WSCF Laboratory

PO Box 650 S3-30
Richland, WA 99352

RECEIVED SEPTEMBER 14, 2010

0093356

September 13, 2010

Michael Neely
CH2M-HILL PRC
PO Box 1600
Richland, WA 99352

Dear Michael Neely,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF102057

Reference: (1) SOW, Mod 2, #36587, Release 3
(2) HNF-SD-CD-QAPP-017, current version, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following information for sample delivery group WSCF102057

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

Very truly yours,

Electronically signed by Susan Kon
For Lab Manager
WSCF Analytical Lab
(509) 373-7495

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Attachments 4
CC: w/Attachments

File/LB

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF102057
Data Deliverable Date 08/27/10

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F10-258	B27200	102057001	SOIL	08/11/10	08/12/10
F10-258	B27202	102057002	SOIL	08/11/10	08/12/10
F10-258	B27203	102057003	SOIL	08/11/10	08/12/10
F10-258	B27204	102057004	SOIL	08/11/10	08/12/10
F10-258	B27205	102057005	SOIL	08/11/10	08/12/10
F10-258	B27206	102057006	SOIL	08/11/10	08/12/10
F10-258	B27207	102057007	SOIL	08/11/10	08/12/10
F10-258	B27208	102057008	SOIL	08/11/10	08/12/10

ATTACHMENT 2

NARRATIVE

Consisting of 6 pages
Including cover page

Attachment 2
Narrative
WSCF102057

Introduction

Eight (8) S&GRP samples were received at the WSCF Laboratory on August 12th, 2010. The sample was analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4. Also is attached an Issue Resolution Form (IRF) pertaining to blank contamination of Aroclor-1248 in a sample batch.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

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

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

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. Analytical Note(s):

- Batch QC 152434 analyzed on sample# B261D7 (102048001)

- Manganese – Matrix Spike and or Matrix Spike Duplicate recoveries exceeded established laboratory limits. Affected sample results in this batch were "N" flagged.
- All other QC controls are within the established limits.

Hexavalent Chromium – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Batch QC 152000 analyzed on sample# B27200 (102057001)
  - All QC controls are within the established limits.

Organic Comments

PCB – 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. Analytical Note(s):

- Batch QC 151799 analyzed on sample# B27200 (102057001)
  - An Issue Resolution Form (CHPRC Tracking Number 10-209) pertaining to blank contamination of Aroclor-1248 was issued for the following samples: B27200 9102057001), B27202 (102057002), B27204 (102057004), B27206 (102057006), B27207 (102057007) and B27208 (102057008)
  - Aroclor-1248 - was detected in the Blank and was evaluated. No sample results in this batch were affected. "B" Flags not required
  - The surrogate, tetrachloro-m-xylene, did not meet acceptable percent recovery limits for the following samples: B27204 (102057004) and B27206 (102057006). Surrogate percent recovery failures were "X" flagged on the Quality Control report.
  - - All other QC controls are within the established limits.
- Batch QC 153534 analyzed on sample# B271Y9 (102081007)
  - All QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Technetium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Attachment 2
Narrative
WSCF102057

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

- Technetium-99:
  - Batch QC 151969 analyzed on sample# B27200 (102057001)
    - All QC controls are within the established limits.
- Gamma Energy Analysis:
  - Batch QC 151837 analyzed on sample# B27200 (102057001)
    - Cobalt-60, europium-12, europium-154 and europium-155 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other QC controls are within the established limits.
- Strontium-89/90:
  - Batch QC152138analyzed on sample# B27200 (102057001)
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other QC controls are within the established limits.
- Americium-241:
  - Batch QC 151811 analyzed on sample# B27200 (102057001)
    - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other QC controls are within the established limits.
- Isotopic Plutonium analysis:
  - Batch QC 151811 analyzed on sample# B27200 (102057001)

Attachment 2
Narrative
WSCF102057

- Plutonium-238 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
- All other QC controls are within the established limits.

- Isotopic Uranium analysis:
  - Batch QC 151811 analyzed on sample# B27200 (102057001)
    - Uranium-235 - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
    - All other QC controls are within the established limits.

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

ISSUE RESOLUTION FORM

CHPRC TRACKING NUMBER: 10-209

Date: 08-25-10 SAF No. F10-258

SDG: 102057 and 102081 TEST: PCBs (8082) **DUE DATE: 8/27/10**

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Attachment 2
Narrative
WSCF102057

LOGIN No.: 102057001, 102057002, 102057004, 102057006, 102057007 and 102057008
102081001, 102081002, 102081003, 102081005, 102081006, 102081008, 102081009 and 102081010

Sample No (s): B27200, B27202, B27204, B27206, B27207 and B27208

Submitted By: Marisol Avila
Phone No.: 373-1613
Fax. No.:

Submitted To: S. Champoux
Phone No.: 373-5290
Fax No.:

ISSUE

The samples were analyzed on 8/17/10 for PCBs by 8082. Upon review of the data, it was found that there was contamination from Aroclor 1248 in the Blank. It was determined to have come from carryover in the ASES station. However, none of these samples contained any PCBs above the detection limits. The LCS was within limits and the MS/MSD spike recoveries were also acceptable.

PROPOSED RESOLUTION

Accept results and add a "B" flag to all samples indicating blank contamination for Aroclor 1248.

CHPRC/BHI/WMH/PNNL COMMENTS

Accept proposed resolution

Sara Champoux 8/25/2010
Signature and Date

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ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 74 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Michael Neely

Contract #	MOA-FH-CHPRC-2008
Group #	WSCF102057
Report Date	September 13, 2010

Analytical: Electronically signed by Susan Kon

Client Services: Electronically signed by Heather Medley

Solid samples results that have a 'Percent Solid' test are reported on a "dry weight basis", except results of TCLP, Percent Solid, and Total Activity. If no `Percent Solid' test is reported then the results are reported on an "as received" basis.

