene	129-00-0	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (Inorg)

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

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

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X - Other flags/notes described in the comments/narrative(Inorg)

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

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# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01082  
**Client ID:** B1TFH1

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/23/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Acenaphthene	83-32-9	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 210	ug/kg			1.00	2.1e+02		05/06/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
1,2,4-Trimethylbenzene	95-63-6	LA-523-456	U	< 190	ug/kg			1.00	1.9e+02		05/06/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01084  
**Client ID:** BITFF3

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/21/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>VOA Ground Water Protection</b>											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Trichloroethene	79-01-6	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Benzene	71-43-2	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Toluene	108-88-3	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Chlorobenzene	108-90-7	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Ethylbenzene	100-41-4	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Styrene	100-42-5	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
2-Hexanone	591-78-6	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Acetone	67-64-1	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Chloroform	67-86-3	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Bromomethane	74-83-9	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Chloromethane	74-87-3	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Chloroethane	75-00-3	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated;

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

D - Analyte was identified at a secondary dilution factor  
 U - Analyzed for but not detected above limiting criteria.  
 X - Other flags/notes described in the comments/narrative(inorg)

+ - Indicates more than six qualifier symbols

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01084  
**Client ID:** B1TFF3

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/21/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Methylenechloride	75-09-2	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Carbon disulfide	75-15-0	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Bromoform	75-25-2	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
2-Butanone	78-93-3	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Hexane	110-54-3	LA-523-455	U	< 0.990	ug/kg			1.00	0.99		04/30/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/kg			1.00	2.0		04/30/08
Acetonitrile	75-05-8	LA-523-455	U	< 2.00	ug/kg			1.00	2.0		04/30/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

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X - Other flags/notes described in the comments/narrative(inorg)

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Groundwater Remediation Program

# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01085  
**Client ID:** BITFD7

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/17/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>VOA Ground Water Protection</b>											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Styrene	100-42-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
cis-1,3-Dichloropropene	10081-01-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
trans-1,3-Dichloropropene	10081-02-6	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
2-Hexanone	591-78-6	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Bromomethane	74-83-9	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Chloromethane	74-87-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Chloroethane	75-00-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

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

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

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# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01085  
**Client ID:** BITFD7

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/17/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Bromoform	75-25-2	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Hexane	110-54-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.10	ug/kg			1.00	2.1		04/30/08
Acetonitrile	75-05-8	LA-523-455	U	< 2.10	ug/kg			1.00	2.1		04/30/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

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

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

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01086  
**Client ID:** BITFF6

**GPP**      **TRENT**  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/22/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>VOA Ground Water Protection</b>											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Styrene	100-42-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
2-Hexanone	591-78-6	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Chloroform	67-68-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Bromomethane	74-83-9	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Chloromethane	74-87-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Chloroethane	75-00-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01086  
**Client ID:** BITFF6

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/22/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Bromoform	75-25-2	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Hexane	110-54-3	LA-523-455	U	< 1.00	ug/kg			1.00	1.0		04/30/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/kg			1.00	2.0		04/30/08
Acetonitrile	75-05-8	LA-523-455	U	< 2.00	ug/kg			1.00	2.0		04/30/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

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U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

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# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01087  
**Client ID:** B1TF9

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/23/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>VOA Ground Water Protection</b>											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Trichloroethene	79-01-8	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Benzene	71-43-2	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Toluene	108-88-3	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Chlorobenzene	108-90-7	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Ethylbenzene	100-41-4	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Styrene	100-42-5	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
2-Hexanone	591-78-6	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Acetone	67-64-1	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Chloroform	67-66-3	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Bromomethane	74-83-9	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Chloromethane	74-87-3	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Chloroethane	75-00-3	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08

**MDL=Minimum Detection Limit**

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**TP Err=Total Propagated Error**

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# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01087  
**Client ID:** BITFF9

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Organic  
**Sampled:** 04/23/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Methylenechloride	75-09-2	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Carbon disulfide	75-15-0	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Bromoform	75-25-2	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
2-Butanone	78-93-3	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Hexane	110-54-3	LA-523-455	U	< 0.960	ug/kg			1.00	0.96		04/30/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 1.90	ug/kg			1.00	1.9		04/30/08
Acetonitrile	75-05-8	LA-523-455	U	< 1.90	ug/kg			1.00	1.9		04/30/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

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D - Analyte was identified at a secondary dilution factor

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# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent  
Project Number F08-066 :F08-066

Group #: WSCF20080847  
Department: Organic

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01075	B1TFF2	GPP TRENT	SW-846 8270C Semi-Vols	SMP 13.485 Di-n-butylphthalate	84-74-2		13.48526	6.9e + 02 ug/kg
W08GR01078	B1TFF5	GPP TRENT	SW-846 8270C Semi-Vols	SMP 13.490 Di-n-butylphthalate	84-74-2		13.49055	2.4e + 02 ug/kg
W08GR01079	B1TFD9	GPP TRENT	SW-846 8270C Semi-Vols	SMP 13.485 Di-n-butylphthalate	84-74-2		13.48528	3.2e + 02 ug/kg
W08GR01080	B1TFF8	GPP TRENT	SW-846 8270C Semi-Vols	SMP 13.480 Di-n-butylphthalate	84-74-2		13.48011	2.5e + 02 ug/kg
W08GR01082	B1TFH1	GPP TRENT	SW-846 8270C Semi-Vols	SMP 13.479 Di-n-butylphthalate	84-74-2		13.47995	4.7e + 02 ug/kg

RQ=Result Qualifier

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Report Date: 25-jun-2008

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# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: PCBs complete list

Sample Date: 03/31/08  
 Receive Date: 04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01033</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
MS	Aroclor-1260	11096-82-5	214.74	103.000	% Recov	75.000	125.000				05/06/08
MS	Decachlorobiphenyl	2051-24-3	204.34	98.100	% Recov	50.000	150.000				05/06/08
MS	Tetrachloro-m-xylene	877-09-8	195.45	93.800	% Recov	50.000	150.000				05/06/08
MSD	Aroclor-1260	11096-82-5	213.48	106.000	% Recov	75.000	125.000				05/06/08
MSD	Decachlorobiphenyl	2051-24-3	201.16	100.000	% Recov	50.000	150.000				05/06/08
MSD	Tetrachloro-m-xylene	877-09-8	193.50	96.400	% Recov	50.000	150.000				05/06/08
SPK-RPD	Aroclor-1260	11096-82-5	106.000		RPD			2.871	25.000		05/06/08
SPK-RPD	Decachlorobiphenyl	2051-24-3	100.000		RPD			1.918	20.000		05/06/08
SPK-RPD	Tetrachloro-m-xylene	877-09-8	96.400		RPD			2.734	20.000		05/06/08

**Lab ID: W08GR01075**  
**BATCH QC ASSOCIATED WITH SAMPLE**

SURR	Decachlorobiphenyl	2051-24-3	198.30	99.900	% Recov	50.000	150.000				05/06/08
SURR	Tetrachloro-m-xylene	877-09-8	187.18	94.300	% Recov	50.000	150.000				05/06/08

**Lab ID: W08GR01078**  
**BATCH QC ASSOCIATED WITH SAMPLE**

SURR	Decachlorobiphenyl	2051-24-3	200.66	98.600	% Recov	50.000	150.000				05/06/08
SURR	Tetrachloro-m-xylene	877-09-8	185.55	91.200	% Recov	50.000	150.000				05/06/08

**Lab ID: W08GR01079**  
**BATCH QC ASSOCIATED WITH SAMPLE**

SURR	Decachlorobiphenyl	2051-24-3	208.09	98.400	% Recov	50.000	150.000				05/06/08
SURR	Tetrachloro-m-xylene	877-09-8	195.62	92.500	% Recov	50.000	150.000				05/06/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: PCBs complete list

Sample Date: 04/22/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01080</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Decachlorobiphenyl	2051-24-3	204.56	98.700	% Recov	50.000	150.000				05/06/08
SURR	Tetrachloro-m-xylene	877-09-8	195.95	94.600	% Recov	50.000	150.000				05/06/08
<b>Lab ID: W08GR01082</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Decachlorobiphenyl	2051-24-3	207.59	101.000	% Recov	50.000	150.000				05/06/08
SURR	Tetrachloro-m-xylene	877-09-8	187.50	91.200	% Recov	50.000	150.000				05/06/08
<b>BATCH QC</b>											
BLANK	Aroclor-1016	12674-11-2	< 10	n/a	UGKG					U	05/06/08
BLANK	Aroclor-1221	11104-28-2	< 20	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1232	11141-16-5	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1242	53469-21-9	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1248	12672-29-6	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1254	11097-69-1	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1260	11096-82-5	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1262	37324-23-5	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1268	11100-14-4	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Decachlorobiphenyl	2051-24-3	191.10	95.800	% Recov	50.000	150.000				05/06/08
BLANK	Tetrachloro-m-xylene	877-09-8	185.59	92.800	% Recov	50.000	150.000				05/06/08
LCS	Aroclor-1260	11096-82-5	205.86	103.000	% Recov	70.000	130.000				05/06/08
LCS	Decachlorobiphenyl	2051-24-3	198.16	99.100	% Recov	50.000	150.000				05/06/08
LCS	Tetrachloro-m-xylene	877-09-8	185.66	92.800	% Recov	50.000	150.000				05/06/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: SW-846 8270C Semi-Vols

Sample Date: 03/26/08  
 Receive Date: 04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01038 BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,2,4-Trichlorobenzene	120-82-1	4855.4	109.000	% Recov	75.000	121.000				05/06/08
MS	1,4-Dichlorobenzene	106-46-7	4834.2	109.000	% Recov	68.000	121.000				05/06/08
MS	2,4-Dinitrotoluene	121-14-2	4628.0	104.000	% Recov	66.000	113.000				05/06/08
MS	2-Fluorophenol(Surr)	367-12-4	4428.8	99.900	% Recov	72.000	120.000				05/06/08
MS	Acenaphthene	83-32-9	5009.1	113.000	% Recov	69.000	125.000				05/06/08
MS	4-Chloro-3-methylphenol	59-50-7	7004.0	105.000	% Recov	68.000	116.000				05/06/08
MS	2-Chlorophenol	95-57-8	6983.5	105.000	% Recov	65.000	124.000				05/06/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	4919.2	111.000	% Recov	69.000	127.000				05/06/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	4763.2	107.000	% Recov	66.000	122.000				05/06/08
MS	Phenol	108-95-2	7009.8	105.000	% Recov	71.000	122.000				05/06/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	4747.5	107.000	% Recov	63.000	125.000				05/06/08
MS	4-Nitrophenol	100-02-7	5908.3	88.800	% Recov	55.000	113.000				05/06/08
MS	Pentachlorophenol	87-86-5	5767.6	86.700	% Recov	50.000	113.000				05/06/08
MS	Phenol-d5(Surr)	4165-62-2	4899.5	106.000	% Recov	66.000	124.000				05/06/08
MS	Pyrene	129-00-0	5508.6	124.000	% Recov	67.000	125.000				05/06/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	4594.5	104.000	% Recov	49.000	120.000				05/06/08
MS	Terphenyl-d14(Surr)	98904-43-9	5356.6	121.000	% Recov	58.000	128.000				05/06/08
MSD	1,2,4-Trichlorobenzene	120-82-1	4965.4	112.000	% Recov	75.000	121.000				05/06/08
MSD	1,4-Dichlorobenzene	106-46-7	4770.4	108.000	% Recov	68.000	121.000				05/06/08
MSD	2,4-Dinitrotoluene	121-14-2	4720.4	107.000	% Recov	66.000	113.000				05/06/08
MSD	2-Fluorophenol(Surr)	367-12-4	4652.6	105.000	% Recov	72.000	120.000				05/06/08
MSD	Acenaphthene	83-32-9	5116.2	116.000	% Recov	69.000	125.000				05/06/08
MSD	4-Chloro-3-methylphenol	59-50-7	7395.4	111.000	% Recov	68.000	116.000				05/06/08
MSD	2-Chlorophenol	95-57-8	7185.2	108.000	% Recov	65.000	124.000				05/06/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	5172.5	117.000	% Recov	69.000	127.000				05/06/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	4923.2	111.000	% Recov	66.000	122.000				05/06/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: SW-846 8270C Semi-Vols

Sample Date: 03/26/08  
 Receive Date: 04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Phenol	108-95-2	7386.0	111.000	% Recov	71.000	122.000				05/06/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	4904.8	111.000	% Recov	63.000	125.000				05/06/08
MSD	4-Nitrophenol	100-02-7	6815.4	99.700	% Recov	55.000	113.000				05/06/08
MSD	Pentachlorophenol	87-86-5	6594.1	99.300	% Recov	50.000	113.000				05/06/08
MSD	Phenol-d5(Surr)	4165-82-2	4740.8	107.000	% Recov	66.000	124.000				05/06/08
MSD	Pyrene	129-00-0	5471.2	124.000	% Recov	67.000	125.000				05/06/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	4730.5	107.000	% Recov	49.000	120.000				05/06/08
MSD	Terphenyl-d14(Surr)	98904-43-9	5552.1	125.000	% Recov	58.000	128.000				05/08/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	112.000		RPD			2.715	20.000		05/06/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	108.000		RPD			0.922	20.000		05/08/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	107.000		RPD			2.844	20.000		05/06/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	105.000		RPD			4.978	20.000		05/06/08
SPK-RPD	Acenaphthene	83-32-9	116.000		RPD			2.620	20.000		05/06/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	111.000		RPD			5.556	20.000		05/06/08
SPK-RPD	2-Chlorophenol	95-57-8	108.000		RPD			2.817	20.000		05/06/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	117.000		RPD			5.263	20.000		05/06/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	111.000		RPD			3.670	20.000		05/06/08
SPK-RPD	Phenol	108-95-2	111.000		RPD			5.556	20.000		05/06/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	111.000		RPD			3.670	20.000		05/06/08
SPK-RPD	4-Nitrophenol	100-02-7	99.700		RPD			11.565	20.000		05/06/08
SPK-RPD	Pentachlorophenol	87-86-5	99.300		RPD			13.548	20.000		05/06/08
SPK-RPD	Phenol-d5(Surr)	4165-82-2	107.000		RPD			0.939	20.000		05/06/08
SPK-RPD	Pyrene	129-00-0	124.000		RPD			0.000	20.000		05/06/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	107.000		RPD			2.844	20.000		05/06/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	125.000		RPD			3.252	20.000		05/08/08
<b>Lab ID: W08GR01075</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	2-Fluorophenol(Surr)	367-12-4	4275.3	106.000	% Recov	72.000	120.000				05/06/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	4283.0	106.000	% Recov	66.000	122.000				05/06/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: SW-846 8270C Semi-Vols

Sample Date: 04/17/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Nitrobenzene-d5(Surr)	4165-60-0	4428.6	109.000	% Recov	63.000	125.000				05/06/08
SURR	Phenol-d5(Surr)	4165-62-2	4286.9	106.000	% Recov	66.000	124.000				05/06/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	3721.5	91.800	% Recov	49.000	120.000				05/06/08
SURR	Terphenyl-d14(Surr)	98904-43-9	4736.5	117.000	% Recov	58.000	128.000				05/06/08

**Lab ID: W08GR01078**  
**BATCH QC ASSOCIATED WITH SAMPLE**

SURR	2-Fluorophenol(Surr)	367-12-4	3611.7	87.400	% Recov	72.000	120.000				05/06/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	3747.6	90.700	% Recov	66.000	122.000				05/06/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	3901.6	94.400	% Recov	63.000	125.000				05/06/08
SURR	Phenol-d5(Surr)	4165-62-2	3726.3	90.200	% Recov	66.000	124.000				05/06/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	3004.9	72.700	% Recov	49.000	120.000				05/06/08
SURR	Terphenyl-d14(Surr)	98904-43-9	4188.1	101.000	% Recov	58.000	128.000				05/06/08

**Lab ID: W08GR01079**  
**BATCH QC ASSOCIATED WITH SAMPLE**

SURR	2-Fluorophenol(Surr)	367-12-4	4235.4	99.500	% Recov	72.000	120.000				05/06/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	4423.5	104.000	% Recov	66.000	122.000				05/06/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	4571.3	107.000	% Recov	63.000	125.000				05/06/08
SURR	Phenol-d5(Surr)	4165-62-2	4277.6	100.000	% Recov	66.000	124.000				05/06/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	3625.2	85.200	% Recov	49.000	120.000				05/06/08
SURR	Terphenyl-d14(Surr)	98904-43-9	5058.7	119.000	% Recov	58.000	128.000				05/06/08