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

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF102057

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
152000	152001	1	BLANK	35929	BLANK		Hexavalent chromium
152000	152001	3	LCS	35930	LCS		Hexavalent chromium
152000	152001	4	DUP	35931	B27200(102057001DUP)	102057001	Hexavalent chromium
152000	152001	5	MS	35932	B27200(102057001MS)	102057001	Hexavalent chromium
152000	152001	6	MSD	35933	B27200(102057001MSD)	102057001	Hexavalent chromium
152000	152001	7	IMS	35934	B27200(102057001IMS)	102057001	Hexavalent chromium
152000	152001	8	PSTSPK	35935	PSTSPK		Hexavalent chromium
152000	152001	9	SAMPLE	102057001	B27200		Hexavalent chromium
152000	152001	10	SAMPLE	102057002	B27202		Hexavalent chromium
152000	152001	11	SAMPLE	102057003	B27203		Hexavalent chromium
152000	152001	12	SAMPLE	102057004	B27204		Hexavalent chromium
152000	152001	13	SAMPLE	102057005	B27205		Hexavalent chromium
152000	152001	14	SAMPLE	102057006	B27206		Hexavalent chromium
152000	152001	15	SAMPLE	102057007	B27207		Hexavalent chromium
152000	152001	16	SAMPLE	102057008	B27208		Hexavalent chromium
152434	152435	4	BLANK	36138	BLANK		ICP-2008 MS All possible metal
152434	152435	5	LCS	36139	LCS		ICP-2008 MS All possible metal
152434	152435	7	MS	36140	B261D7(102048001MS)	102048001	ICP-2008 MS All possible metal
152434	152435	8	MSD	36141	B261D7(102048001MSD)	102048001	ICP-2008 MS All possible metal
152434	152435	9	SAMPLE	102057001	B27200		ICP-2008 MS All possible metal
152434	152435	10	SAMPLE	102057002	B27202		ICP-2008 MS All possible metal
152434	152435	11	SAMPLE	102057003	B27203		ICP-2008 MS All possible metal
152434	152435	12	SAMPLE	102057004	B27204		ICP-2008 MS All possible metal

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF102057

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
152434	152435	13	SAMPLE	102057005	B27205		ICP-2008 MS All possible metal
152434	152435	16	SAMPLE	102057006	B27206		ICP-2008 MS All possible metal
152434	152435	17	SAMPLE	102057007	B27207		ICP-2008 MS All possible metal
152434	152435	18	SAMPLE	102057008	B27208		ICP-2008 MS All possible metal

Batch QC List

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
151799	152032	1	BLANK	35494	BLANK		PCBs by EPA SW-846 Method 8082
151799	152032	2	LCS	35495	LCS		PCBs by EPA SW-846 Method 8082
151799	152032	3	MS	35496	B27200(102057001MS)	102057001	PCBs by EPA SW-846 Method 8082
151799	152032	4	MSD	35497	B27200(102057001MSD)	102057001	PCBs by EPA SW-846 Method 8082
151799	152032	5	SAMPLE	102057001	B27200		PCBs by EPA SW-846 Method 8082
151799	152032	6	SAMPLE	102057002	B27202		PCBs by EPA SW-846 Method 8082
151799	152032	7	SAMPLE	102057004	B27204		PCBs by EPA SW-846 Method 8082
151799	152032	8	SAMPLE	102057006	B27206		PCBs by EPA SW-846 Method 8082
151799	152032	9	SAMPLE	102057007	B27207		PCBs by EPA SW-846 Method 8082
151799	152032	10	SAMPLE	102057008	B27208		PCBs by EPA SW-846 Method 8082
153534	153535	1	BLANK	36491	BLANK		PCBs by EPA SW-846 Method 8082
153534	153535	2	LCS	36492	LCS		PCBs by EPA SW-846 Method 8082
153534	153535	3	MS	36493	B271Y9(102081007MS)	102081007	PCBs by EPA SW-846 Method 8082
153534	153535	4	MSD	36494	B271Y9(102081007MSD)	102081007	PCBs by EPA SW-846 Method 8082
153534	153535	5	SAMPLE	102057003	B27203		PCBs by EPA SW-846 Method 8082
153534	153535	6	SAMPLE	102057005	B27205		PCBs by EPA SW-846 Method 8082

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
151811	152838	1	DUP	35526	B27200(102057001DUP)	102057001	Uranium (AEA)
151811	152838	2	SAMPLE	102057001	B27200		Uranium (AEA)
151811	152838	3	SAMPLE	102057002	B27202		Uranium (AEA)
151811	152838	4	SAMPLE	102057003	B27203		Uranium (AEA)
151811	152838	5	SAMPLE	102057004	B27204		Uranium (AEA)
151811	152838	6	SAMPLE	102057005	B27205		Uranium (AEA)
151811	152838	7	SAMPLE	102057006	B27206		Uranium (AEA)
151811	152838	8	SAMPLE	102057007	B27207		Uranium (AEA)
151811	152838	9	SAMPLE	102057008	B27208		Uranium (AEA)
151811	152838	10	BLANK	35524	BLANK		Uranium (AEA)
151811	152838	11	LCS	35525	LCS		Uranium (AEA)
151811	153433	1	DUP	35526	B27200(102057001DUP)	102057001	Plutonium (AEA)
151811	153433	2	SAMPLE	102057001	B27200		Plutonium (AEA)
151811	153433	3	SAMPLE	102057002	B27202		Plutonium (AEA)
151811	153433	4	SAMPLE	102057003	B27203		Plutonium (AEA)
151811	153433	5	SAMPLE	102057004	B27204		Plutonium (AEA)
151811	153433	6	SAMPLE	102057005	B27205		Plutonium (AEA)
151811	153433	7	SAMPLE	102057006	B27206		Plutonium (AEA)
151811	153433	8	SAMPLE	102057007	B27207		Plutonium (AEA)
151811	153433	9	SAMPLE	102057008	B27208		Plutonium (AEA)
151811	153433	10	BLANK	35524	BLANK		Plutonium (AEA)
151811	153433	11	LCS	35525	LCS		Plutonium (AEA)
151811	153434	1	BLANK	35524	BLANK		Americium/Curium (AEA)

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
151811	153434	2	LCS	35525	LCS		Americium/Curium (AEA)
151811	153434	3	DUP	35526	B27200(102057001DUP)	102057001	Americium/Curium (AEA)
151811	153434	4	SAMPLE	102057001	B27200		Americium/Curium (AEA)
151811	153434	5	SAMPLE	102057002	B27202		Americium/Curium (AEA)
151811	153434	6	SAMPLE	102057003	B27203		Americium/Curium (AEA)
151811	153434	7	SAMPLE	102057004	B27204		Americium/Curium (AEA)
151811	153434	8	SAMPLE	102057005	B27205		Americium/Curium (AEA)
151811	153434	9	SAMPLE	102057006	B27206		Americium/Curium (AEA)
151811	153434	10	SAMPLE	102057007	B27207		Americium/Curium (AEA)
151811	153434	11	SAMPLE	102057008	B27208		Americium/Curium (AEA)
151837	151903	1	IBLANK	35579	IBLANK		Gamma Energy Analysis-general
151837	151903	2	LCS	35580	LCS		Gamma Energy Analysis-general
151837	151903	3	DUP	35581	B27200(102057001DUP)	102057001	Gamma Energy Analysis-general
151837	151903	4	SAMPLE	102057001	B27200		Gamma Energy Analysis-general
151837	151903	5	SAMPLE	102057002	B27202		Gamma Energy Analysis-general
151837	151903	6	SAMPLE	102057003	B27203		Gamma Energy Analysis-general
151837	151903	7	SAMPLE	102057004	B27204		Gamma Energy Analysis-general
151837	151903	8	SAMPLE	102057005	B27205		Gamma Energy Analysis-general
151837	151903	9	SAMPLE	102057006	B27206		Gamma Energy Analysis-general
151837	151903	10	SAMPLE	102057007	B27207		Gamma Energy Analysis-general
151837	151903	11	SAMPLE	102057008	B27208		Gamma Energy Analysis-general
151969	151998	1	BLANK	35921	BLANK		TC99 by Liquid Scintillation
151969	151998	2	LCS	35922	LCS		TC99 by Liquid Scintillation

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
151969	151998	3	SAMPLE	102057001	B27200		TC99 by Liquid Scintillation
151969	151998	4	DUP	35923	B27200(102057001DUP)	102057001	TC99 by Liquid Scintillation
151969	151998	5	MS	35924	B27200(102057001MS)	102057001	TC99 by Liquid Scintillation
151969	151998	6	SAMPLE	102057002	B27202		TC99 by Liquid Scintillation
151969	151998	7	SAMPLE	102057003	B27203		TC99 by Liquid Scintillation
151969	151998	8	SAMPLE	102057004	B27204		TC99 by Liquid Scintillation
151969	151998	9	SAMPLE	102057005	B27205		TC99 by Liquid Scintillation
151969	151998	10	SAMPLE	102057006	B27206		TC99 by Liquid Scintillation
151969	151998	11	SAMPLE	102057007	B27207		TC99 by Liquid Scintillation
151969	151998	12	SAMPLE	102057008	B27208		TC99 by Liquid Scintillation
152138	153437	1	BLANK	36099	BLANK		Strontium 89/90 (GPC/GEA)
152138	153437	2	LCS	36100	LCS		Strontium 89/90 (GPC/GEA)
152138	153437	3	DUP	36101	B27200(102057001DUP)	102057001	Strontium 89/90 (GPC/GEA)
152138	153437	4	SAMPLE	102057001	B27200		Strontium 89/90 (GPC/GEA)
152138	153437	5	SAMPLE	102057002	B27202		Strontium 89/90 (GPC/GEA)
152138	153437	6	SAMPLE	102057003	B27203		Strontium 89/90 (GPC/GEA)
152138	153437	7	SAMPLE	102057004	B27204		Strontium 89/90 (GPC/GEA)
152138	153437	8	SAMPLE	102057005	B27205		Strontium 89/90 (GPC/GEA)
152138	153437	9	SAMPLE	102057006	B27206		Strontium 89/90 (GPC/GEA)
152138	153437	10	SAMPLE	102057007	B27207		Strontium 89/90 (GPC/GEA)
152138	153437	11	SAMPLE	102057008	B27208		Strontium 89/90 (GPC/GEA)

Batch QC List

Attention Michael Neely
Department Wet Chemistry

Group # WSCF102057

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
152234	152234	1	SAMPLE	102057001	B27200		Dry Weight/Percent Moisture
152234	152234	2	SAMPLE	102057002	B27202		Dry Weight/Percent Moisture
152234	152234	3	SAMPLE	102057003	B27203		Dry Weight/Percent Moisture
152234	152234	4	SAMPLE	102057004	B27204		Dry Weight/Percent Moisture
152234	152234	5	SAMPLE	102057005	B27205		Dry Weight/Percent Moisture
152234	152234	6	SAMPLE	102057006	B27206		Dry Weight/Percent Moisture
152234	152234	7	SAMPLE	102057007	B27207		Dry Weight/Percent Moisture
152234	152234	8	SAMPLE	102057008	B27208		Dry Weight/Percent Moisture

Method Reference

Attention Michael Neely
Department Inorganic

Group # WSCF102057

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, industry methods or HEIS 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 WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-265-403	Hexavalent Chromium Analysis		
	EPA SW-846	7196A	Hexavalent Chromium
	HEIS	7196_CR6	Hexavalent Chromium
LA-505-412	Determination of Trace Elements in Waters & Wastes by ICP-Mass Spectrometry		
	EPA-600/R-94-111	200.8	Determination of Trace Elements in Waters and Waste by Inductively Coupled Plasma
	HEIS	200.8_METALS_ICPMS	Determination of Trace Elements in Waters and Waste by Inductively Coupled Plasma, Mass Spec.