**Lab ID: W08GR01080**  
**BATCH QC ASSOCIATED WITH SAMPLE**

SURR	2-Fluorophenol(Surr)	367-12-4	4278.0	103.000	% Recov	72.000	120.000				05/06/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	4356.6	104.000	% Recov	66.000	122.000				05/06/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	4408.3	106.000	% Recov	63.000	125.000				05/06/08
SURR	Phenol-d5(Surr)	4165-62-2	4293.5	103.000	% Recov	66.000	124.000				05/06/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	3335.0	79.900	% Recov	49.000	120.000				05/06/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: SW-846 8270C Semi-Vols

Sample Date: 04/22/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Terphenyl-d14(Surr)	98904-43-9	5087.4	122.000	% Recov	58.000	128.000				05/06/08
<b>Lab ID: W08GR01082</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	2-Fluorophenol(Surr)	367-12-4	3709.3	88.000	% Recov	72.000	120.000				05/06/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	3622.0	85.900	% Recov	66.000	122.000				05/06/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	3825.2	90.800	% Recov	63.000	125.000				05/06/08
SURR	Phenol-d5(Surr)	4165-62-2	3600.4	85.400	% Recov	66.000	124.000				05/06/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-8	2906.6	69.000	% Recov	49.000	120.000				05/06/08
SURR	Terphenyl-d14(Surr)	98904-43-9	4456.3	106.000	% Recov	58.000	128.000				05/06/08
<b>BATCH QC</b>											
BLANK	1,2,4-Trimethylbenzene	95-63-6	< 180	n/a	ug/Kg					U	05/06/08
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 140	n/a	ug/Kg					U	05/06/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 240	n/a	ug/Kg					U	05/06/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 140	n/a	ug/Kg					U	05/06/08
BLANK	2-Fluorophenol(Surr)	367-12-4	3245.6	81.100	% Recov	72.000	120.000				05/06/08
BLANK	Acenaphthene	83-32-9	< 140	n/a	ug/Kg					U	05/06/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 140	n/a	ug/Kg					U	05/06/08
BLANK	2-Chlorophenol	95-57-8	< 140	n/a	ug/Kg					U	05/06/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 140	n/a	ug/Kg					U	05/06/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	3223.3	80.600	% Recov	66.000	122.000				05/06/08
BLANK	Phenol	108-95-2	< 140	n/a	ug/Kg					U	05/06/08
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	3268.5	81.700	% Recov	63.000	125.000				05/06/08
BLANK	4-Nitrophenol	100-02-7	< 200	n/a	ug/Kg					U	05/06/08
BLANK	Pentachlorophenol	87-86-5	< 200	n/a	ug/Kg					U	05/06/08
BLANK	Phenol-d5(Surr)	4165-62-2	3227.2	80.700	% Recov	66.000	124.000				05/06/08
BLANK	Pyrene	129-00-0	< 140	n/a	ug/Kg					U	05/06/08
BLANK	Tributyl phosphate	126-73-8	< 140	n/a	ug/Kg					U	05/06/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-8	2693.6	67.300	% Recov	49.000	120.000				05/06/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: SW-846 8270C Semi-Vols

Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Terphenyl-d14(Surr)	98904-43-9	3511.7	87.800	% Recov	58.000	128.000				05/08/08
LCS	1,2,4-Trichlorobenzene	120-82-1	4451.0	111.000	% Recov	76.000	118.000				05/08/08
LCS	1,4-Dichlorobenzene	106-46-7	4474.7	112.000	% Recov	68.000	121.000				05/08/08
LCS	2,4-Dinitrotoluene	121-14-2	4243.3	106.000	% Recov	68.000	112.000				05/08/08
LCS	2-Fluorophenol(Surr)	367-12-4	4399.7	110.000	% Recov	50.000	110.000				05/08/08
LCS	Acenaphthene	83-32-9	4541.2	114.000	% Recov	75.000	121.000				05/08/08
LCS	4-Chloro-3-methylphenol	59-50-7	6574.7	110.000	% Recov	68.000	117.000				05/08/08
LCS	2-Chlorophenol	95-57-8	6755.2	113.000	% Recov	84.000	114.000				05/08/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	4533.2	113.000	% Recov	76.000	119.000				05/08/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	4304.0	107.600	% Recov	58.000	109.000				05/08/08
LCS	Phenol	108-95-2	6775.8	112.930	% Recov	80.000	113.000				05/08/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	4479.7	112.000	% Recov	60.000	118.000				05/08/08
LCS	4-Nitrophenol	100-02-7	5440.8	90.700	% Recov	42.000	123.000				05/08/08
LCS	Pentachlorophenol	87-86-5	5921.1	98.700	% Recov	55.000	120.000				05/08/08
LCS	Phenol-d5(Surr)	4165-62-2	4489.2	112.000	% Recov	59.000	116.000				05/08/08
LCS	Pyrene	129-00-0	4837.4	120.935	% Recov	67.000	122.000				05/08/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	4078.1	102.000	% Recov	60.000	120.000				05/08/08
LCS	Terphenyl-d14(Surr)	98904-43-9	4723.9	118.097	% Recov	60.000	120.000				05/08/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: NWTPH-D TPH Diesel Range (Wa)

Sample Date: 04/10/08  
 Receive Date: 04/16/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01053</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
MS	ortho-Terphenyl	Surr	84-15-1	20260	101.000	% Recov	70.000	130.000			05/05/08
MS	Total Pet. Hydrocarbons Diesel		TPHDIESEL	111020	110.000	% Recov	75.000	125.000			05/05/08
MSD	ortho-Terphenyl	Surr	84-15-1	19493	97.700	% Recov	70.000	130.000			05/05/08
MSD	Total Pet. Hydrocarbons Diesel		TPHDIESEL	107400	108.000	% Recov	75.000	125.000			05/05/08
SPK-RPD	ortho-Terphenyl	Surr	84-15-1	97.700		RPD			3.322	20.000	05/05/08
SPK-RPD	Total Pet. Hydrocarbons Diesel		TPHDIESEL	108.000		RPD			1.835	20.000	05/05/08
<b>Lab ID: W08GR01075</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	ortho-Terphenyl	Surr	84-15-1	19583	95.600	% Recov	70.000	130.000			05/05/08
<b>Lab ID: W08GR01078</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	ortho-Terphenyl	Surr	84-15-1	19485	94.900	% Recov	70.000	130.000			05/05/08
<b>Lab ID: W08GR01079</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	ortho-Terphenyl	Surr	84-15-1	20538	95.900	% Recov	70.000	130.000			05/05/08
<b>Lab ID: W08GR01080</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	ortho-Terphenyl	Surr	84-15-1	20937	101.000	% Recov	70.000	130.000			05/05/08
<b>Lab ID: W08GR01082</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	ortho-Terphenyl	Surr	84-15-1	19993	94.600	% Recov	70.000	130.000			05/05/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: NWTDPH-D TPH Diesel Range (Wa)

Sample Date: 04/23/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>BATCH QC</b>											
BLANK	Kerosene	TPHKEROSENE	< 3000	n/a	ug/Kg					U	05/05/08
BLANK	ortho-Terphenyl Surr	84-15-1	16572	82.900	% Recov	70.000	130.000				05/05/08
BLANK	Total Pat. Hydrocarbons Diesel	TPHDIESEL	< 3000	n/a	ug/Kg					U	05/05/08
LCS	ortho-Terphenyl Surr	84-15-1	19214	96.100	% Recov	70.000	130.000				05/05/08
LCS	Total Pat. Hydrocarbons Diesel	TPHDIESEL	98085	98.100	% Recov	80.000	120.000				05/05/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: VOA Ground Water Protection

Sample Date: 04/17/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01076</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
MS	1,1-Dichloroethene	75-35-4	24.260	96.200	% Recov	63.000	117.000				04/30/08
MS	Benzene	71-43-2	25.130	99.700	% Recov	75.000	129.000				04/30/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	52.210	104.000	% Recov	75.000	125.000				04/30/08
MS	Chlorobenzene	108-90-7	25.890	103.000	% Recov	79.000	119.000				04/30/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	53.060	105.000	% Recov	75.000	125.000				04/30/08
MS	Toluene-d8(Surr)	2037-26-5	50.470	100.000	% Recov	75.000	125.000				04/30/08
MS	Toluene	108-88-3	25.700	102.000	% Recov	76.000	120.000				04/30/08
MS	Trichloroethene	79-01-6	22.510	89.300	% Recov	73.000	123.000				04/30/08
MSD	1,1-Dichloroethene	75-35-4	24.250	104.000	% Recov	63.000	117.000				04/30/08
MSD	Benzene	71-43-2	22.360	95.600	% Recov	75.000	129.000				04/30/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	49.240	105.000	% Recov	75.000	125.000				04/30/08
MSD	Chlorobenzene	108-90-7	23.340	99.800	% Recov	79.000	119.000				04/30/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	49.840	107.000	% Recov	75.000	125.000				04/30/08
MSD	Toluene-d8(Surr)	2037-26-5	46.670	99.800	% Recov	75.000	125.000				04/30/08
MSD	Toluene	108-88-3	22.930	98.100	% Recov	76.000	120.000				04/30/08
MSD	Trichloroethene	79-01-6	20.320	86.900	% Recov	73.000	123.000				04/30/08
SPK-RPD	1,1-Dichloroethene	75-35-4	104.000		RPD			7.792	20.000		04/30/08
SPK-RPD	Benzene	71-43-2	95.600		RPD			4.199	20.000		04/30/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	105.000		RPD			0.957	20.000		04/30/08
SPK-RPD	Chlorobenzene	108-90-7	99.800		RPD			3.156	20.000		04/30/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	107.000		RPD			1.887	20.000		04/30/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	99.800		RPD			0.200	20.000		04/30/08
SPK-RPD	Toluene	108-88-3	98.100		RPD			3.898	20.000		04/30/08
SPK-RPD	Trichloroethene	79-01-6	86.900		RPD			2.724	20.000		04/30/08
SURR	4-Bromofluorobenzene(Surr)	460-00-4	51.140	105.000	% Recov	75.000	125.000				04/30/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	51.800	107.000	% Recov	75.000	125.000				04/30/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: VOA Ground Water Protection

Sample Date: 04/17/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Toluene-d8(Surr)	2037-26-5	48.620	100.000	% Recov	80.000	126.000				04/30/08
<b>Lab ID: W08GR01084</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	4-Bromofluorobenzene(Surr)	480-00-4	51.540	104.000	% Recov	75.000	125.000				04/30/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.120	105.000	% Recov	75.000	125.000				04/30/08
SURR	Toluene-d8(Surr)	2037-26-5	49.810	100.000	% Recov	80.000	126.000				04/30/08
<b>Lab ID: W08GR01085</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	4-Bromofluorobenzene(Surr)	480-00-4	53.590	104.000	% Recov	75.000	125.000				04/30/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	53.720	104.000	% Recov	75.000	125.000				04/30/08
SURR	Toluene-d8(Surr)	2037-26-5	52.330	101.000	% Recov	80.000	126.000				04/30/08
<b>Lab ID: W08GR01086</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	4-Bromofluorobenzene(Surr)	480-00-4	52.230	104.000	% Recov	75.000	125.000				04/30/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.340	104.000	% Recov	75.000	125.000				04/30/08
SURR	Toluene-d8(Surr)	2037-26-5	50.880	101.000	% Recov	80.000	126.000				04/30/08
<b>Lab ID: W08GR01087</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	4-Bromofluorobenzene(Surr)	480-00-4	49.560	103.000	% Recov	75.000	125.000				04/30/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	50.830	105.000	% Recov	75.000	125.000				04/30/08
SURR	Toluene-d8(Surr)	2037-26-5	48.800	101.000	% Recov	80.000	126.000				04/30/08
<b>BATCH QC</b>											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/Kg					U	04/30/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: VOA Ground Water Protection

Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	52.180	104.000	% Recov	75.000	125.000				04/30/08
BLANK	Bromoform	75-25-2	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	cis-1,3-Dichloropropene	10081-01-5	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Chloroethane	75-00-3	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	1,2-Dichloroethane-d4(Surr)	17080-07-0	50.460	101.000	% Recov	75.000	125.000				04/30/08
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Hexane	110-54-3	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Bromomethane	74-83-9	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Chloromethane	74-87-3	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Tetrahydrofuran	109-99-9	< 2.0	n/a	ug/Kg					U	04/30/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: VOA Ground Water Protection

Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Toluene-d8(Surr)	2037-26-5	49.650	99.300	% Recov	80.000	126.000				04/30/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/Kg					U	04/30/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/Kg					U	04/30/08
LCS	1,1-Dichloroethene	75-35-4	22.470	89.900	% Recov	75.000	125.000				04/30/08
LCS	Benzene	71-43-2	24.120	96.500	% Recov	75.000	125.000				04/30/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	52.080	104.000	% Recov	75.000	125.000				04/30/08
LCS	Chlorobenzene	108-90-7	25.410	102.000	% Recov	75.000	125.000				04/30/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	50.500	101.000	% Recov	75.000	125.000				04/30/08
LCS	Toluene-d8(Surr)	2037-26-5	50.480	101.000	% Recov	80.000	126.000				04/30/08
LCS	Toluene	108-88-3	25.030	100.000	% Recov	75.000	125.000				04/30/08
LCS	Trichloroethene	79-01-6	21.580	86.300	% Recov	75.000	125.000				04/30/08

# WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent  
Project Number F08-066

Group #: WSCF20080847  
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS: Barium spike RPD over 20% but still pass. X-flag  ORGANICS: All samples are corrected for moisture and reported on a dry weight basis. cgc  U-235 duplicate is flagged for poor RPD but the sample activity is low level. RPD does not apply to low level samples. Imh U-234 duplicate is flagged for poor RPD due to the inhomogeneity of the sample. Imh U-232 Tracer recovery is low. Since all the other tracer came out fine, this batch has been approved. Imh

Lab Areas: VALGROUP - Group Validation  
LOGSAMP - Login for Sample

VALTEST - Test Validation  
LOGTEST - Login for Tests

TESTDATA - Test Data Entry

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# WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent  
SAF Number: F08-066  
Sample # W08GR01075  
Client ID: BITFF2

GPP TRENT  
WSCF

Matrix: SOIL

Group #: WSCF20080847  
Department: Radiochemistry  
Sampled: 04/17/08  
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Americium by AEA</b>											
Americium-241	14596-10-2	LA-508-471	U	0.0140	pCi/g	+ -0.0175	pCi/g	1.00	0.028		08/04/08
Am-243 tracer by AEA	AM243	LA-508-471		3.90	pCi/g			1.00	0.019		08/04/08
<b>Gamma Energy Analysis-grd H2O</b>											
Cobalt-60	10198-40-0	LA-508-481	U	2.11e-03	pCi/g	+ -4.79e-03	pCi/g	1.00	8.5e-03		05/09/08
Cesium-137	10045-97-3	LA-508-481		0.0369	pCi/g	+ -0.0104	pCi/g	1.00	9.8e-03		05/09/08
Europium-152	14683-23-9	LA-508-481	U	-0.0299	pCi/g	+ -0.0185	pCi/g	1.00	0.029		05/09/08
Europium-154	15585-10-1	LA-508-481	U	6.81e-03	pCi/g	+ -0.0172	pCi/g	1.00	0.026		05/09/08
Europium-155	14391-18-3	LA-508-481	U	0.0124	pCi/g	+ -0.0403	pCi/g	1.00	0.066		05/09/08
Niobium-94	14681-63-1	LA-508-481	U	2.80e-03	pCi/g	+ -4.78e-03	pCi/g	1.00	8.3e-03		05/09/08
Radium-226	13982-63-3	LA-508-481		0.386	pCi/g	+ -0.0639	pCi/g	1.00	0.017		05/09/08
Radium-228	15262-20-1	LA-508-481		0.472	pCi/g	+ -0.0818	pCi/g	1.00	0.027		05/09/08
<b>Neptunium by AEA</b>											
Neptunium-237	13994-20-2	LA-508-471		0.0340	pCi/g	+ -0.0235	pCi/g	1.00	0.025		08/04/08
<b>Plutonium Isotopics by AEA</b>											
Plutonium-238	13981-18-3	LA-508-471	U	-3.40e-03	pCi/g	+ -0.0289	pCi/g	1.00	0.052		05/20/08
Pu-239/240 by AEA	PU-239/240	LA-508-471		0.0390	pCi/g	+ -0.0203	pCi/g	1.00	0.018		05/20/08
Pu-242 tracer by AEA	PU242	LA-508-471		6.00	pCi/g			1.00	0.018		05/20/08
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415		88.0	pCi/g	+ -8.84	pCi/g	1.00	0.37		05/06/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		92.8	Percent			1.00	0.0		05/06/08
<b>Uranium Isotopics by AEA</b>											
Uranium-233/234	U-233/234	LA-508-471		0.870	pCi/g	+ -0.304	pCi/g	1.00	0.11		05/20/08
Uranium-235	15117-98-1	LA-508-471		0.0580	pCi/g	+ -0.0526	pCi/g	1.00	0.030		05/20/08
Uranium-238	U-238	LA-508-471		0.760	pCi/g	+ -0.274	pCi/g	1.00	0.095		05/20/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but >= the IDL/MDL (inorg)