Note: A complete list of WSCF analytical procedures and reference regulatory or industry methods is available online at http://www7.rl.gov/rapidweb/AS-DOL/index.cfm

Method Reference

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

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, industry methods or HEIS 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 WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-523-427	Polychlorinated Biphenyls (PCB'S) by Gas Chromatography		
	EPA SW-846	3510C	Separatory Funnel Liquid-Liquid Extraction
	EPA SW-846	3545	Pressurized Fluid Extraction (PFE)
	EPA SW-846	3665A	Sulfuric Acid/Permanganate Cleanup
	EPA SW-846	8000B	Determinative Chromatographic Separations
	EPA SW-846	8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography
	HEIS	8082_PCB_GC	Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Note: A complete list of WSCF analytical procedures and reference regulatory or industry methods is available online at http://www7.rl.gov/rapidweb/AS-DOL/index.cfm

Method Reference

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

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, industry methods or HEIS 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 WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-220-406	Strontium-89 and 90 in Aqueous Samples by SR-SPEC Separation		
	HEIS	SRTOT_SEP_PRECIP_GPC	Strontium 89/90, by Sr-Spec Sep.
LA-508-471	Thorium, Neptunium, Plutonium, Americium, and Uranium In Soil and Water Using Eichrom Column Separation (Prep)		
	HEIS	PUISO_IE_PRECIP_AEA	Isotopic Plutonium, Alpha Spec
LA-508-471	Determination Of Uranium, Plutonium, And Americium		
	HEIS	AMCMISO_IE_PREC_AEA	Americium/Curium Iso, Alpha Spec
LA-508-481	Gamma Energy Analysis using the Canberra Genie Ssystem		
	HEIS	GAMMA_GS	Gamma Energy Analysis
LA-508-471	Determination Of Uranium, Plutonium, And Americium		
	HEIS	UISO_IE_PRECIP_AEA	Uranium Iso, Alpha Spec
LA-508-421	Operation of the Tri-Carb Model 2500TR Liquid Scintillation Analyzer		
	HEIS	ALPHA_LSC	A/B Liquid Scintillation
	HEIS	BETA_LSC	A/B Liquid Scintillation
	HEIS	TC99_3MDSK_LSC	TC99 by Liquid Scintillation
	HEIS	TRITIUM_EIE_LSC	Tritium, by Eichrome ion exchange, LSC

Note: A complete list of WSCF analytical procedures and reference regulatory or industry methods is available online at http://www7.rl.gov/rapidweb/AS-DOL/index.cfm

Method Reference

Attention Michael Neely
Department Wet Chemistry

Group # WSCF102057

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, industry methods or HEIS 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 WSCF procedure may reference an older version of the method. Also, a reference to a regulatory or industry method here does not necessarily indicate a verbatim implementation of that method.

LA-519-412	Total Residual Percent Solids Dried at 103 - 105 Degrees C		
	EPA-600/4-79-020	160.3	Total Residue
	Standard Methods	2540B	Total Solids Dried at 103-105 C
	HEIS	%SOLIDS	Dry Weight, Percent Solids

Note: A complete list of WSCF analytical procedures and reference regulatory or industry methods is available online at http://www7.rl.gov/rapidweb/AS-DOL/index.cfm

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

Sample # 102057001
SAF# F10-258
Sample ID B27200

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/15/10**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/15/10
ICPMS Prep										**08/19/10**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	359		mg/kg	1	0.10	1.0	08/19/10
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/19/10
Barium	7440-39-3	LA-505-412		77.2		mg/kg	1	0.20	2.0	08/19/10
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/19/10
Chromium	7440-47-3	LA-505-412		6.50		mg/kg	1	0.51	5.1	08/19/10
Zinc	7440-66-6	LA-505-412		40.8		mg/kg	1	0.81	5.1	08/19/10
Lead	7439-92-1	LA-505-412		6.06		mg/kg	1	0.10	1.0	08/19/10
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.20	08/19/10
Arsenic	7440-38-2	LA-505-412	B	2.86		mg/kg	1	0.40	4.0	08/19/10
Thorium	7440-29-1	LA-505-412		2.71		mg/kg	1	0.10	0.51	08/19/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

Sample # 102057002
SAF# F10-258
Sample ID B27202

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/15/10**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/15/10
ICPMS Prep										**08/19/10**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	361		mg/kg	1	0.096	0.96	08/19/10
Antimony	7440-36-0	LA-505-412	U	<0.29		mg/kg	1	0.29	2.9	08/19/10
Barium	7440-39-3	LA-505-412		79.1		mg/kg	1	0.19	1.9	08/19/10
Cadmium	7440-43-9	LA-505-412	U	<0.096		mg/kg	1	0.096	0.96	08/19/10
Chromium	7440-47-3	LA-505-412		7.20		mg/kg	1	0.48	4.8	08/19/10
Zinc	7440-66-6	LA-505-412		33.9		mg/kg	1	0.77	4.8	08/19/10
Lead	7439-92-1	LA-505-412		5.44		mg/kg	1	0.096	0.96	08/19/10
Mercury	7439-97-6	LA-505-412	U	<0.048		mg/kg	1	0.048	0.19	08/19/10
Arsenic	7440-38-2	LA-505-412	B	2.36		mg/kg	1	0.39	3.9	08/19/10
Thorium	7440-29-1	LA-505-412		2.69		mg/kg	1	0.096	0.48	08/19/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary dilution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

Sample # 102057003
SAF# F10-258
Sample ID B27203

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/15/10**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.52	08/15/10
ICPMS Prep										**08/19/10**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	285		mg/kg	1	0.10	1.0	08/19/10
Antimony	7440-36-0	LA-505-412	U	<0.31		mg/kg	1	0.31	3.1	08/19/10
Barium	7440-39-3	LA-505-412		56.8		mg/kg	1	0.21	2.1	08/19/10
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/19/10
Chromium	7440-47-3	LA-505-412		6.12		mg/kg	1	0.51	5.1	08/19/10
Zinc	7440-66-6	LA-505-412		31.8		mg/kg	1	0.82	5.1	08/19/10
Lead	7439-92-1	LA-505-412		4.63		mg/kg	1	0.10	1.0	08/19/10
Mercury	7439-97-6	LA-505-412	U	<0.051		mg/kg	1	0.051	0.21	08/19/10
Arsenic	7440-38-2	LA-505-412	B	2.84		mg/kg	1	0.41	4.1	08/19/10
Thorium	7440-29-1	LA-505-412		2.40		mg/kg	1	0.10	0.51	08/19/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

Sample # 102057004
SAF# F10-258
Sample ID B27204

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/15/10**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/15/10
ICPMS Prep										**08/19/10**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	367		mg/kg	1	0.099	0.99	08/19/10
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/19/10
Barium	7440-39-3	LA-505-412		81.1		mg/kg	1	0.20	2.0	08/19/10
Cadmium	7440-43-9	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/19/10
Chromium	7440-47-3	LA-505-412		5.58		mg/kg	1	0.50	5.0	08/19/10
Zinc	7440-66-6	LA-505-412		36.7		mg/kg	1	0.79	5.0	08/19/10
Lead	7439-92-1	LA-505-412		6.14		mg/kg	1	0.099	0.99	08/19/10
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/19/10
Arsenic	7440-38-2	LA-505-412	B	2.85		mg/kg	1	0.40	4.0	08/19/10
Thorium	7440-29-1	LA-505-412		2.48		mg/kg	1	0.099	0.50	08/19/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

Sample # 102057005
SAF# F10-258
Sample ID B27205

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/15/10**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.52	08/15/10
ICPMS Prep										**08/19/10**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	400		mg/kg	1	0.10	1.0	08/19/10
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/19/10
Barium	7440-39-3	LA-505-412		80.6		mg/kg	1	0.20	2.0	08/19/10
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/19/10
Chromium	7440-47-3	LA-505-412		5.92		mg/kg	1	0.50	5.0	08/19/10
Zinc	7440-66-6	LA-505-412		36.3		mg/kg	1	0.81	5.0	08/19/10
Lead	7439-92-1	LA-505-412		4.84		mg/kg	1	0.10	1.0	08/19/10
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/19/10
Arsenic	7440-38-2	LA-505-412	B	2.43		mg/kg	1	0.40	4.0	08/19/10
Thorium	7440-29-1	LA-505-412		3.17		mg/kg	1	0.10	0.50	08/19/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

Sample # 102057006
SAF# F10-258
Sample ID B27206

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/15/10**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/15/10
ICPMS Prep										**08/19/10**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	302		mg/kg	1	0.10	1.0	08/19/10
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/19/10
Barium	7440-39-3	LA-505-412		71.4		mg/kg	1	0.20	2.0	08/19/10
Cadmium	7440-43-9	LA-505-412	U	<0.10		mg/kg	1	0.10	1.0	08/19/10
Chromium	7440-47-3	LA-505-412		5.96		mg/kg	1	0.50	5.0	08/19/10
Zinc	7440-66-6	LA-505-412		29.2		mg/kg	1	0.80	5.0	08/19/10
Lead	7439-92-1	LA-505-412		4.70		mg/kg	1	0.10	1.0	08/19/10
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/19/10
Arsenic	7440-38-2	LA-505-412	B	2.46		mg/kg	1	0.40	4.0	08/19/10
Thorium	7440-29-1	LA-505-412		1.93		mg/kg	1	0.10	0.50	08/19/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary dilution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

Sample # 102057007
SAF# F10-258
Sample ID B27207

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/15/10**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/15/10
ICPMS Prep										**08/19/10**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	360		mg/kg	1	0.099	0.99	08/19/10
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/19/10
Barium	7440-39-3	LA-505-412		81.5		mg/kg	1	0.20	2.0	08/19/10
Cadmium	7440-43-9	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/19/10
Chromium	7440-47-3	LA-505-412		7.88		mg/kg	1	0.50	5.0	08/19/10
Zinc	7440-66-6	LA-505-412		30.2		mg/kg	1	0.79	5.0	08/19/10
Lead	7439-92-1	LA-505-412		5.52		mg/kg	1	0.099	0.99	08/19/10
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/19/10
Arsenic	7440-38-2	LA-505-412	B	2.27		mg/kg	1	0.40	4.0	08/19/10
Thorium	7440-29-1	LA-505-412		2.21		mg/kg	1	0.099	0.50	08/19/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary dilution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