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

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

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

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Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01075  
**Client ID:** B1TFF2

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Radiochemistry  
**Sampled:** 04/17/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
U-232 tracer by AEA	U232	LA-508-471		4.10	pCi/g			1.00	0.18		05/20/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

Report WGPP/ver. 5.2

Groundwater Remediation Program



# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01078  
**Client ID:** B1TFF5

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Radiochemistry  
**Sampled:** 04/21/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
U-232 tracer by AEA	U232	LA-508-471		3.80	pCi/g			1.00	0.017		05/20/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01079  
**Client ID:** B1TFD9

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Radiochemistry  
**Sampled:** 04/17/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Americium by AEA</b>											
Americium-241	14596-10-2	LA-508-471	U	0.540	pCi/g	+ -1.31	pCi/g	1.00	2.4		06/04/08
Am-243 tracer by AEA	AM243	LA-508-471		390	pCi/g			1.00	0.49		06/04/08
<b>Gamma Energy Analysis-grd H2O</b>											
Cobalt-60	10198-40-0	LA-508-481	U	-2.80e-03	pCi/g	+ -0.0104	pCi/g	1.00	0.018		05/09/08
Cesium-137	10045-97-3	LA-508-481	U	-1.64e-03	pCi/g	+ -0.0164	pCi/g	1.00	0.036		05/09/08
Europium-152	14683-23-9	LA-508-481	U	0.0102	pCi/g	+ -0.102	pCi/g	1.00	0.18		05/09/08
Europium-154	15585-10-1	LA-508-481	U	0.0176	pCi/g	+ -0.0336	pCi/g	1.00	0.058		05/09/08
Europium-155	14391-16-3	LA-508-481	U	-0.164	pCi/g	+ -0.376	pCi/g	1.00	0.61		05/09/08
Niobium-94	14681-63-1	LA-508-481	U	6.17e-03	pCi/g	+ -0.0180	pCi/g	1.00	0.030		05/09/08
Radium-226	13982-63-3	LA-508-481		0.564	pCi/g	+ -0.117	pCi/g	1.00	0.071		05/09/08
Radium-228	15262-20-1	LA-508-481		0.754	pCi/g	+ -0.166	pCi/g	1.00	0.087		05/09/08
<b>Neptunium by AEA</b>											
Neptunium-237	13994-20-2	LA-508-471		0.250	pCi/g	+ -0.0575	pCi/g	1.00	8.5e-03		06/04/08
<b>Plutonium Isotopics by AEA</b>											
Plutonium-238	13981-16-3	LA-508-471	U	3.30	pCi/g	+ -25.1	pCi/g	1.00	45		05/20/08
Pu-239/240 by AEA	PU-239/240	LA-508-471	U	6.60	pCi/g	+ -10.6	pCi/g	1.00	18		05/20/08
Pu-242 tracer by AEA	PU242	LA-508-471		6.10e+03	pCi/g			1.00	12		05/20/08
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415		3.70e+03	pCi/g	+ -444	pCi/g	1.00	14		05/07/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		84.5	Percent			1.00	0.0		05/07/08
<b>Uranium Isotopics by AEA</b>											
Uranium-233/234	U-233/234	LA-508-471		3.10	pCi/g	+ -1.77	pCi/g	1.00	1.4		05/20/08
Uranium-235	15117-96-1	LA-508-471	U	0.200	pCi/g	+ -0.896	pCi/g	1.00	1.9		05/20/08
Uranium-238	U-238	LA-508-471		2.60	pCi/g	+ -1.53	pCi/g	1.00	0.50		05/20/08

**MDL = Minimum Detection Limit**

**RQ = Result Qualifier**

**TP Err = Total Propagated Error**

**DF = Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative (inorg)

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Groundwater Remediation Program

# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01079  
**Client ID:** BITFD9

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Radiochemistry  
**Sampled:** 04/17/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
U-232 tracer by AEA	U232	LA-508-471		400	pCi/g			1.00	2.8		05/20/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

\* - Indicates results that have NOT been validated;

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

+ - Indicates more than six qualifier symbols

D - Analyte was identified at a secondary dilution factor

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

Report WGPP/ver. 5.2

Groundwater Remediation Program

# WSCF ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01080  
**Client ID:** B1TFF8

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Radiochemistry  
**Sampled:** 04/22/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Americium by AEA</b>											
Americium-241	14596-10-2	LA-508-471		0.0230	pCi/g	+ -0.0138	pCi/g	1.00	0.013		06/12/08
Am-243 tracer by AEA	AM243	LA-508-471		3.90	pCi/g			1.00	3.8e-03		06/12/08
<b>Gamma Energy Analysis-grd H2O</b>											
Cobalt-60	10198-40-0	LA-508-481	U	2.99e-03	pCi/g	+ -9.74e-03	pCi/g	1.00	0.016		05/09/08
Cesium-137	10045-97-3	LA-508-481	U	0.0139	pCi/g	+ -0.0157	pCi/g	1.00	0.018		05/09/08
Europium-152	14683-23-9	LA-508-481	U	-0.0376	pCi/g	+ -0.0380	pCi/g	1.00	0.047		05/09/08
Europium-154	15585-10-1	LA-508-481	U	-0.0132	pCi/g	+ -0.0306	pCi/g	1.00	0.050		05/09/08
Europium-155	14391-16-3	LA-508-481	U	0.0850	pCi/g	+ -0.0503	pCi/g	1.00	0.075		05/09/08
Niobium-94	14681-63-1	LA-508-481	U	3.91e-03	pCi/g	+ -9.31e-03	pCi/g	1.00	0.016		05/09/08
Radium-226	13982-63-3	LA-508-481		0.692	pCi/g	+ -0.125	pCi/g	1.00	0.031		05/09/08
Radium-228	15262-20-1	LA-508-481		0.893	pCi/g	+ -0.163	pCi/g	1.00	0.054		05/09/08
<b>Neptunium by AEA</b>											
Neptunium-237	13994-20-2	LA-508-471	U	0.0210	pCi/g	+ -0.0273	pCi/g	1.00	0.045		06/10/08
<b>Plutonium Isotopics by AEA</b>											
Plutonium-238	13981-16-3	LA-508-471	U	-3.50e-03	pCi/g	+ -0.0289	pCi/g	1.00	0.053		06/12/08
Pu-239/240 by AEA	PU-239/240	LA-508-471		0.0190	pCi/g	+ -0.0133	pCi/g	1.00	0.013		06/12/08
Pu-242 tracer by AEA	PU242	LA-508-471		6.10	pCi/g			1.00	0.013		06/12/08
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.0800	pCi/g	+ -0.724	pCi/g	1.00	0.37		05/06/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		94.0	Percent			1.00	0.0		05/06/08
<b>Uranium Isotopics by AEA</b>											
Uranium-233/234	U-233/234	LA-508-471		1.80	pCi/g	+ -0.468	pCi/g	1.00	0.021		06/24/08
Uranium-235	15117-96-1	LA-508-471		0.150	pCi/g	+ -0.0525	pCi/g	1.00	5.7e-03		06/24/08
Uranium-238	U-238	LA-508-471		1.60	pCi/g	+ -0.416	pCi/g	1.00	0.014		06/24/08

**MDL=Minimum Detection Limit**

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X - Other flags/notes described in the comments/narrative(inorg)

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Groundwater Remediation Program

# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01080  
**Client ID:** B1TFF8

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Radiochemistry  
**Sampled:** 04/22/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
U-232 tracer by AEA	U232	LA-508-471		4.00	pCi/g			1.00	0.033		06/24/08

**MDL=Minimum Detection Limit**

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\* - 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: F08-066  
Sample # W08GR01082  
Client ID: BITFH1

GPP TRENT  
WSCF

Matrix: SOIL

Group #: WSCF20080847  
Department: Radiochemistry  
Sampled: 04/23/08  
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
<b>Americium by AEA</b>											
Americium-241	14596-10-2	LA-508-471		0.0280	pCi/g	+0.0148	pCi/g	1.00	0.010		06/12/08
Am-243 tracer by AEA	AM243	LA-508-471		3.90	pCi/g			1.00	3.9e-03		06/12/08
<b>Gamma Energy Analysis-grd H2O</b>											
Cobalt-60	10198-40-0	LA-508-481	U	-1.16e-03	pCi/g	+0.0100	pCi/g	1.00	0.017		05/07/08
Cesium-137	10045-97-3	LA-508-481	U	-9.20e-03	pCi/g	+9.52e-03	pCi/g	1.00	0.016		05/07/08
Europium-152	14683-23-9	LA-508-481	U	-0.0294	pCi/g	+0.0294	pCi/g	1.00	0.044		05/07/08
Europium-154	15585-10-1	LA-508-481	U	-0.0278	pCi/g	+0.0334	pCi/g	1.00	0.050		05/07/08
Europium-155	14391-16-3	LA-508-481	U	0.0876	pCi/g	+0.0539	pCi/g	1.00	0.084		05/07/08
Niobium-94	14681-63-1	LA-508-481	U	7.76e-03	pCi/g	+8.74e-03	pCi/g	1.00	0.015		05/07/08
Radium-226	13982-63-3	LA-508-481		0.676	pCi/g	+0.114	pCi/g	1.00	0.030		05/07/08
Radium-228	15262-20-1	LA-508-481		0.914	pCi/g	+0.154	pCi/g	1.00	0.051		05/07/08
<b>Neptunium by AEA</b>											
Neptunium-237	13994-20-2	LA-508-471	U	4.40e-03	pCi/g	+0.0154	pCi/g	1.00	0.033		06/10/08
<b>Plutonium Isotopes by AEA</b>											
Plutonium-238	13981-16-3	LA-508-471	U	6.80e-03	pCi/g	+0.0221	pCi/g	1.00	0.039		06/12/08
Pu-239/240 by AEA	PU-239/240	LA-508-471	U	5.10e-03	pCi/g	+7.70e-03	pCi/g	1.00	0.013		06/12/08
Pu-242 tracer by AEA	PU242	LA-508-471		6.10	pCi/g			1.00	0.022		06/12/08
<b>Strontium 89/90</b>											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.510	pCi/g	+0.617	pCi/g	1.00	0.35		05/06/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		97.3	Percent			1.00	0.0		05/06/08
<b>Uranium Isotopes by AEA</b>											
Uranium-233/234	U-233/234	LA-508-471		1.00	pCi/g	+0.270	pCi/g	1.00	0.021		06/24/08
Uranium-235	15117-96-1	LA-508-471		0.0880	pCi/g	+0.0352	pCi/g	1.00	5.8e-03		06/24/08
Uranium-238	U-238	LA-508-471		0.970	pCi/g	+0.262	pCi/g	1.00	0.024		06/24/08

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X - Other flags/notes described in the comments/narrative(inorg)

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Groundwater Remediation Program

# WSCF

## ANALYTICAL RESULTS REPORT

**Attention:** Steve Trent  
**SAF Number:** F08-066  
**Sample #** W08GR01082  
**Client ID:** B1TFH1

**GPP** TRENT  
**WSCF**

**Matrix:** SOIL

**Group #:** WSCF20080847  
**Department:** Radiochemistry  
**Sampled:** 04/23/08  
**Received:** 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
U-232 tracer by AEA	U232	LA-508-471		4.00	pCi/g			1.00	0.033		06/24/08

**MDL=Minimum Detection Limit**

**RQ=Result Qualifier**

**TP Err=Total Propagated Error**

**DF=Dilution Factor**

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Groundwater Remediation Program

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent  
 Project Number F08-066 :F08-066

Group #: WSCF20080847  
 Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	AC-228			0.41	pCi/g
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	AC-228 Count Error			20	%
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	BI-212			0.29	pCi/g
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	BI-212 Count Error			26	%
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	BI-214			0.46	pCi/g
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	BI-214 Count Error			13	%
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	K-40			12	pCi/g
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	K-40 Count Error			13	%
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	PB-212			0.51	pCi/g
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	PB-212 Count Error			10	%
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	PB-214			0.69	pCi/g
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	PB-214 Count Error			24	%
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	SN-126			0.074	pCi/g
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	SN-126 Count Error			46	%
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	TH-234			0.92	pCi/g
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	TH-234 Count Error			29	%
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	TL-208			0.15	pCi/g
W08GR01075	B1TFF2	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	TL-208 Count Error			15	%
W08GR01078	B1TFF5	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	AC-228			0.21	pCi/g
W08GR01078	B1TFF5	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	AC-228 Count Error			19	%
W08GR01078	B1TFF5	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	BI-212			0.17	pCi/g
W08GR01078	B1TFF5	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	BI-212 Count Error			24	%
W08GR01078	B1TFF5	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	BI-214			0.23	pCi/g
W08GR01078	B1TFF5	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	BI-214 Count Error			13	%
W08GR01078	B1TFF5	GPP	TRÉNT	Gamma Energy Analysis-grd H2O	CS-134			0.012	pCi/g

RQ=Result Qualifier

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Groundwater Remediation Program

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Report Date: 25-jun-2008

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# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent  
 Project Number F08-066 :F08-066

Group #: WSCF20080847  
 Department: Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	CS-134 Count Error			37	%
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	K-40			6.7	pCi/g
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	K-40 Count Error			13	%
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	PB-212			0.22	pCi/g
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error			9.8	%
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	PB-214			0.23	pCi/g
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error			23	%
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	SN-128			0.040	pCi/g
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	SN-128 Count Error			24	%
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	TH-234			0.35	pCi/g
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	TH-234 Count Error			25	%
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	TL-208			0.071	pCi/g
W08GR01078	B1TFF5	GPP TRENT	Gamma Energy Analysis-grd H2O	TL-208 Count Error			16	%
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	AC-228			0.81	pCi/g
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	AC-228 Count Error			41	%
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	BI-212			0.85	pCi/g
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	BI-212 Count Error			31	%
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	BI-214			0.69	pCi/g
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error			15	%
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	K-40			17	pCi/g
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	K-40 Count Error			14	%
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	PB-212			0.72	pCi/g
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error			19	%
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	PB-214			0.68	pCi/g
W08GR01079	B1TFD9	GPP TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error			22	%

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 Groundwater Remediation Program

WGPPPE v 5.2 Report #: WSCF20080847 Report Date: 25-jun-2008

# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent  
 Project Number F08-066 :F08-066

Group #: WSCF20080847  
 Department: Radiochemistry

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01079	B1TFD9	GPP TRÉNT	Gamma Energy Analysis-grd H2O	TL-208			0.23	pCi/g
W08GR01079	B1TFD9	GPP TRÉNT	Gamma Energy Analysis-grd H2O	TL-208 Count Error			22	%
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	AC-228			0.82	pCi/g
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	AC-228 Count Error			19	%
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	BI-212			0.68	pCi/g
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	BI-212 Count Error			24	%
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	BI-214			0.81	pCi/g
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	BI-214 Count Error			14	%
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	CS-134			0.044	pCi/g
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	CS-134 Count Error			44	%
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	K-40			22	pCi/g
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	K-40 Count Error			13	%
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	PB-212			1.1	pCi/g
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	PB-212 Count Error			10	%
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	PB-214			1.4	pCi/g
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	PB-214 Count Error			22	%
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	SN-126			0.21	pCi/g
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	SN-126 Count Error			27	%
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	TH-234			2.3	pCi/g
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	TH-234 Count Error			19	%
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	TL-208			0.29	pCi/g
W08GR01080	B1TFF8	GPP TRÉNT	Gamma Energy Analysis-grd H2O	TL-208 Count Error			16	%
W08GR01082	B1TFH1	GPP TRÉNT	Gamma Energy Analysis-grd H2O	AC-228			0.76	pCi/g
W08GR01082	B1TFH1	GPP TRÉNT	Gamma Energy Analysis-grd H2O	AC-228 Count Error			20	%
W08GR01082	B1TFH1	GPP TRÉNT	Gamma Energy Analysis-grd H2O	BI-212			0.58	pCi/g