Sample # 102057008
SAF# F10-258
Sample ID B27208

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Cr(VI) Prep										**08/15/10**
Cr(VI)										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.10		ug/g	1	0.10	0.51	08/15/10
ICPMS Prep										**08/19/10**
ICP-MS										
Manganese	7439-96-5	LA-505-412	N	348		mg/kg	1	0.099	0.99	08/19/10
Antimony	7440-36-0	LA-505-412	U	<0.30		mg/kg	1	0.30	3.0	08/19/10
Barium	7440-39-3	LA-505-412		82.3		mg/kg	1	0.20	2.0	08/19/10
Cadmium	7440-43-9	LA-505-412	U	<0.099		mg/kg	1	0.099	0.99	08/19/10
Chromium	7440-47-3	LA-505-412		8.15		mg/kg	1	0.50	5.0	08/19/10
Zinc	7440-66-6	LA-505-412		30.9		mg/kg	1	0.80	5.0	08/19/10
Lead	7439-92-1	LA-505-412		5.51		mg/kg	1	0.099	0.99	08/19/10
Mercury	7439-97-6	LA-505-412	U	<0.050		mg/kg	1	0.050	0.20	08/19/10
Arsenic	7440-38-2	LA-505-412	B	2.35		mg/kg	1	0.40	4.0	08/19/10
Thorium	7440-29-1	LA-505-412		2.04		mg/kg	1	0.099	0.50	08/19/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

Sample # 102057001
SAF# F10-258
Sample ID B27200

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
PCB Prep Solids										**08/15/10**
PCBs										
Aroclor-1016	12674-11-2	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1221	11104-28-2	LA-523-427	U	<8		ug/kg	1	8	8	08/17/10
Aroclor-1232	11141-16-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1242	53469-21-9	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1248	12672-29-6	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1254	11097-69-1	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1260	11096-82-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1262	37324-23-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1268	11100-14-4	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

Sample # 102057002
SAF# F10-258
Sample ID B27202

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
PCB Prep Solids										**08/15/10**
PCBs										
Aroclor-1016	12674-11-2	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1221	11104-28-2	LA-523-427	U	<8		ug/kg	1	8	8	08/17/10
Aroclor-1232	11141-16-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1242	53469-21-9	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1248	12672-29-6	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1254	11097-69-1	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1260	11096-82-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1262	37324-23-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1268	11100-14-4	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

Sample # 102057003
SAF# F10-258
Sample ID B27203

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
PCB Prep Solids										**08/19/10**
PCBs										
Aroclor-1016	12674-11-2	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1221	11104-28-2	LA-523-427	U	<8		ug/kg	1	8	8	08/23/10
Aroclor-1232	11141-16-5	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1242	53469-21-9	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1248	12672-29-6	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1254	11097-69-1	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1260	11096-82-5	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1262	37324-23-5	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1268	11100-14-4	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

Sample # 102057004
SAF# F10-258
Sample ID B27204

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
PCB Prep Solids										**08/15/10**
PCBs										
Aroclor-1016	12674-11-2	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1221	11104-28-2	LA-523-427	U	<8		ug/kg	1	8	8	08/17/10
Aroclor-1232	11141-16-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1242	53469-21-9	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1248	12672-29-6	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1254	11097-69-1	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1260	11096-82-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1262	37324-23-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1268	11100-14-4	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

Sample # 102057005
SAF# F10-258
Sample ID B27205

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
PCB Prep Solids										**08/19/10**
PCBs										
Aroclor-1016	12674-11-2	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1221	11104-28-2	LA-523-427	U	<8		ug/kg	1	8	8	08/23/10
Aroclor-1232	11141-16-5	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1242	53469-21-9	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1248	12672-29-6	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1254	11097-69-1	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1260	11096-82-5	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1262	37324-23-5	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10
Aroclor-1268	11100-14-4	LA-523-427	U	<4		ug/kg	1	4	4	08/23/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

Sample # 102057006
SAF# F10-258
Sample ID B27206

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
PCB Prep Solids										**08/15/10**
PCBs										
Aroclor-1016	12674-11-2	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1221	11104-28-2	LA-523-427	U	<8		ug/kg	1	8	8	08/17/10
Aroclor-1232	11141-16-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1242	53469-21-9	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1248	12672-29-6	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1254	11097-69-1	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1260	11096-82-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1262	37324-23-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1268	11100-14-4	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

Sample # 102057007
SAF# F10-258
Sample ID B27207

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
PCB Prep Solids										**08/15/10**
PCBs										
Aroclor-1016	12674-11-2	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1221	11104-28-2	LA-523-427	U	<8		ug/kg	1	8	8	08/17/10
Aroclor-1232	11141-16-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1242	53469-21-9	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1248	12672-29-6	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1254	11097-69-1	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1260	11096-82-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1262	37324-23-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1268	11100-14-4	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

Sample # 102057008
SAF# F10-258
Sample ID B27208

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
PCB Prep Solids										**08/15/10**
PCBs										
Aroclor-1016	12674-11-2	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1221	11104-28-2	LA-523-427	U	<8		ug/kg	1	8	8	08/17/10
Aroclor-1232	11141-16-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1242	53469-21-9	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1248	12672-29-6	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1254	11097-69-1	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1260	11096-82-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1262	37324-23-5	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10
Aroclor-1268	11100-14-4	LA-523-427	U	<4		ug/kg	1	4	4	08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057001
SAF# F10-258
Sample ID B27200

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/16/10**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.61	.088	pCi/g	1	0.027		08/18/10
Cobalt-60	10198-40-0	LA-508-481	U	-0.010	.015	pCi/g	1	0.026		08/18/10
Europium-152	14683-23-9	LA-508-481	U	0.011	.051	pCi/g	1	0.081		08/18/10
Europium-154	15585-10-1	LA-508-481	U	-0.025	.046	pCi/g	1	0.078		08/18/10
Europium-155	14391-16-3	LA-508-481	U	-1.3E-3	.062	pCi/g	1	0.11		08/18/10
SR-89/90										**08/18/10**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406		0.71	.65	pCi/g	1	0.47		08/27/10
Tc-99										**08/17/10**
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	-0.10	.15	pCi/g	1	0.20		08/19/10
Th/Pu/Am/U Teva										**08/19/10**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.033	.037	pCi/g	1	0.057		08/24/10
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.11	.1	pCi/g	1	0.16		08/24/10
Plutonium-239/240	PU-239/240	LA-508-471	U	0.019	.03	pCi/g	1	0.051		08/24/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057001
SAF# F10-258
Sample ID B27200

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.19	.059	pCi/g	1	4.5E-3		08/20/10
Uranium-235	15117-96-1	LA-508-471		0.020	.014	pCi/g	1	0.013		08/20/10
Uranium-238	U-238	LA-508-471		0.17	.055	pCi/g	1	4.5E-3		08/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057002
SAF# F10-258
Sample ID B27202

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/16/10**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.25	.051	pCi/g	1	0.029		08/18/10
Cobalt-60	10198-40-0	LA-508-481	U	0.013	.017	pCi/g	1	0.033		08/18/10
Europium-152	14683-23-9	LA-508-481	U	-0.031	.074	pCi/g	1	0.095		08/18/10
Europium-154	15585-10-1	LA-508-481	U	0.046	.048	pCi/g	1	0.090		08/18/10
Europium-155	14391-16-3	LA-508-481	U	8.5E-3	.091	pCi/g	1	0.16		08/18/10
SR-89/90										**08/18/10**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406	U	-0.19	.62	pCi/g	1	0.45		08/27/10
Tc-99										**08/17/10**
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	-0.10	.15	pCi/g	1	0.20		08/19/10
Th/Pu/Am/U Teva										**08/19/10**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.037	.031	pCi/g	1	0.031		08/24/10
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.018	.086	pCi/g	1	0.15		08/24/10
Plutonium-239/240	PU-239/240	LA-508-471	U	4.6E-3	.018	pCi/g	1	0.042		08/24/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057002
SAF# F10-258
Sample ID B27202

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.18	.05	pCi/g	1	4.1E-3		08/20/10
Uranium-235	15117-96-1	LA-508-471	U	1.9E-3	.0037	pCi/g	1	5.1E-3		08/20/10
Uranium-238	U-238	LA-508-471		0.13	.039	pCi/g	1	0.011		08/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057003
SAF# F10-258
Sample ID B27203

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/16/10**
GEA										
Cesium-137	10045-97-3	LA-508-481		1.2	.15	pCi/g	1	0.010		08/18/10
Cobalt-60	10198-40-0	LA-508-481	U	-3.6E-3	.0052	pCi/g	1	8.9E-3		08/18/10
Europium-152	14683-23-9	LA-508-481	U	0.021	.021	pCi/g	1	0.034		08/18/10
Europium-154	15585-10-1	LA-508-481	U	-0.015	.017	pCi/g	1	0.028		08/18/10
Europium-155	14391-16-3	LA-508-481	U	-4.6E-3	.027	pCi/g	1	0.045		08/18/10
SR-89/90										**08/18/10**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406	U	-0.045	.56	pCi/g	1	0.45		08/27/10
Tc-99										**08/17/10**
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	0.0	.15	pCi/g	1	0.21		08/19/10
Th/Pu/Am/U Teva										**08/19/10**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.032	.025	pCi/g	1	0.021		08/24/10
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.017	.063	pCi/g	1	0.11		08/24/10
Plutonium-239/240	PU-239/240	LA-508-471		0.041	.028	pCi/g	1	0.031		08/24/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057003
SAF# F10-258
Sample ID B27203

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.17	.053	pCi/g	1	4.5E-3		08/20/10
Uranium-235	15117-96-1	LA-508-471		0.020	.013	pCi/g	1	0.016		08/20/10
Uranium-238	U-238	LA-508-471		0.13	.044	pCi/g	1	4.5E-3		08/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057004
SAF# F10-258
Sample ID B27204

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/16/10**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.073	.033	pCi/g	1	0.031		08/18/10
Cobalt-60	10198-40-0	LA-508-481	U	-5.2E-3	.017	pCi/g	1	0.031		08/18/10
Europium-152	14683-23-9	LA-508-481	U	0.014	.091	pCi/g	1	0.092		08/18/10
Europium-154	15585-10-1	LA-508-481	U	-0.035	.054	pCi/g	1	0.092		08/18/10
Europium-155	14391-16-3	LA-508-481	U	0.11	.077	pCi/g	1	0.12		08/18/10
SR-89/90										**08/18/10**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406	U	-0.90	.54	pCi/g	1	0.41		08/27/10
Tc-99										**08/17/10**
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	-0.10	.15	pCi/g	1	0.21		08/19/10
Th/Pu/Am/U Teva										**08/19/10**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.053	.038	pCi/g	1	0.041		08/24/10
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-7.7E-3	.058	pCi/g	1	0.11		08/24/10
Plutonium-239/240	PU-239/240	LA-508-471	U	-7.7E-3	.015	pCi/g	1	0.041		08/24/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057004
SAF# F10-258
Sample ID B27204

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.14	.041	pCi/g	1	4.2E-3		08/20/10
Uranium-235	15117-96-1	LA-508-471	U	1.9E-3	.0037	pCi/g	1	5.1E-3		08/20/10
Uranium-238	U-238	LA-508-471		0.078	.027	pCi/g	1	0.011		08/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057005
SAF# F10-258
Sample ID B27205

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/16/10**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.32	.057	pCi/g	1	0.029		08/18/10
Cobalt-60	10198-40-0	LA-508-481	U	-2.5E-3	.017	pCi/g	1	0.028		08/18/10
Europium-152	14683-23-9	LA-508-481	U	0.018	.072	pCi/g	1	0.097		08/18/10
Europium-154	15585-10-1	LA-508-481	U	-1.5E-3	.054	pCi/g	1	0.098		08/18/10
Europium-155	14391-16-3	LA-508-481	U	0.017	.085	pCi/g	1	0.15		08/18/10
SR-89/90										**08/18/10**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406	U	0.24	.63	pCi/g	1	0.50		08/27/10
Tc-99										**08/17/10**
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	-0.21	.15	pCi/g	1	0.31		08/19/10
Th/Pu/Am/U Teva										**08/19/10**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.023	.024	pCi/g	1	0.036		08/24/10
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-3.5E-3	.054	pCi/g	1	0.10		08/24/10
Plutonium-239/240	PU-239/240	LA-508-471	U	6.9E-3	.019	pCi/g	1	0.037		08/24/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057005
SAF# F10-258
Sample ID B27205