RQ=Result Qualifier

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# WSCF

## TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent  
 Project Number F08-066 :F08-066

Group #: WSCF20080847  
 Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	BI-212 Count Error			27	%
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	BI-214			0.75	pCi/g
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error			14	%
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	CS-134			0.033	pCi/g
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	CS-134 Count Error			42	%
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	K-40			19	pCi/g
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	K-40 Count Error			13	%
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	PB-212			1.0	pCi/g
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error			10	%
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	PB-214			1.2	pCi/g
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error			23	%
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	SN-126			0.23	pCi/g
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	SN-126 Count Error			25	%
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	TH-234			1.8	pCi/g
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	TH-234 Count Error			21	%
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	TL-208			0.30	pCi/g
W08GR01082	B1TFH1	GPP	TRENT	Gamma Energy Analysis-grd H2O	TL-208 Count Error			15	%

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 Groundwater Remediation Program

WGPPE v 5.2 Report#: WSCF20080847

Report Date: 25-jun-2008

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# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Gamma Energy Analysis-grd H2O

Sample Date: 04/17/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01075</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Cobalt-60	10198-40-0	U-5.516e-3		RPD			n/a	20.000		05/09/08
DUP	Cesium-137	10045-97-3	3.703e-2		RPD			0.270	20.000		05/09/08
DUP	Europium-152	14883-23-9	U-7.589e-3		RPD			n/a	20.000		05/09/08
DUP	Europium-154	15585-10-1	U-8.665e-3		RPD			n/a	20.000		05/09/08
DUP	Europium-155	14391-16-3	U1.896e-2		RPD			n/a	20.000		05/09/08
DUP	Niobium-94	14681-63-1	U2.506e-3		RPD			n/a	20.000		05/09/08
DUP	Radium-226	13982-63-3	0.3651		RPD			5.591	20.000		05/09/08
DUP	Radium-228	15262-20-1	0.4596		RPD			2.704	20.000		05/09/08
<b>BATCH QC</b>											
BLANK	Cobalt-60	10198-40-0	U-2.847e-3	n/a	pCi/g	-10.000	1000.000				05/09/08
BLANK	Cesium-137	10045-97-3	U1.442e-3	n/a	pCi/g	-10.000	1000.000				05/09/08
BLANK	Europium-152	14883-23-9	U-8.407e-4	n/a	pCi/g	-10.000	1000.000				05/09/08
BLANK	Europium-154	15585-10-1	U-1.303e-2	n/e	pCi/g	-10.000	1000.000				05/09/08
BLANK	Europium-155	14391-16-3	U-3.435e-3	n/a	pCi/g	-10.000	1000.000				05/09/08
BLANK	Niobium-94	14681-63-1	U-2.537e-3	n/a	pCi/g	-10.000	1000.000				05/09/08
BLANK	Radium-226	13982-63-3	5.521e-2	0.055	pCi/g	-10.000	1000.000				05/09/08
BLANK	Radium-228	15262-20-1	3.644e-2	0.036	pCi/g	-10.000	1000.000				05/09/08
LCS	Cobalt-60	10198-40-0	10120	101.811	% Recov	80.000	120.000				05/02/08
LCS	Cesium-137	10045-97-3	6317	104.586	% Recov	80.000	120.000				05/02/08
<b>Lab ID: W08GR01082</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Cobalt-60	10198-40-0	U6.949e-3		RPD			n/a	20.000		05/09/08
DUP	Cesium-137	10045-97-3	U-8.742e-3		RPD			n/a	20.000		05/09/08
DUP	Europium-152	14883-23-9	U-4.24e-3		RPD			n/a	20.000		05/09/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Gamma Energy Analysis-grd H2O

Sample Date: 04/23/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
DUP	Europium-154	15585-10-1	U-3.154e-2		RPD			n/a	20.000		05/09/08
DUP	Europium-155	14391-16-3	U7.107e-2		RPD			n/a	20.000		05/09/08
DUP	Niobium-94	14681-63-1	U6.869e-3		RPD			n/a	20.000		05/09/08
DUP	Radium-226	13982-63-3	0.676		RPD			0.074	20.000		05/09/08
DUP	Radium-228	15262-20-1	0.9012		RPD			1.465	20.000		05/09/08

## BATCH QC

BLANK	Cobalt-60	10198-40-0	U4.829e-4	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Cesium-137	10045-97-3	U-1.184e-4	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Europium-152	14683-23-9	U2.656e-3	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Europium-154	15585-10-1	U1.159e-3	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Europium-155	14391-16-3	U2.543e-3	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Niobium-94	14681-63-1	U9.778e-4	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Radium-226	13982-63-3	7.127e-2	0.071	pCi/g	-10.000	1000.000				05/13/08
BLANK	Radium-228	15262-20-1	5.118e-2	0.051	pCi/g	-10.000	1000.000				05/13/08
LCS	Cobalt-60	10198-40-0	10140	102.012	% Recov	80.000	120.000				05/02/08
LCS	Cesium-137	10045-97-3	6122	101.358	% Recov	80.000	120.000				05/02/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Americium by AEA

Sample Date: 04/17/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01075</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Americium-241	14596-10-2	U2e-2		RPD			n/a	20.000		06/04/08
DUP	Am-243 tracer by AEA	AM243	3.995	99.790	% Recov	30.000	105.000				06/04/08
SURR	Am-243 tracer by AEA	AM243	3.894	90.150	% Recov	30.000	105.000				06/04/08
<b>Lab ID: W08GR01078</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Am-243 tracer by AEA	AM243	3.72	101.710	% Recov	30.000	105.000				06/04/08
<b>Lab ID: W08GR01079</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Am-243 tracer by AEA	AM243	390.9	90.840	% Recov	30.000	105.000				06/04/08
<b>BATCH QC</b>											
BLANK	Americium-241	14596-10-2	U6.1e-3	n/a	pCi/g	-10.000	1000.000				06/04/08
BLANK	Am-243 tracer by AEA	AM243	4.003	79.940	% Recov	30.000	105.000				06/04/08
LCS	Americium-241	14596-10-2	13	109.705	% Recov	80.000	120.000				06/04/08
LCS	Am-243 tracer by AEA	AM243	11.11	87.630	% Recov	30.000	105.000				06/04/08
<b>Lab ID: W08GR01080</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Americium-241	14596-10-2	1.9e-2		RPD			19.048	20.000		06/12/08
DUP	Am-243 tracer by AEA	AM243	3.812	95.960	% Recov	30.000	105.000				06/12/08
SURR	Am-243 tracer by AEA	AM243	3.932	91.700	% Recov	30.000	105.000				06/12/08
<b>Lab ID: W08GR01082</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
Matrix: SOLID  
Test: Americium by AEA

Sample Date: 04/23/08  
Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Am-243 tracer by AEA	AM243	3.909	92.200	% Recov	30.000	105.000				06/12/08
<b>BATCH QC</b>											
BLANK	Americium-241	14596-10-2	2.1e-2	0.021	pCi/g	-10.000	1000.000				06/12/08
BLANK	Am-243 tracer by AEA	AM243	4.003	76.590	% Recov	30.000	105.000				06/12/08
LCS	Americium-241	14596-10-2	12.94	100.000	% Recov	80.000	120.000				06/12/08
LCS	Am-243 tracer by AEA	AM243	11.11	95.650	% Recov	30.000	105.000				06/12/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Neptunium by AEA

Sample Date: 04/17/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01075</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Neptunium-237	13994-20-2	3.9e-2		RPD			13.699	25.000		06/04/08
MS	Neptunium-237	13994-20-2	99.866	99.866	% Recov	75.000	125.000				06/04/08
MSD	Neptunium-237	13994-20-2	106.966	106.966	% Recov	75.000	125.000				06/04/08
SPK-RPD	Neptunium-237	13994-20-2	106.966		% RPD			6.865	20.000		06/04/08
<b>Lab ID: W08GR01078</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
MS	Neptunium-237	13994-20-2	96	96.000	% Recov	75.000	125.000				06/04/08
<b>Lab ID: W08GR01079</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
MS	Neptunium-237	13994-20-2	104.4	104.400	% Recov	75.000	125.000				06/04/08
<b>BATCH QC</b>											
BLANK	Neptunium-237	13994-20-2	U3.5e-3	n/a	pCi/G	-10.000	1000.000				06/04/08
LCS	Neptunium-237	13994-20-2	13.07	102.550	% Recov	80.000	120.000				06/04/08
<b>Lab ID: W08GR01080</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Neptunium-237	13994-20-2	U1.4e-2		RPD			n/a	25.000		06/10/08
MS	Neptunium-237	13994-20-2	96.2	96.200	% Recov	75.000	125.000				06/10/08
MSD	Neptunium-237	13994-20-2	95	95.000	% Recov	75.000	125.000				06/10/08
SPK-RPD	Neptunium-237	13994-20-2	95.000		% RPD			1.255	20.000		06/10/08
<b>Lab ID: W08GR01082</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Neptunium by AEA

Sample Date: 04/23/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Neptunium-237	13994-20-2	93.1	93.100	% Recov	75.000	125.000				06/10/08
Lab ID: W08GR01097 BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	95.1	95.100	% Recov	75.000	125.000				06/10/08
BATCH QC											
BLANK	Neptunium-237	13994-20-2	U4.1e-3	n/a	pCi/G	-10.000	1000.000				06/10/08
LCS	Neptunium-237	13994-20-2	12.12	95.096	% Recov	80.000	120.000				06/10/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Plutonium Isotopics by AEA

Sample Date: 04/17/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01075</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Plutonium-238	13981-18-3	U3.4e-3		RPD			n/a	20.000		05/20/08
DUP	Pu-239/240 by AEA	PU-239/240	3.9e-2		RPD			0.000	20.000		05/20/08
DUP	Pu-242 tracer by AEA	PU242	6.184	91.650	% Recov	30.000	105.000				05/20/08
SURR	Pu-242 tracer by AEA	PU242	6.027	95.780	% Recov	30.000	105.000				05/20/08
<b>Lab ID: W08GR01078</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Pu-242 tracer by AEA	PU242	5.759	94.900	% Recov	30.000	105.000				05/20/08
<b>Lab ID: W08GR01079</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Pu-242 tracer by AEA	PU242	6051	97.660	% Recov	30.000	105.000				05/20/08
<b>BATCH QC</b>											
BLANK	Plutonium-238	13981-18-3	U7.9e-3	n/a	pCi/g	-10.000	1000.000				05/20/08
BLANK	Pu-239/240 by AEA	PU-239/240	U-2e-3	n/a	pCi/g	-10.000	1000.000				05/20/08
BLANK	Pu-242 tracer by AEA	PU242	6.196	84.750	% Recov	30.000	105.000				05/20/08
LCS	Pu-239/240 by AEA	PU-239/240	13.61	105.956	% Recov	80.000	120.000				05/20/08
LCS	Pu-242 tracer by AEA	PU242	17.19	91.900	% Recov	30.000	105.000				05/20/08
<b>Lab ID: W08GR01080</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Plutonium-238	13981-18-3	U3.4e-3		RPD			n/a	20.000		06/12/08
DUP	Pu-239/240 by AEA	PU-239/240	U8.6e-3		RPD			n/a	20.000		06/12/08
DUP	Pu-242 tracer by AEA	PU242	5.901	94.100	% Recov	30.000	105.000				06/12/08
SURR	Pu-242 tracer by AEA	PU242	6.087	97.170	% Recov	30.000	105.000				06/12/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Plutonium Isotopics by AEA

Sample Date: 04/22/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01082</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Pu-242 tracer by AEA	PU242	6.051	97.580	% Recov	30.000	105.000				06/12/08
<b>BATCH QC</b>											
BLANK	Plutonium-238	13981-16-3	U1.5e-2	n/a	pCi/g	-10.000	1000.000				06/12/08
BLANK	Pu-239/240 by AEA	PU-239/240	U9.4e-3	n/a	pCi/g	-10.000	1000.000				06/12/08
BLANK	Pu-242 tracer by AEA	PU242	6.196	90.150	% Recov	30.000	105.000				06/12/08
LCS	Pu-239/240 by AEA	PU-239/240	11.68	90.966	% Recov	80.000	120.000				06/12/08
LCS	Pu-242 tracer by AEA	PU242	17.19	96.240	% Recov	30.000	105.000				06/12/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Strontium 89/90

Sample Date: 04/17/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01075</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Sr-85 Tracer by Beta Counting	SR85	89.3	89.300	% Recov	30.000	105.000				05/06/08
DUP	Strontium-89/90	SR-RAD	6.1E+01		RPD			10.853	20.000		05/06/08
SURR	Sr-85 Tracer by Beta Counting	SR85	92.8	92.800	% Recov	30.000	105.000				05/08/08
<b>Lab ID: W08GR01078</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	92.8	92.800	% Recov	30.000	105.000				05/06/08
<b>Lab ID: W08GR01080</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	94.0	94.000	% Recov	30.000	105.000				05/08/08
<b>Lab ID: W08GR01082</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	Sr-85 Tracer by Beta Counting	SR85	97.3	97.300	% Recov	30.000	105.000				05/06/08
<b>BATCH QC</b>											
BLANK	Sr-85 Tracer by Beta Counting	SR85	100.7	100.700	% Recov	30.000	105.000				05/06/08
BLANK	Strontium-89/90	10098-97-2	U-1.0	n/a	pCi/g	-10.000	300.000				05/06/08
LCS	Sr-85 Tracer by Beta Counting	SR85	85.5	85.500	% Recov	30.000	105.000				05/06/08
LCS	Strontium-89/90	10098-97-2	77.1	109.947	% Recov	80.000	120.000				05/06/08
<b>Lab ID: W08GR01079</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				05/07/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Strontium 89/90

Sample Date: 02/11/08  
 Receive Date: 05/01/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01131</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	Sr-85 Tracer by Beta Counting	SR85	93.9	93.900	% Recov	30.000	105.000				05/07/08
DUP	Strontium-89/90	SR-RAD	U-1.0		RPD			n/a	20.000		05/07/08
<b>BATCH QC</b>											
BLANK	Sr-85 Tracer by Beta Counting	SR85	97	97.000	% Recov	30.000	105.000				05/07/08
BLANK	Strontium-89/90	10098-97-2	U-8.2E-01	n/a	pCi/g	-10.000	300.000				05/07/08
LCS	Sr-85 Tracer by Beta Counting	SR85	90.5	90.500	% Recov	30.000	105.000				05/07/08
LCS	Strontium-89/90	10098-97-2	75.6	107.807	% Recov	80.000	120.000				05/07/08

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Uranium Isotopics by AEA

Sample Date: 04/17/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
<b>Lab ID: W08GR01075</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
DUP	U-232 tracer by AEA	U232	4.105	91.700	% Recov	30.000	105.000				05/20/08
DUP	Uranium-233/234	U-233/234	1.1		RPD			23.350	20.000	*	05/20/08
DUP	Uranium-235	15117-96-1	0.1		RPD			56.410	20.000	*	05/20/08
DUP	Uranium-238	U-238	0.9		RPD			16.867	20.000		05/20/08
SURR	U-232 tracer by AEA	U232	4.113	16.040	% Recov	30.000	105.000			*	05/20/08
<b>Lab ID: W08GR01078</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	U-232 tracer by AEA	U232	3.823	87.840	% Recov	30.000	105.000				05/20/08
<b>Lab ID: W08GR01079</b>											
<b>BATCH QC ASSOCIATED WITH SAMPLE</b>											
SURR	U-232 tracer by AEA	U232	401.7	89.010	% Recov	30.000	105.000				05/20/08
<b>BATCH QC</b>											
BLANK	U-232 tracer by AEA	U232	4.113	83.880	% Recov	30.000	105.000				05/20/08
BLANK	Uranium-233/234	13966-29-5	2.5e-2	0.025	pCi/g	-10.000	1000.000				05/20/08
BLANK	Uranium-235	15117-96-1	1.1e-2	0.011	pCi/g	-10.000	1000.000				05/20/08
BLANK	Uranium-238	24678-82-8	9.7e-3	0.010	pCi/g	-10.000	1000.000				05/20/08
LCS	U-232 tracer by AEA	U232	11.41	78.920	% Recov	30.000	105.000				05/20/08
LCS	Uranium-233/234	13966-29-5	n/a	n/a	% Recov	75.000	125.000				05/20/08
LCS	Uranium-235	15117-96-1	n/a	n/a	% Recov	75.000	125.000				05/20/08
LCS	Uranium-238	24678-82-8	20.08	105.935	% Recov	80.000	120.000				05/20/08

**Lab ID: W08GR01080**  
**BATCH QC ASSOCIATED WITH SAMPLE**

# WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080847  
 Matrix: SOLID  
 Test: Uranium Isotopics by AEA

Sample Date: 04/22/08  
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
DUP	U-232 tracer by AEA	U232	3.914	90.480	% Recov	30.000	105.000				06/24/08
DUP	Uranium-233/234	U-233/234	1.7		RPD			5.714	20.000		06/24/08
DUP	Uranium-235	15117-96-1	0.17		RPD			12.500	20.000		06/24/08
DUP	Uranium-238	U-238	1.4		RPD			13.333	20.000		06/24/08
SURR	U-232 tracer by AEA	U232	4.037	80.540	% Recov	30.000	105.000				06/24/08

Lab ID: W08GR01082  
**BATCH QC ASSOCIATED WITH SAMPLE**

SURR	U-232 tracer by AEA	U232	4.013	78.120	% Recov	30.000	105.000				06/24/08
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**BATCH QC**

BLANK	U-232 tracer by AEA	U232	4.11	90.920	% Recov	30.000	105.000				06/24/08
BLANK	Uranium-233/234	13966-29-5	U9.7e-3	n/a	pCi/g	-10.000	1000.000				06/24/08
BLANK	Uranium-235	15117-96-1	8.5e-3	0.009	pCi/g	-10.000	1000.000				06/24/08
BLANK	Uranium-238	24678-82-8	U1.2e-2	n/a	pCi/g	-10.000	1000.000				06/24/08
LCS	U-232 tracer by AEA	U232	11.4	83.960	% Recov	30.000	105.000				06/24/08
LCS	Uranium-233/234	13966-29-5	n/a	n/a	% Recov	75.000	125.000				06/24/08
LCS	Uranium-235	15117-96-1	n/a	n/a	% Recov	75.000	125.000				06/24/08
LCS	Uranium-238	24678-82-8	20.52	108.256	% Recov	80.000	120.000				06/24/08

# WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent  
Project Number F08-066

Group #: WSCF20080847  
Department: Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS: Barium spike RPD over 20% but still pass. X-flag  ORGANICS: All samples are corrected for moisture and reported on a dry weight basis. cgc  U-235 duplicate is flagged for poor RPD but the sample activity is low level. RPD does not apply to low level samples. Imh U-234 duplicate is flagged for poor RPD due to the inhomogeneity of the sample. Imh U-232 Tracer recovery is low. Since all the other tracer came out fine, this batch has been approved. Imh

Lab Areas: VALGROUP - Group Validation  
LOGSAMP - Login for Sample

VALTEST - Test Validation  
LOGTEST - Login for Tests

TESTDATA - Test Data Entry

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

wgppc/5.2 Report#: WSCF20080847

Report Date: 25-jun-2008

Page 2

M4W41-SLF-08-643

ATTACHMENT 5

**SAMPLE RECEIPT INFORMATION**

Consisting of 28 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

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354  
Attn: Steve Trent

Customer Code: GPP  
PO#: 123210/ES20  
Group#: 20080847  
Project#: F08-066  
Proj Mgr: Steve Trent E6-35  
Phone: 373-5869

The following samples were received from you on 04/28/08. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W08GR01075	B1TFF2	GPP @2008 @GEA-GPP PERSOLID	TRENT Solid, or handle as if solid @AEA-30 @AEA-31 @AEA-32 @AEA-33 @IC-30 @PCBGPP @SR89_90 @SVOCGPP @TPHD PH-30	04/17/08
W08GR01076	B1TFF0	GPP @VOA-GPP	TRENT Solid, or handle as if solid	04/17/08
W08GR01077	B1TFF1	GPP	TRENT Solid, or handle as if solid	04/17/08
W08GR01078	B1TFF5	GPP @2008 @GEA-GPP PERSOLID	TRENT Solid, or handle as if solid @AEA-30 @AEA-31 @AEA-32 @AEA-33 @IC-30 @PCBGPP @SR89_90 @SVOCGPP @TPHD PH-30	04/21/08
W08GR01079	B1TFD9	GPP @2008 @GEA-GPP PERSOLID	TRENT Solid, or handle as if solid @AEA-30 @AEA-31 @AEA-32 @AEA-33 @IC-30 @PCBGPP @SR89_90 @SVOCGPP @TPHD PH-30	04/17/08
W08GR01080	B1TFF8	GPP @2008 @GEA-GPP PERSOLID	TRENT Solid, or handle as if solid @AEA-30 @AEA-31 @AEA-32 @AEA-33 @IC-30 @PCBGPP @SR89_90 @SVOCGPP @TPHD PH-30	04/22/08
W08GR01082	B1TFH1	GPP @2008 @GEA-GPP PERSOLID	TRENT Solid, or handle as if solid @AEA-30 @AEA-31 @AEA-32 @AEA-33 @IC-30 @PCBGPP @SR89_90 @SVOCGPP @TPHD PH-30	04/23/08
W08GR01084	B1TFF3	GPP @VOA-GPP	TRENT Solid, or handle as if solid	04/21/08
W08GR01085	B1TFD7	GPP @VOA-GPP	TRENT Solid, or handle as if solid	04/17/08
W08GR01086	B1TFF6	GPP @VOA-GPP	TRENT Solid, or handle as if solid	04/22/08

Groundwater Remediation Program

Richland, WA 99354  
 Attn: Steve Trent

Customer Code: GPP  
 PO#: 123210/ES20  
 Group#: 20080847  
 Project#: F08-066  
 Proj Mgr: Steve Trent E6-35  
 Phone: 373-5869

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W08GR01087	B1TFF9	GPP @VOA-GPP	TRENT Solid, or handle as if solid	04/23/08
W08GR01088	B1TFF4	GPP	TRENT Solid, or handle as if solid	04/21/08
W08GR01089	B1TFD8	GPP	TRENT Solid, or handle as if solid	04/17/08
W08GR01090	B1TFF7	GPP	TRENT Solid, or handle as if solid	04/22/08
W08GR01091	B1TFH0	GPP	TRENT Solid, or handle as if solid	04/23/08

Test Acronym Description

Test Acronym	Description
@2008	ICP-200.8 MS All possible meta
@AEA-30	Plutonium Isotopics by AEA
@AEA-31	Americium by AEA
@AEA-32	Uranium Isotopics by AEA
@AEA-33	Neptunium by AEA
@GEA-GPP	Gamma Energy Analysis-grd H2O
@IC-30	Anions by Ion Chromatography
@PCBGPP	PCBs complete list
@SR89_90	Strontium 89/90
@SVOCGPP	SW-846 8270C Semi-Vols
@TPHD-WA	NWTPH-D TPH Diesel Range (Wa)
@VOA-GPP	VOA Ground Water Protection
PERSOLID	Percent Solids
PH-30	pH Soil and Waste Measurement

Fluor Hanford Inc.

6/1405  
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-036

PAGE 1 OF 2

COLLECTOR  
NCO Sampler *D Connolly*  
SAMPLING LOCATION  
C6174, I-006  
ICE CHEST NO.

COMPANY CONTACT  
TRENT, SJ  
PROJECT DESIGNATION  
216-S-6 Crib Sampling - Soil  
FIELD LOGBOOK NO.  
*HN# - N-585-5 pg 27*  
ACTUAL SAMPLE DEPTH  
*45' - 47.5'*  
OFFSITE PROPERTY NO.  
N/A

TELEPHONE NO.  
373-5869  
PROJECT COORDINATOR  
WIDRIG, DL  
SAF NO.  
F08-066  
COA  
123210E520  
BILL OF LADING/AIR BILL NO.  
N/A

PRICE CODE 8N  
AIR QUALITY   
DATA TURNAROUND  
45 Days / 45 Days  
METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

SHIPPED TO  
Waste Sampling & Characterization  
MATRIX\*  
A=Air  
DL=Drum  
Liquids  
DS=Drum  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
W=Water  
WT=Wipe  
X=Other  
POSSIBLE SAMPLE HAZARDS/ REMARKS  
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)  
SPECIAL HANDLING AND/OR STORAGE  
Radioactive tie to BITFB4

PRESERVATION	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None
TYPE OF CONTAINER	G/P	aG	aG	aG	G/P	G/P	Square Bottle - Poly
NO. OF CONTAINER(S)	1	1	1	1	1	1	1
VOLUME	120ml	120ml	120ml	120ml	120ml	120ml	500ml
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	PCBs/8082;	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	SEE ITEM (6) IN SPECIAL INSTRUCTIONS

20080847

SAMPLE NO. MATRIX\*  
B1TFB2 W086R01075 SOIL

SAMPLE DATE	SAMPLE TIME						
4-17-8	1425						

ICED

*2-4875* → *7519616*

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM <i>D Connolly</i>	DATE/TIME <i>4-17-8 1500</i>	RECEIVED BY/STORED IN <i>on site Ret</i>	DATE/TIME <i>4-17-8 1500</i>
RELINQUISHED BY/REMOVED FROM <i>onsite Ref</i>	DATE/TIME <i>4-28-08 1300</i>	RECEIVED BY/STORED IN <i>Chris Fulton</i>	DATE/TIME <i>4-28-08 1300</i>
RELINQUISHED BY/REMOVED FROM <i>Chris Fulton</i>	DATE/TIME <i>4-28-08 1400</i>	RECEIVED BY/STORED IN <i>V. [Signature]</i>	DATE/TIME <i>4/28/08 1400</i>
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

97 of 127  
LABORATORY SECTION  
FINAL SAMPLE DISPOSITION

RECEIVED BY

TITLE

DATE/TIME

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-036

PAGE 2 OF 2

<b>COLLECTOR</b> NCO Sampler	<b>COMPANY CONTACT</b> TRENT, SJ	<b>TELEPHONE NO.</b> 373-5869	<b>PROJECT COORDINATOR</b> WIDRIG, DL	<b>PRICE CODE</b> 8N	<b>DATA TURNAROUND</b> 45 Days / 45 Days
<b>SAMPLING LOCATION</b> C6174, I-006	<b>PROJECT DESIGNATION</b> 216-S-6 Crib Sampling - Soil		<b>SAF NO.</b> F08-066	<b>AIR QUALITY</b> <input type="checkbox"/>	
<b>ICE CHEST NO.</b>	<b>FIELD LOGBOOK NO.</b>	<b>ACTUAL SAMPLE DEPTH</b>	<b>COA</b> 123210ES20	<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE	
<b>SHIPPED TO</b> Waste Sampling & Characterization	<b>OFFSITE PROPERTY NO.</b> N/A		<b>BILL OF LADING / AIR BILL NO.</b> N/A		

SPECIAL INSTRUCTIONS

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

\*\* Analytical batch QC must be run on a sample associated with this SAF.

(1) Conductivity - 9050 {Specific Conductance} pH {Soil} - 9045 {pH Measurement}

(2) Semi-VOC - 8270B (Add-On) {1,2,4-Trimethylbenzene, Tributyl phosphate}

(3) TPH-Diesel/Kerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}

(4) ICP/MS - 200.8 (TAL) {Barium, Cadmium, Chromium, Copper, Nickel, Silver, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Selenium} 200.8\_HG - ICPMS;

(5) IC Anions - 300.0 {Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}

(6) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226} Gamma Spec - Add-on {Niobium-94, Radium-228} Isotopic Uranium; Neptunium-237; Strontium-89,90 -- Total Sr; Isotopic Plutonium; Americium-241 {Americium-241}

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Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-034

PAGE 1 OF 2

COLLECTOR  
NCO Sampler  
SAMPLING LOCATION  
C6174, I-006  
ICE CHEST NO.

COMPANY CONTACT  
TRENT, SJ  
PROJECT DESIGNATION  
216-S-6 Crib Sampling - Soil  
FIELD LOGBOOK NO.

TELEPHONE NO.  
373-5869  
ACTUAL SAMPLE DEPTH  
45' - 47.5'

PROJECT COORDINATOR  
WIDRIG, DL  
SAF NO.  
F08-066  
COA  
123210ES20

PRICE CODE 8N  
AIR QUALITY   
METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

DATA  
TURNAROUND  
45 Days / 45  
Days

SHIPPED TO  
Waste Sampling & Characterization

OFFSITE PROPERTY NO.  
N/A

BILL OF LADING/AIR BILL NO.  
N/A

MATRIX\* POSSIBLE SAMPLE HAZARDS/ REMARKS  
A=Air Contains Radioactive Material at concentrations  
DL=Drum that are not regulated for transportation per 49  
Liquids CFR but are not releasable per DOE Order  
DS=Drum 5400.5 (1990/1993)  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
W=Water  
WI=Wipe  
X=Other

SPECIAL HANDLING AND/OR STORAGE  
Radioactive tie to B1TFB4

PRESERVATION Cool <-7C and MEOH/Cool--4  
>-20C C  
TYPE OF CONTAINER aGs\* aGs\*  
NO. OF CONTAINER(S) 5 3  
VOLUME 40mL 40mL

SEE ITEM (1) IN SPECIAL INSTRUCTIONS  
SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE ANALYSIS

SAMPLE NO. MATRIX\*  
B1TF0 W086201076 SOIL

SAMPLE DATE SAMPLE TIME  
4-17-8 1425 ✓ ✓

ICED

732110 732110

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM DATE/TIME  
D. Connolly 4-17-8  
RELINQUISHED BY/REMOVED FROM DATE/TIME  
Christa Ref 4-29-08 1300  
RELINQUISHED BY/REMOVED FROM DATE/TIME  
Chris Fulton/Christa 4-29-08 1400  
RELINQUISHED BY/REMOVED FROM DATE/TIME

RECEIVED BY/STORED IN DATE/TIME  
on site Ref 4-17-8  
RECEIVED BY/STORED IN DATE/TIME  
Chris Fulton/Christa 4-29-08 1300  
RECEIVED BY/STORED IN DATE/TIME  
Victor Sims 4/28/08 1400  
RECEIVED BY/STORED IN DATE/TIME

RELINQUISHED BY/REMOVED FROM DATE/TIME  
RELINQUISHED BY/REMOVED FROM DATE/TIME  
RELINQUISHED BY/REMOVED FROM DATE/TIME

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

LABORATORY SECTION RECEIVED BY

TITLE DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY DATE/TIME

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

<b>COLLECTOR</b> NCO Sampler	<b>COMPANY CONTACT</b> TRENT, SJ	<b>TELEPHONE NO.</b> 373-5869	<b>PROJECT COORDINATOR</b> WIDRIG, DL	<b>PRICE CODE</b> 8N	<b>DATA TURNAROUND</b> 45 Days / 45 Days
<b>SAMPLING LOCATION</b> C6174, I-006	<b>PROJECT DESIGNATION</b> 216-S-6 Crib Sampling - Soil		<b>SAF NO.</b> F08-066	<b>AIR QUALITY</b> <input type="checkbox"/>	
<b>ICE CHEST NO.</b>	<b>FIELD LOGBOOK NO.</b>	<b>ACTUAL SAMPLE DEPTH</b>	<b>COA</b> 123210ES20	<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE	
<b>SHIPPED TO</b> Waste Sampling & Characterization	<b>OFFSITE PROPERTY NO.</b> N/A		<b>BILL OF LADING/AIR BILL NO.</b> N/A		

**SPECIAL INSTRUCTIONS**

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

\*\* Analytical batch QC must be run on a sample associated with this SAF.

\*\* All VOA samples will be collected using EPA Method 5035A.

\*\* VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis, and 1 methanol process control sample.

\*\* The laboratory is to use one of the low level VOA bottles for moisture content determination.

\*\* VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.

(1)VOA - 5035/8260 (LOW LEVEL); VOA - 5035/8260 (LOW LEVEL) - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

(2)VOA - 5035/8260 (HIGH LEVEL); VOA - 5035/8260 (HIGH LEVEL) - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-035

PAGE 1 OF 1

COLLECTOR  
NCO Sampler *D Connolly*  
SAMPLING LOCATION  
C6174, I-006  
ICE CHEST NO.

COMPANY CONTACT  
TRENT, SJ  
TELEPHONE NO.  
373-5869  
PROJECT COORDINATOR  
WIDRIG, DL

PRICE CODE 8N  
AIR QUALITY

DATA  
TURNAROUND  
45 Days / 45  
Days

PROJECT DESIGNATION  
216-S-6 Crib Sampling - Soil  
SAF NO.  
F08-066

FIELD LOGBOOK NO.  
*HNF-N-505 pg 27*  
ACTUAL SAMPLE DEPTH  
*45' - 47.5'*  
COA  
123210ES20

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

SHIPPED TO  
Waste Sampling & Characterization

OFFSITE PROPERTY NO.  
N/A  
BILL OF LADING/AIR BILL NO.  
N/A

MATRIX\*  
A=Air  
DL=Drum  
Liquids  
DS=Drum  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
W=Water  
WI=Wipe  
X=Other  
POSSIBLE SAMPLE HAZARDS/ REMARKS  
Contains Radioactive Material at concentrations  
that are not regulated for transportation per 49  
CFR but are not releasable per DOE Order  
5400.5 (1990/1993)

PRESERVATION  
Cool~4C  
TYPE OF CONTAINER  
aGs\*  
NO. OF CONTAINER(S)  
1  
VOLUME  
40mL  
SAMPLE ANALYSIS  
SEE ITEM (1) IN  
SPECIAL  
INSTRUCTIONS

SPECIAL HANDLING AND/OR STORAGE  
Radioactive tie to BITFB4

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
BITFF1 <i>W086201077</i> SOIL		4-17-08	1425 ✓

ICED

7312110

CHAIN OF POSSESSION	SIGN/ PRINT NAMES
RELINQUISHED BY/REMOVED FROM <i>D Connolly</i>	RECEIVED BY/STORED IN <i>on site Ref</i>
RELINQUISHED BY/REMOVED FROM <i>Chris Fulton</i>	RECEIVED BY/STORED IN <i>Chris Fulton</i>
RELINQUISHED BY/REMOVED FROM <i>Chris Fulton</i>	RECEIVED BY/STORED IN <i>Victor Sims</i>
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN

SPECIAL INSTRUCTIONS

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

\*\* Analytical batch QC must be run on a sample associated with this SAF.

\*\* All VOA samples will be collected using EPA Method 5035A.  
(1)VOA - 5035/8260 (TCL); VOA - 5035/8260 - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

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

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Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-039

PAGE 1 OF 2

COLLECTOR  
NCO Sampler *D. Connolly*  
SAMPLING LOCATION  
C6174, I-007  
ICE CHEST NO.

COMPANY CONTACT  
TRENT, SJ  
PROJECT DESIGNATION  
216-S-6 Crib Sampling - Soil  
FIELD LOGBOOK NO.

TELEPHONE NO.  
373-5869  
PROJECT COORDINATOR  
WIDRIG, DL  
SAF NO.  
F08-066  
ACTUAL SAMPLE DEPTH  
67.5' - 70'

COA  
123210E520  
BILL OF LADING/AIR BILL NO.  
N/A

PRICE CODE 8N  
AIR QUALITY

DATA TURNAROUND  
45 Days / 45 Days

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

SHIPPED TO  
Waste Sampling & Characterization

MATRIX\* POSSIBLE SAMPLE HAZARDS/ REMARKS  
A=Air Contains Radioactive Material at concentrations  
DL=Drum that are not regulated for transportation per 49  
Liquids CFR but are not releasable per DOE Order  
DS=Drum 5400.5 (1990/1993)  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
W=Water  
WT=Wipe  
X=Other

SPECIAL HANDLING AND/OR STORAGE  
Radioactive tie to B1TFB5

OFFSITE PROPERTY NO.  
N/A

PRESERVATION	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None
TYPE OF CONTAINER	G/P	aG	aG	aG	G/P	G/P	Square Bottle - Poly
NO. OF CONTAINER(S)	1	1	1	1	1	1	1
VOLUME	120ml	120ml	120ml	120ml	120ml	120ml	500ml
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	SEE ITEM (6) IN SPECIAL INSTRUCTIONS

SAMPLE NO. B1TFB5 *w/016201076* SOIL

MATRIX\*

SAMPLE DATE SAMPLE TIME

4-21-8 1335

✓	✓	✓	✓	✓	✓	✓	✓
---	---	---	---	---	---	---	---

ICED

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>D. Connolly</i>	4-21-8 1400	<i>on site Ref</i>	4-21-8 1400
<i>on site ref</i>	4-28-08 1300	<i>D. Parich</i>	4-28-08
<i>D. Parich</i>	4-28-08	<i>V. Lutz</i>	4/28/08 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

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

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<b>COLLECTOR</b> NCO Sampler	<b>COMPANY CONTACT</b> TRENT, SJ	<b>TELEPHONE NO.</b> 373-5869	<b>PROJECT COORDINATOR</b> WIDRIG, DL	<b>PRICE CODE</b> 8N	<b>DATA TURNAROUND</b> 45 Days / 45 Days
<b>SAMPLING LOCATION</b> C6174, I-007	<b>PROJECT DESIGNATION</b> 216-S-6 Crib Sampling - Soil		<b>SAF NO.</b> F08-066	<b>AIR QUALITY</b> <input type="checkbox"/>	
<b>ICE CHEST NO.</b>	<b>FIELD LOGBOOK NO.</b>	<b>ACTUAL SAMPLE DEPTH</b>	<b>COA</b> 123210ES20	<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE	
<b>SHIPPED TO</b> Waste Sampling & Characterization	<b>OFFSITE PROPERTY NO.</b> N/A		<b>BILL OF LADING/AIR BILL NO.</b> N/A		

**SPECIAL INSTRUCTIONS**

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

\*\* Analytical batch QC must be run on a sample associated with this SAF.

(1) Conductivity - 9050 {Specific Conductance} pH {Soil} - 9045 {pH Measurement}

(2) Semi-VOA - 8270B (Add-On) {1,2,4-Trimethylbenzene, Tributyl phosphate}

(3) TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}

(4) ICP/MS - 200.8 (TAL) {Barium, Cadmium, Chromium, Copper, Nickel, Silver, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Selenium} 200.8\_HG - ICP/MS;

(5) IC Anions - 300.0 {Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}

(6) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226} Gamma Spec - Add-on {Niobium-94, Radium-228} Isotopic Uranium; Neptunium-237; Strontium-89,90 -- Total Sr; Isotopic Plutonium; Americium-241 {Americium-241}

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-037

PAGE 1 OF 2

COLLECTOR  
NCO Sampler *D. Connolly*  
SAMPLING LOCATION  
C6174, I-007  
ICE CHEST NO.

COMPANY CONTACT  
TRENT, SJ  
PROJECT DESIGNATION  
216-S-6 Crib Sampling - Soil

TELEPHONE NO.  
373-5869

PROJECT COORDINATOR  
WIDRIG, DL

PRICE CODE BN  
AIR QUALITY

DATA  
TURNAROUND  
45 Days / 45  
Days

FIELD LOGBOOK NO.  
*HNF-N-585-5 pg 28*  
ACTUAL SAMPLE DEPTH  
*67.5' - 70'*  
OFFSITE PROPERTY NO.  
N/A

SAF NO.  
F08-066  
COA  
123210ES20

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

BILL OF LADING/AIR BILL NO.  
N/A

SHIPPED TO  
Waste Sampling & Characterization

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 are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

PRESERVATION Cool <-7C and >-20C MEOH/Cool--4 C  
TYPE OF CONTAINER aGs\* bGs\*  
NO. OF CONTAINER(S) 5 3  
VOLUME 40ml 40ml  
SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SPECIAL HANDLING AND/OR STORAGE  
Radioactive tie to B1TFB5

SAMPLE NO. B1TFB3 *W08C22 1064* MATRIX\* SOIL

SAMPLE DATE 4-21-8 SAMPLE TIME 1335

ICED

Lot#

749577-149577

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>D. Connolly</i>	4-21-8 1400	<i>on site ref</i>	4-21-8 1400
<i>on s.k. ref</i>	4-28-08	<i>D. Karch</i>	4-28-08
<i>D. Karch</i>	4-28-08	<i>V. [Signature]</i>	4-28-08 1400

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LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-037

PAGE 2 OF 2

<b>COLLECTOR</b> NCO Sampler	<b>COMPANY CONTACT</b> TRENT, SJ	<b>TELEPHONE NO.</b> 373-5869	<b>PROJECT COORDINATOR</b> WIDRIG, DL	<b>PRICE CODE</b> BN	<b>DATA TURNAROUND</b> 45 Days / 45 Days
<b>SAMPLING LOCATION</b> C6174, I-007	<b>PROJECT DESIGNATION</b> 216-5-6 Crib Sampling - Soil	<b>SAF NO.</b> F08-066	<b>AIR QUALITY</b> <input type="checkbox"/>		
<b>ICE CHEST NO.</b>	<b>FIELD LOGBOOK NO.</b>	<b>ACTUAL SAMPLE DEPTH</b>	<b>COA</b> 123210ES20	<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE	
<b>SHIPPED TO</b> Waste Sampling & Characterization	<b>OFFSITE PROPERTY NO.</b> N/A	<b>BILL OF LADING/AIR BILL NO.</b> N/A			

**SPECIAL INSTRUCTIONS**

- \*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
- \*\* Analytical batch QC must be run on a sample associated with this SAF.
- \*\* All VOA samples will be collected using EPA Method 5035A.
- \*\* VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis, and 1 methanol process control sample.
- \*\* The laboratory is to use one of the low level VOA bottles for moisture content determination.
- \*\* VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.
- (1)VOA - 5035/8260 (LOW LEVEL); VOA - 5035/8260 (LOW LEVEL) - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}
- (2)VOA - 5035/8260 (HIGH LEVEL); VOA - 5035/8260 (HIGH LEVEL) - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

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Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-038

PAGE 1 OF 1

COLLECTOR  
NCO Sampler  
SAMPLING LOCATION  
C6174, I-007  
ICE CHEST NO.

*DPinnolly*

COMPANY CONTACT  
TRENT, SJ  
PROJECT DESIGNATION  
216-S-6 Crib Sampling - Soil  
FIELD LOGBOOK NO.

TELEPHONE NO.  
373-5869

PROJECT COORDINATOR  
WIDRIG, DL  
SAF NO.  
F08-066

PRICE CODE  
8N  
AIR QUALITY

DATA  
TURNAROUND  
45 Days / 45  
Days

SHIPPED TO  
Waste Sampling & Characterization

ACTUAL SAMPLE DEPTH  
*41N-585-5 1728 67.5' - 70'*  
OFFSITE PROPERTY NO.  
N/A

COA  
123210ES20  
BILL OF LADING/AIR BILL NO.  
N/A

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

MATRIX\*  
A=Air  
DL=Drum  
Liquids  
DS=Drum  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
W=Water  
WI=Wipe  
X=Other  
POSSIBLE SAMPLE HAZARDS/ REMARKS  
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)  
SPECIAL HANDLING AND/OR STORAGE  
Radioactive tie to BITFB5

PRESERVATION  
Cool-4C

TYPE OF CONTAINER  
3Gs\*

NO. OF CONTAINER(S)  
1

VOLUME  
40mL

SAMPLE ANALYSIS  
SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.  
BITFF4 *12586201088* SOIL

MATRIX\*

SAMPLE DATE  
*4-21-8*  
SAMPLE TIME  
*1335*

ICED

CHAIN OF POSSESSION

*Lot #1*

*749577*

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM  
*DPinnolly* *4-21-8* *1400*  
RELINQUISHED BY/REMOVED FROM  
*on site ref* *4-28-08* *1200*  
RELINQUISHED BY/REMOVED FROM  
*D. Parach* *4-28-08*  
RELINQUISHED BY/REMOVED FROM  
*V. J. ...* *4-28-08*

RECEIVED BY/STORED IN  
*on site ref* *4-21-8* *1400*  
RECEIVED BY/STORED IN  
*D. Parach* *4-28-08*  
RECEIVED BY/STORED IN  
*V. J. ...* *4-28-08*

\*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.  
\*\* Analytical batch QC must be run on a sample associated with this SAF.  
\*\* All VOA samples will be collected using EPA Method 5035A.  
(1)VOA - 5035/8260 (TCL); VOA - 5035/8260 - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

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LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

COLLECTOR  
NCO Sampler *D Connolly*  
SAMPLING LOCATION  
C6174, I-005  
ICE CHEST NO.

COMPANY CONTACT  
TRENT, SJ  
TELEPHONE NO.  
373-5869  
PROJECT COORDINATOR  
WIDRIG, DL  
PROJECT DESIGNATION  
216-S-6 Crib Sampling - Soil  
SAF NO.  
F08-066  
FIELD LOGBOOK NO.  
*HNF N-5855 pg 27*  
ACTUAL SAMPLE DEPTH  
*29.2' - 31.7'*  
COA  
123210ES20  
OFFSITE PROPERTY NO.  
N/A  
BILL OF LADING/AIR BILL NO.  
N/A

PRICE CODE 8N  
AIR QUALITY   
METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

DATA  
TURNAROUND  
45 Days / 45  
Days

SHIPPED TO  
Waste Sampling & Characterization

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 are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)  
SPECIAL HANDLING AND/OR STORAGE  
Radioactive tie to B1TFB3

PRESERVATION	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None
TYPE OF CONTAINER	G/P	aG	aG	aG	G/P	G/P	Square Bottle - Poly
NO. OF CONTAINER(S)	1	1	1	1	1	1	1
VOLUME	120ml	120ml	120ml	120ml	120ml	120ml	500ml
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	SEE ITEM (6) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1TFD9 <i>Wax 201079</i>	SOIL	4-17-8	0915	✓	✓	✓	✓	✓	✓

**ICED**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	SIGN/ PRINT NAMES	RECEIVED BY/STORED IN	DATE/TIME
<i>D Connolly</i>	4-17-8 1100	<i>on site Ref</i>	<i>on site Ref</i>	4-17-8 1100
<i>Chris Fulton</i>	4-28-08 1300	<i>Chris Fulton</i>	<i>Chris Fulton</i>	4-28-08 1300
<i>Chris Fulton</i>	4-28-08 1400	<i>Vi Star</i>	<i>Vi Star</i>	4/28/08 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME

SPECIAL INSTRUCTIONS  
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

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<b>COLLECTOR</b> NCO Sampler	<b>COMPANY CONTACT</b> TRENT, SJ	<b>TELEPHONE NO.</b> 373-5869	<b>PROJECT COORDINATOR</b> WIDRIG, DL	<b>PRICE CODE</b> 8N	<b>DATA TURNAROUND</b> 45 Days / 45 Days
<b>SAMPLING LOCATION</b> C6174, I-005	<b>PROJECT DESIGNATION</b> 216-S-6 Crib Sampling - Soil		<b>SAF NO.</b> F08-066	<b>AIR QUALITY</b> <input type="checkbox"/>	
<b>ICE CHEST NO.</b>	<b>FIELD LOGBOOK NO.</b>	<b>ACTUAL SAMPLE DEPTH</b>	<b>COA</b> 123210ES20	<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE	
<b>SHIPPED TO</b> Waste Sampling & Characterization	<b>OFFSITE PROPERTY NO.</b> N/A		<b>BILL OF LADING/AIR BILL NO.</b> N/A		

**SPECIAL INSTRUCTIONS**

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

\*\* Analytical batch QC must be run on a sample associated with this SAF.

(1) Conductivity - 9050 (Specific Conductance) pH (Soil) - 9045 (pH Measurement)

(2) Semi-VOA - 8270B (Add-On) (1,2,4-Trimethylbenzene, Tributyl phosphate)

(3) TPH-Diesel/Kerosene Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)

(4) ICP/MS - 200.8 (TAL) (Barium, Cadmium, Chromium, Copper, Nickel, Silver, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Lead, Selenium) 200.8\_HG - ICPMS;

(5) IC Anions - 300.0 (Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate)

(6) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226) Gamma Spec - Add-on (Niobium-94, Radium-228) Isotopic Uranium; Neptunium-237; Strontium-89,90 -- Total Sr; Isotopic Plutonium; Americium-241 (Americium-241)

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-031

PAGE 1 OF 2

COLLECTOR  
NCO Sampler *DConnolly*  
SAMPLING LOCATION  
C6174, I-005  
ICE CHEST NO.

COMPANY CONTACT  
TRENT, SJ  
PROJECT DESIGNATION  
216-S-6 Crib Sampling - Soil  
FIELD LOGBOOK NO.

TELEPHONE NO.  
373-5869

PROJECT COORDINATOR  
WIDRIG, DL  
SAF NO.  
F08-066

PRICE CODE 8N  
AIR QUALITY

DATA  
TURNAROUND  
45 Days / 45  
Days

ACTUAL SAMPLE DEPTH  
*HNF-N-585-5 pgs 27 29-2' - 31.7'*  
OFFSITE PROPERTY NO.  
N/A

COA  
123210ES20  
BILL OF LADING/AIR BILL NO.  
N/A

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

SHIPPED TO  
Waste Sampling & Characterization

MATRIX\* POSSIBLE SAMPLE HAZARDS/ REMARKS  
A=Air Contains Radioactive Material at concentrations  
DL=Drum that are not regulated for transportation per 49  
Liquids CFR but are not releasable per DOE Order  
DS=Drum 5400.5 (1990/1993)  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
W=Water  
WI=Wipe  
X=Other

PRESERVATION Cool <-7C and MEOH/Cool-4  
>-20C C

TYPE OF CONTAINER aGs\* aGs\*

NO. OF CONTAINER(S) 5 3

VOLUME 40mL 40mL

SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SPECIAL HANDLING AND/OR STORAGE  
Radioactive tie to B1TFB3

SAMPLE NO. MATRIX\*  
B1TFD7W08620,085 SOIL

SAMPLE DATE SAMPLE TIME  
*4-17-8 0915*

**ICED**

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>DConnolly</i>	<i>4-17-8 1100</i>	<i>on site REP</i>	<i>4-17-8 1700</i>
<i>Onsite REP</i>	<i>4-28-08 1300</i>	<i>Chris Fulton</i>	<i>4-28-08 1300</i>
<i>Chris Fulton</i>	<i>4-28-08</i>	<i>V. J. ...</i>	<i>4/28/08 1400</i>
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

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION RECEIVED BY

TITLE DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY DATE/TIME

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**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

F08-066-031

PAGE 2 OF 2

**COLLECTOR**  
NCO Sampler

**SAMPLING LOCATION**  
C6174, I-005

**ICE CHEST NO.**

**SHIPPED TO**  
Waste Sampling & Characterization

**COMPANY CONTACT**  
TRENT, SJ

**PROJECT DESIGNATION**  
216-5-6 Crib Sampling - Soil

**FIELD LOGBOOK NO.**

**OFFSITE PROPERTY NO.**  
N/A

**TELEPHONE NO.**  
373-5869

**ACTUAL SAMPLE DEPTH**

**COA**  
123210E520

**PROJECT COORDINATOR**  
WIDRIG, DL

**SAF NO.**  
F08-066

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

**PRICE CODE** 8N

**AIR QUALITY**

**METHOD OF SHIPMENT**  
GOVERNMENT VEHICLE

**DATA  
TURNAROUND**  
45 Days / 45  
Days

**SPECIAL INSTRUCTIONS**

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

\*\* Analytical batch QC must be run on a sample associated with this SAF.

\*\* All VOA samples will be collected using EPA Method 5035A.

\*\* VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis, and 1 methanol process control sample.

\*\* The laboratory is to use one of the low level VOA bottles for moisture content determination.

\*\* VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.

(1)VOA - 5035/8260 (LOW LEVEL); VOA - 5035/8260 (LOW LEVEL) - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

(2)VOA - 5035/8260 (HIGH LEVEL); VOA - 5035/8260 (HIGH LEVEL) - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-032

PAGE 1 OF 1

COLLECTOR  
NCO Sampler *D Connolly*  
SAMPLING LOCATION  
C6174, I-005  
ICE CHEST NO.

COMPANY CONTACT  
TRENT, SJ  
TELEPHONE NO.  
373-5869  
PROJECT DESIGNATION  
216-S-6 Crib Sampling - Soil  
FIELD LOGBOOK NO.  
*HNF-N-5855 pg 27*  
ACTUAL SAMPLE DEPTH  
*29.2'-31.7'*  
OFFSITE PROPERTY NO.  
N/A

PROJECT COORDINATOR  
WIDRIG, DL  
SAF NO.  
F08-066  
COA  
123210ES20  
BILL OF LADING/AIR BILL NO.  
N/A

PRICE CODE 8N  
AIR QUALITY   
DATA TURNAROUND  
45 Days / 45 Days  
METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

SHIPPED TO  
Waste Sampling & Characterization

MATRIX\* POSSIBLE SAMPLE HAZARDS/ REMARKS  
A=Air Contains Radioactive Material at concentrations  
DL=Drum that are not regulated for transportation per 49  
Liquids CFR but are not releasable per DOE Order  
DS=Drum 5400.5 (1990/1993)  
Solids  
L=Liquid  
O=Oil  
S=Soil  
SE=Sediment  
T=Tissue  
V=Vegetation  
W=Water  
WI=Wipe  
X=Other  
SPECIAL HANDLING AND/OR STORAGE  
Radioactive tie to B1TFB3

PRESERVATION Cool-4C  
TYPE OF CONTAINER aGs\*  
NO. OF CONTAINER(S) 1  
VOLUME 40mL  
SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1TFD8 <i>W056201089</i>	SOIL	4-17-08	0915

ICED

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>D Connolly</i>	4-17-08 1100	<i>on site Ref</i>	4-17-08 1100
Onsite Ref	4-28-08 1300	<i>Chris Fulton</i>	4-28-08 1300
<i>Chris Fulton</i>	4-28-08 1400	<i>Victor Sims</i>	4/28/08 1400

\*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.  
\*\* Analytical batch QC must be run on a sample associated with this SAF.  
\*\* All VOA samples will be collected using EPA Method 5035A.  
(1)VOA - 5035/8260 (TCL); VOA - 5035/8260 - (Add-On) (Acetonitrile, Hexane, Tetrahydrofuran)

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

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

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-042

PAGE 1 OF 2

COLLECTOR  
NCO Sampler *D Connolly*  
SAMPLING LOCATION  
C6174, I-008  
ICE CHEST NO.

COMPANY CONTACT  
TRENT, SJ

TELEPHONE NO.  
373-5869

PROJECT COORDINATOR  
WIDRIG, DL

PRICE CODE 8N

DATA  
TURNAROUND  
45 Days / 45  
Days

PROJECT DESIGNATION  
216-5-6 Crib Sampling - Soil

SAF NO.  
F08-066

AIR QUALITY

FIELD LOGBOOK NO.

ACTUAL SAMPLE DEPTH

OFFSITE PROPERTY NO.

N/A

COA  
123210ES20

METHOD OF SHIPMENT  
GOVERNMENT VEHICLE

BILL OF LADING/AIR BILL NO.

N/A

SHIPPED TO  
Waste Sampling & Characterization

MATRIX\* **POSSIBLE SAMPLE HAZARDS/ REMARKS**  
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 are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

PRESERVATION	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None
TYPE OF CONTAINER	G/P	aG	aG	aG	G/P	G/P	Square Bottle - Poly
NO. OF CONTAINER(S)	1	1	1	1	1	1	1

**SPECIAL HANDLING AND/OR STORAGE**  
Radioactive tie to B1TFB6

**SAMPLE ANALYSIS**

SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	SEE ITEM (6) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1TFB6 <i>w086120108</i>	SOIL	4-22-8	1250	✓	✓	✓	✓	✓	✓

**ICED**

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>D Connolly</i>	4-22-8 1330	<i>on site Ref</i>	4-22-8 1330
<i>on site Ref</i>	4-28-08 1300	<i>D. Parthen</i>	4-28-08
<i>D. Parthen</i>	4-28-08	<i>Nata J Sims</i>	4/28/08 1400

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION  
FINAL SAMPLE DISPOSITION

RECEIVED BY  
DISPOSAL METHOD

TITLE  
DISPOSED BY

DATE/TIME  
DATE/TIME

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-042

PAGE 2 OF 2

<b>COLLECTOR</b> NCO Sampler	<b>COMPANY CONTACT</b> TRENT, SJ	<b>TELEPHONE NO.</b> 373-5869	<b>PROJECT COORDINATOR</b> WIDRIG, DL	<b>PRICE CODE</b> 8N	<b>DATA TURNAROUND</b> 45 Days / 45 Days
<b>SAMPLING LOCATION</b> C6174, I-008	<b>PROJECT DESIGNATION</b> 216-S-6 Crib Sampling - Soil		<b>SAF NO.</b> F08-066	<b>AIR QUALITY</b> <input type="checkbox"/>	
<b>ICE CHEST NO.</b>	<b>FIELD LOGBOOK NO.</b>	<b>ACTUAL SAMPLE DEPTH</b>	<b>COA</b> 123210E520	<b>METHOD OF SHIPMENT</b> GOVERNMENT VEHICLE	
<b>SHIPPED TO</b> Waste Sampling & Characterization	<b>OFFSITE PROPERTY NO.</b> N/A		<b>BILL OF LADING/AIR BILL NO.</b> N/A		

**SPECIAL INSTRUCTIONS**

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

\*\* Analytical batch QC must be run on a sample associated with this SAF.

- (1) Conductivity - 9050 {Specific Conductance} pH (Soil) - 9045 {pH Measurement}
- (2) Semi-VOA - 8270B (Add-On) {1,2,4-Trimethylbenzene, Tributyl phosphate}
- (3) TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
- (4) ICP/MS - 200.8 (TAL) {Barium, Cadmium, Chromium, Copper, Nickel, Silver, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Selenium} 200.8\_HG - ICPMS;
- (5) IC Anions - 300.0 {Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}
- (6) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226} Gamma Spec - Add-on {Niobium-94, Radium-228} Isotopic Uranium; Neptunium-237; Strontium-89,90 -- Total Sr; Isotopic Plutonium; Americium-241 {Americium-241}

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-040

PAGE 1 OF 2

NCO Sampler  
 SAMPLING LOCATION  
 C6174, I-008  
 ICE CHEST NO.

*D Connolly*

COMPANY CONTACT  
 TRENT, SJ

TELEPHONE NO.  
 373-5869

PROJECT COORDINATOR  
 WIDRIG, DL

PRICE CODE 8N

DATA  
 TURNAROUND

PROJECT DESIGNATION  
 216-S-6 Crib Sampling - Soil

SAF NO.  
 F08-066

AIR QUALITY

45 Days / 45  
 Days

FIELD LOGBOOK NO.

ACTUAL SAMPLE DEPTH

COA

METHOD OF SHIPMENT

OFFSITE PROPERTY NO.  
*17NF-N-5R55 pg 29*

*82.6' - 85.1'*

123210ES20

GOVERNMENT VEHICLE

N/A

BILL OF LADING/AIR BILL NO.

N/A

SHIPPED TO  
 Waste Sampling & Characterization

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 are not regulated for transportation per 49  
 CFR but are not releasable per DOE Order  
 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE  
 Radioactive tie to B1TF86

PRESERVATION	Cool <-7C and >-20C	MEOH/Cool-4 C
TYPE OF CONTAINER	aGs*	aGs*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.  
 B1TF86 *W086RD1086* SOIL

MATRIX\*

SAMPLE DATE SAMPLE TIME  
*4-22-8 1210*

**ICED**

Lot#

7312110 7312110

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM <i>D Connolly</i>	DATE/TIME <i>4-22-8 1330</i>	RECEIVED BY/STORED IN <i>on site Ref</i>	DATE/TIME <i>4-22-8 1330</i>
RELINQUISHED BY/REMOVED FROM <i>on site Ref</i>	DATE/TIME <i>4-28-08 1300</i>	RECEIVED BY/STORED IN <i>D. Arch</i>	DATE/TIME <i>4-28-08</i>
RELINQUISHED BY/REMOVED FROM <i>D. Arch</i>	DATE/TIME <i>4-28-08</i>	RECEIVED BY/STORED IN <i>V. ...</i>	DATE/TIME <i>4/28/08 1400</i>
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

LABORATORY SECTION RECEIVED BY  
 FINAL SAMPLE DISPOSAL METHOD

TITLE DATE/TIME  
 DISPOSED BY DATE/TIME

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-040

PAGE 2 OF 2

NCO Sampler  
 SAMPLING LOCATION  
 C6174, I-008  
 ICE CHEST NO.

COMPANY CONTACT  
 TRENT, SJ

TELEPHONE NO.  
 373-5869

PROJECT COORDINATOR  
 WDRIG, DL

PRICE CODE  
 BN  
 AIR QUALITY

DATA  
 TURNAROUND  
 45 Days / 45  
 Days

PROJECT DESIGNATION  
 216-S-6 Crib Sampling - Soil  
 FIELD LOGBOOK NO.

ACTUAL SAMPLE DEPTH

SAF NO.  
 F08-066

COA  
 123210ES20

METHOD OF SHIPMENT  
 GOVERNMENT VEHICLE

SHIPPED TO  
 Waste Sampling & Characterization

OFFSITE PROPERTY NO.  
 N/A

BILL OF LADING/AIR BILL NO.  
 N/A

SPECIAL INSTRUCTIONS

- \*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
- \*\* Analytical batch QC must be run on a sample associated with this SAF.
- \*\* All VOA samples will be collected using EPA Method 5035A.
- \*\* VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis, and 1 methanol process control sample.
- \*\* The laboratory is to use one of the low level VOA bottles for moisture content determination.
- \*\* VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.
- (1)VOA - 5035/8260 (LOW LEVEL); VOA - 5035/8260 (LOW LEVEL) - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}
- (2)VOA - 5035/8260 (HIGH LEVEL); VOA - 5035/8260 (HIGH LEVEL) - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-041

PAGE 1 OF 1

NCO Sampler *D Connolly*  
 SAMPLING LOCATION  
 C6174, I-008  
 ICE CHEST NO.

COMPANY CONTACT  
 TRENT, SJ

TELEPHONE NO.  
 373-5869

PROJECT COORDINATOR  
 WDRIG, DL

PRICE CODE 8N

DATA TURNAROUND  
 45 Days / 45 Days

PROJECT DESIGNATION  
 216-S-6 Crib Sampling - Soil

SAF NO.  
 F08-066

AIR QUALITY

FIELD LOGBOOK NO. ACTUAL SAMPLE DEPTH

*1-NR-N-SP5-5 pg 29 82.6' - 85.1'*

COA  
 123210E520

METHOD OF SHIPMENT  
 GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.

BILL OF LADING/AIR BILL NO.

N/A

N/A

SHIPPED TO  
 Waste Sampling & Characterization

MATRIX\* POSSIBLE SAMPLE HAZARDS/ REMARKS  
 A=Air Contains Radioactive Material at concentrations  
 DL=Drum that are not regulated for transportation per 49  
 Liquids CFR but are not releasable per DOE Order  
 DS=Drum 5400.5 (1990/1993)  
 Solids  
 L=Liquid  
 O=Oil  
 S=Soil  
 SE=Sediment  
 T=Tissue  
 V=Vegetation  
 W=Water  
 WI=Wipe  
 X=Other

PRESERVATION Cool-4C

TYPE OF CONTAINER aGs\*

NO. OF CONTAINER(S) 1

VOLUME 40mL

SPECIAL HANDLING AND/OR STORAGE  
 Radioactive tie to B1TFB6

SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO. B1TF77  
*W286201090* SOIL

MATRIX\*

SAMPLE DATE

SAMPLE TIME

*4-22-8 1250 ✓*

**ICED**

*Lot #*

*7312110*

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
<i>D Connolly</i>	<i>4-22-8 1330</i>	<i>on site ret</i>	<i>4-22-8 1330</i>
<i>on site RA</i>	<i>4-28-08</i>	<i>D. P. [Signature]</i>	<i>4-28-08</i>
<i>D. P. [Signature]</i>	<i>4-28-08</i>	<i>Victor [Signature]</i>	<i>4/28/08 1400</i>
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

\*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.  
 \*\* Analytical batch QC must be run on a sample associated with this SAF. \*\* All VOA samples will be collected using EPA Method 5035A.  
 (1)VOA - 5035/8260 (TCL); VOA - 5035/8260 - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

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LABORATORY SECTION RECEIVED BY

TITLE DATE/TIME

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

DISPOSED BY DATE/TIME

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-045

PAGE 1 OF 2

NCO Sampler **KAUZE, ROSANE, BATES**  
 SAMPLING LOCATION  
 C6174, I-009  
 ICE CHEST NO.

COMPANY CONTACT  
 TRENT, SJ  
 TELEPHONE NO.  
 373-5869  
 PROJECT COORDINATOR  
 WIDRIG, DL  
 PROJECT DESIGNATION  
 216-S-6 Crib Sampling - Soil  
 SAF NO.  
 F08-066  
 FIELD LOGBOOK NO. **1930**  
 ACTUAL SAMPLE DEPTH  
**1NF-N-585-5 97.5' to 100'**  
 COA  
 123210ES20  
 OFFSITE PROPERTY NO.  
 N/A  
 BILL OF LADING/AIR BILL NO.  
 N/A

PRICE CODE **8N**  
 AIR QUALITY   
 METHOD OF SHIPMENT  
 GOVERNMENT VEHICLE

DATA  
 TURNAROUND  
 45 Days / 45  
 Days

SHIPPED TO  
 Waste Sampling & Characterization

MATRIX\* **POSSIBLE SAMPLE HAZARDS/ REMARKS**  
 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 are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

PRESERVATION	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None
TYPE OF CONTAINER	G/P	aG	aG	aG	G/P	G/P	G/P	Square Bottle - Poly
NO. OF CONTAINER(S)	1	1	1	1	1	1	1	1
VOLUME	120mL	120mL	120mL	120mL	120mL	120mL	120mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	SEE ITEM (6) IN SPECIAL INSTRUCTIONS	

SPECIAL HANDLING AND/OR STORAGE  
 Radioactive tie to B1TFB7

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME							
B1TFH1	was 6201082 SOIL	4-23-08	08:20	✓	✓	✓	✓	✓	✓	✓

**ICED**

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SPECIAL INSTRUCTIONS
Ed Kause, Edwin Kraus	4-23-08 0900	ON Site REF 4-23-08	0900	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
on site ref #	4-28-08 1300	D. Parche	4-28-08	
D. Parche	4-28-08 1400	Vincent B...	4-28-08 1400	

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

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NCO Sampler *Rosane, Krueh, Bitter*  
 SAMPLING LOCATION  
 C6174, I-009  
 ICE CHEST NO.

COMPANY CONTACT  
 TRENT, SJ

TELEPHONE NO.  
 373-5869

PROJECT COORDINATOR  
 WIDRIG, DL

PRICE CODE    SN

DATA  
 TURNAROUND  
 45 Days / 45  
 Days

PROJECT DESIGNATION  
 216-S-6 Crib Sampling - Soil

SAF NO.  
 F08-066

AIR QUALITY   

FIELD LOGBOOK NO.

*HNF-N-585-5*

*PHO* ACTUAL SAMPLE DEPTH  
*97.5' to 100'*

COA  
 123210ES20

METHOD OF SHIPMENT  
 GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.

N/A

BILL OF LADING/AIR BILL NO.

N/A

SHIPPED TO  
 Waste Sampling & Characterization

**SPECIAL INSTRUCTIONS**

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

\*\* Analytical batch QC must be run on a sample associated with this SAF.

(1) Conductivity - 9050 {Specific Conductance} pH (Soil) - 9045 {pH Measurement}

(2) Semi-VOA - 8270B (Add-On) {1,2,4-Trimethylbenzene, Tributyl phosphate}

(3) TPH-Diesel/Kerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}

(4) ICP/MS - 200.8 (TAL) {Barium, Cadmium, Chromium, Copper, Nickel, Silver, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Selenium} 200.8\_HG - ICPMS;

(5) IC Anions - 300.0 {Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}

(6) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226} Gamma Spec - Add-on {Niobium-94, Radium-228} Isotopic Uranium; Neptunium-237; Strontium-89,90 -- Total Sr; Isotopic Plutonium; Americium-241 {Americium-241}

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-043

PAGE 1 OF 2

NCO Sampler *Kauai, Roseane, BATHS*  
 SAMPLING LOCATION  
 C6174, I-009  
 ICE CHEST NO.

COMPANY CONTACT  
 TRENT, SJ

TELEPHONE NO.  
 373-5869

PROJECT COORDINATOR  
 WIDRIG, DL

PRICE CODE 8N

DATA TURNAROUND  
 45 Days / 45 Days

PROJECT DESIGNATION  
 216-5-6 Crib Sampling - Soil

SAF NO.  
 F08-066

AIR QUALITY

FIELD LOGBOOK NO.

*pg 30* ACTUAL SAMPLE DEPTH  
*97.5' to 100'*

COA

123210E520

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

OFFSITE PROPERTY NO.  
*HNF-N-585-5*

N/A

BILL OF LADING/AIR BILL NO.

N/A

SHIPPED TO  
 Waste Sampling & Characterization

MATRIX\*  
 A=Air  
 DL=Drum  
 Liquids  
 OS=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 are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE  
 Radioactive tie to B1TFB7

PRESERVATION  
 Cool <-7C and >-20C MEQH/Cool~4 C

TYPE OF CONTAINER  
 aGs\* aGs\*

NO. OF CONTAINER(S)  
 5 3

VOLUME  
 40ml 40ml

SAMPLE ANALYSIS  
 SEE ITEM (1) IN SPECIAL INSTRUCTIONS  
 SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1TFB9	SOIL	04-23-08	0820	✓	✓				

**ICED**

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	SIGN/ PRINT NAMES	RECEIVED BY/STORED IN	DATE/TIME
<i>Ed K...</i>	4-23-08 0900		<i>on site Res</i>	4-23-08 0900
<i>on site Res</i>	4-28-08 1100		<i>D. Parche</i>	4-28-08 1200
<i>D. Parche</i>	4-28-08 1400		<i>V. ...</i>	4/28/08 1400

SPECIAL INSTRUCTIONS  
 SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

TITLE	DATE/TIME

LABORATORY SECTION	RECEIVED BY	DISPOSED BY	DATE/TIME

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CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-043

PAGE 2 OF 2

COLLECTOR  
NCO Sampler *Kause, ROSALE, Bates*  
SAMPLING LOCATION  
C6174, I-009  
ICE CHEST NO.

COMPANY CONTACT

TRENT, SJ

TELEPHONE NO.

373-5869

PROJECT COORDINATOR

WIDRIG, DL

PROJECT DESIGNATION

216-S-6 Crb Sampling - Soil

SAF NO.

F08-066

FIELD LOGBOOK NO.

*14NF-N-585-5* <sup>P430</sup>

ACTUAL SAMPLE DEPTH

*97.5' to 100'*

COA

123210ES20

OFFSITE PROPERTY NO.

N/A

BILL OF LADING/AIR BILL NO.

N/A

PRICE CODE

8N

AIR QUALITY

DATA  
TURNAROUND

45 Days / 45  
Days

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

SPECIAL INSTRUCTIONS

- \*\* The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
- \*\* Analytical batch QC must be run on a sample associated with this SAF.
- \*\* All VOA samples will be collected using EPA Method 5035A.
- \*\* VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis, and 1 methanol process control sample.
- \*\* The laboratory is to use one of the low level VOA bottles for moisture content determination.
- \*\* VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.
- (1)VOA - 5035/8260 (LOW LEVEL); VOA - 5035/8260 (LOW LEVEL) - (Add-On) (Acetonitrile, Hexane, Tetrahydrofuran)
- (2)VOA - 5035/8260 (HIGH LEVEL); VOA - 5035/8260 (HIGH LEVEL) - (Add-On) (Acetonitrile, Hexane, Tetrahydrofuran)

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-066-044

PAGE 1 OF 1

NCO Sampler *Kaun, Roscoe, Bates*  
 SAMPLING LOCATION  
 C6174, 1-009  
 ICE CHEST NO.

COMPANY CONTACT  
 TRENT, SJ

TELEPHONE NO.  
 373-5869

PROJECT COORDINATOR  
 WIDRIG, DL

PRICE CODE 8N

DATA  
 TURNAROUND  
 45 Days / 45  
 Days

PROJECT DESIGNATION

216-S-6 Crib Sampling - Soil

SAF NO.

F08-066

AIR QUALITY

FIELD LOGBOOK NO.

*HNF-N-535-5* *97.5' to 100'*

ACTUAL SAMPLE DEPTH

COA

123210E520

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.

N/A

BILL OF LADING/AIR BILL NO.

N/A

MATRIX\*

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

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

PRESERVATION

Cool~4C

TYPE OF CONTAINER

aGs\*

NO. OF CONTAINER(S)

1

VOLUME

40ml

SAMPLE ANALYSIS

SEE ITEM (1) IN  
 SPECIAL  
 INSTRUCTIONS

SPECIAL HANDLING AND/OR STORAGE

Radioactive tie to B1TFB7

SAMPLE NO.

MATRIX\*

SAMPLE DATE

SAMPLE TIME

B1TFH0 *W086204091* SOIL

04-23-08 08:20 ✓

**ICED**

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

*Ed Kaun, Sh... 4-23-08 08:00*

*ON Site REF 4-23-08 08:00*

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

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

*on site Ref 4-28-08 1700*

*D. Parke 4-28-08*

\*\* Analytical batch QC must be run on a sample associated with this SAF.

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

*D. Parke 4-28-08 1700*

*Victor Sims 4/28/08 1700*

\*\* All VOA samples will be collected using EPA Method 5035A.

(1)VOA - 5035/8260 (TCL); VOA - 5035/8260 - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

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

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

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M4W41-SLF-08-643

ATTACHMENT 6

**SAMPLE RECORD SHEET**

Consisting of 6 pages  
Including cover page

S-6 I-006 Depth 45.0 — 47.5  
 Sample: 1425

**SAMPLE RECORD SHEET**

Sample Number	Sample Suffix <sup>1</sup>	Empty Weight <sup>2</sup> (g)	Weight with Sample <sup>3</sup> (g)	Weight of Sample <sup>4</sup> (g)	Methanol Added (g)	Methanol Added (mL)	Weight of Methanol and Sample
BITFFD	K	32.4	37.6	5.2	---	---	---
	L	31.7	37.0	5.3	---	---	---
	M	32.6	37.7	5.1	---	---	---
	N	31.9	37.4	5.5	---	---	---
	P	31.2	36.2	5.0	---	---	---
BITFFI		30.8	30.8	0.0	4.0	5.0	34.8
BITFFD	W	30.9	36.5	5.6	4.3	5.5	40.8
	X	30.8	36.8	6.0	4.7	6.0	41.5
	Y	30.6	34.9	4.3	3.6	4.5	38.5

<sup>1</sup>Sample suffix of L, K, M, N and P relate to low-level concentration samples and will not have any preservation beyond freezing between -7C and -20C.

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

<sup>2</sup>Empty weight is to include all labels, stickers, bags, and anything else that will be associated with the bottle when it is weighed with the sample.

<sup>3</sup>Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

<sup>4</sup>Sample weight is the vial with sample minus the vial empty

## SAMPLE RECORD SHEET

Sample Number	Sample Suffix <sup>1</sup>	Empty Weight <sup>2</sup> (g)	Weight with Sample <sup>3</sup> (g)	Weight of Sample <sup>4</sup> (g)	Methanol Added (g)	Methanol Added (mL)	Weight of Methanol and Sample
BITFF3	K	36.9	37.4	5.5	---	---	---
	L	31.7	37.0	5.3	---	---	---
	M	32.7	37.5	5.3	---	---	---
	N	32.8	34.1	5.3	---	---	---
	P	31.6	36.8	5.2	---	---	---
* BITFF4		31.2	---	31	3.9	5	35.1
BITFF3	W	30.1	35.4	5.3	3.8	5.0	39.2
	X	30.3	35.7	5.4	3.6	5.0	39.3
	Y	30.4	35.2	5.2	3.9	5.0	39.2

<sup>1</sup>Sample suffix of L, K, M, N and P relate to low-level concentration samples and will not have any preservation beyond freezing between -7C and -20C.

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

<sup>2</sup>Empty weight is to include all labels, stickers, bags, and anything else that will be associated with the bottle when it is weighed with the sample.

<sup>3</sup>Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

<sup>4</sup>Sample weight is the vial with sample minus the vial empty

## SAMPLE RECORD SHEET

Sample Number	Sample Suffix <sup>1</sup>	Empty Weight <sup>2</sup> (g)	Weight with Sample <sup>3</sup> (g)	Weight of Sample <sup>4</sup> (g)	Methanol Added (g)	Methanol Added (mL)	Weight of Methanol and Sample
↓	K	31.0	36.3	5.3	---	---	---
	L	32.0	37.0	5.0	---	---	---
	M	31.6	36.3	4.7	---	---	---
	N	31.2	36.0	4.8	---	---	---
	P	30.8	36.0	5.2	---	---	---
* B2TFF7		30.7	30.8			5.0	34.6
↓	W	30.8	35.6	4.8		5.0	39.4
	X	30.5	36.3	5.8		5.0	40.2
	Y	30.2	35.1	4.9		5.0	39.1

<sup>1</sup>Sample suffix of L, K, M, N and P relate to low-level concentration samples and will not have any preservation beyond freezing between -7C and -20C.

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

<sup>2</sup>Empty weight is to include all labels, stickers, bags, and anything else that will be associated with the bottle when it is weighed with the sample.

<sup>3</sup>Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

<sup>4</sup>Sample weight is the vial with sample minus the vial empty

Interval #5

7/14/00

49112-1000

S-6

CB174

Sample 0915  
Time

### SAMPLE RECORD SHEET

Sample Number	Sample Suffix <sup>1</sup>	Empty Weight <sup>2</sup> (g)	Weight with Sample <sup>3</sup> (g)	Weight of Sample <sup>4</sup> (g)	Methanol Added (g)	Methanol Added (mL)	Weight of Methanol and Sample
BITF07	K	31.7	36.5	4.8	---	---	---
↓	L	32.4	37.4	5.0	---	---	---
↓	M	31.7	36.6	4.9	---	---	---
↓	N	31.1	36.3	5.2	---	---	---
↓	P	32.2	37.4	5.2	---	---	---
BITF08		30.9	30.9	0.0	3.9	5.0	34.8
BITF07	W	30.8	35.9	5.1	4.0	5.0	39.9
↓	X	30.7	35.7	5.0	4.0	5.0	39.7
↓	Y	30.7	35.5	4.8	4.0	5.0	39.5

<sup>1</sup>Sample suffix of L, K, M, N and P relate to low-level concentration samples and will not have any preservation beyond freezing between -7C and -20C.

Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

<sup>2</sup>Empty weight is to include all labels, stickers, bags, and anything else that will be associated with the bottle when it is weighed with the sample.

<sup>3</sup>Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

<sup>4</sup>Sample weight is the vial with sample minus the vial empty

C-4174

### SAMPLE RECORD SHEET

Sample Number	Sample Suffix <sup>1</sup>	Empty Weight <sup>2</sup> (g)	Weight with Sample <sup>3</sup> (g)	Weight of Sample <sup>4</sup> (g)	Methanol Added (g)	Methanol Added (mL)	Weight of Methanol and Sample
B1TFE9	K	31.5	37.0	5.5	---	---	---
	L	32.3	37.2	4.9	---	---	---
	M	31.3	36.7	5.4	---	---	---
	N	31.5	36.8	5.3	---	---	---
	P	32.4	37.3	4.9	---	---	---

* B1TFH0		30.5	30.5	∅		5.0	34.5
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B1TFE9	W	30.4	35.7	5.3		5.0	<del>40.7</del>
	X	31.0	35.8	4.8		5.0	<del>40.8</del>
	Y	30.5	35.7	5.2		5.0	<del>40.7</del>

39.4  
39.7  
39.5

AGR  
4-23-08

<sup>1</sup> Sample suffix of L, K, M, N and P relate to low-level concentration samples and will not have any preservation beyond freezing between -7C and -20C.  
<sup>2</sup> Empty weight is to include all labels, stickers, bags, and anything else that will be associated with the bottle when it is weighed with the sample.  
<sup>3</sup> Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.  
<sup>4</sup> Sample weight is the vial with sample minus the vial empty