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.14	.047	pCi/g	1	0.013		08/20/10
Uranium-235	15117-96-1	LA-508-471		0.014	.011	pCi/g	1	0.014		08/20/10
Uranium-238	U-238	LA-508-471		0.16	.053	pCi/g	1	0.019		08/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057006
SAF# F10-258
Sample ID B27206

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/16/10**
GEA										
Cesium-137	10045-97-3	LA-508-481		0.056	.029	pCi/g	1	0.031		08/20/10
Cobalt-60	10198-40-0	LA-508-481	U	-9.4E-3	.019	pCi/g	1	0.027		08/20/10
Europium-152	14683-23-9	LA-508-481	U	-0.016	.061	pCi/g	1	0.087		08/20/10
Europium-154	15585-10-1	LA-508-481	U	-0.066	.051	pCi/g	1	0.082		08/20/10
Europium-155	14391-16-3	LA-508-481	U	0.072	.085	pCi/g	1	0.13		08/20/10
SR-89/90										**08/18/10**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406	U	-0.64	.53	pCi/g	1	0.40		08/27/10
Tc-99										**08/17/10**
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	-0.10	.15	pCi/g	1	0.20		08/19/10
Th/Pu/Am/U Teva										**08/19/10**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471		0.043	.032	pCi/g	1	0.030		08/24/10
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	0.042	.059	pCi/g	1	0.098		08/24/10
Plutonium-239/240	PU-239/240	LA-508-471	U	3.8E-3	.017	pCi/g	1	0.036		08/24/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057006
SAF# F10-258
Sample ID B27206

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.14	.048	pCi/g	1	5.2E-3		08/20/10
Uranium-235	15117-96-1	LA-508-471		0.017	.012	pCi/g	1	0.014		08/20/10
Uranium-238	U-238	LA-508-471		0.12	.043	pCi/g	1	0.014		08/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057007
SAF# F10-258
Sample ID B27207

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/16/10**
GEA										
Cesium-137	10045-97-3	LA-508-481		1.2	.16	pCi/g	1	0.034		08/20/10
Cobalt-60	10198-40-0	LA-508-481	U	5.8E-4	.015	pCi/g	1	0.028		08/20/10
Europium-152	14683-23-9	LA-508-481	U	-7.9E-3	.075	pCi/g	1	0.10		08/20/10
Europium-154	15585-10-1	LA-508-481	U	0.053	.052	pCi/g	1	0.095		08/20/10
Europium-155	14391-16-3	LA-508-481	U	-0.036	.093	pCi/g	1	0.16		08/20/10
SR-89/90										**08/18/10**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406	U	-0.51	.59	pCi/g	1	0.46		08/27/10
Tc-99										**08/17/10**
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	-0.10	.15	pCi/g	1	0.20		08/19/10
Th/Pu/Am/U Teva										**08/19/10**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.022	.017	pCi/g	1	0.023		08/24/10
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-0.062	.082	pCi/g	1	0.16		08/24/10
Plutonium-239/240	PU-239/240	LA-508-471	U	0.014	.022	pCi/g	1	0.035		08/24/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057007
SAF# F10-258
Sample ID B27207

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.13	.04	pCi/g	1	4.4E-3		08/20/10
Uranium-235	15117-96-1	LA-508-471	U	6.1E-3	.007	pCi/g	1	0.014		08/20/10
Uranium-238	U-238	LA-508-471		0.11	.035	pCi/g	1	0.012		08/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057008
SAF# F10-258
Sample ID B27208

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GEA Prep										**08/16/10**
GEA										
Cesium-137	10045-97-3	LA-508-481		1.1	.15	pCi/g	1	0.036		08/20/10
Cobalt-60	10198-40-0	LA-508-481	U	0.018	.02	pCi/g	1	0.038		08/20/10
Europium-152	14683-23-9	LA-508-481	U	-0.035	.087	pCi/g	1	0.11		08/20/10
Europium-154	15585-10-1	LA-508-481	U	-0.047	.061	pCi/g	1	0.10		08/20/10
Europium-155	14391-16-3	LA-508-481	U	-4.9E-3	.096	pCi/g	1	0.16		08/20/10
SR-89/90										**08/18/10**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406		0.47	.57	pCi/g	1	0.46		08/27/10
Tc-99										**08/17/10**
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	-0.20	.15	pCi/g	1	0.20		08/19/10
Th/Pu/Am/U Teva										**08/19/10**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.029	.027	pCi/g	1	0.038		08/24/10
AEA Pu-Np										
Plutonium-238	13981-16-3	LA-508-471	U	-0.025	.05	pCi/g	1	0.099		08/24/10
Plutonium-239/240	PU-239/240	LA-508-471	U	3.6E-3	.021	pCi/g	1	0.044		08/24/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Sample # 102057008
SAF# F10-258
Sample ID B27208

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Uranium Iso										
Uranium-234	U-233/234	LA-508-471		0.12	.041	pCi/g	1	0.013		08/20/10
Uranium-235	15117-96-1	LA-508-471		0.016	.011	pCi/g	1	0.014		08/20/10
Uranium-238	U-238	LA-508-471		0.11	.04	pCi/g	1	4.8E-3		08/20/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF102057

Sample # 102057001
SAF# F10-258
Sample ID B27200

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**08/17/10**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		99		percent	1			08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF102057

Sample # 102057002
SAF# F10-258
Sample ID B27202

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**08/17/10**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		99		percent	1			08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF102057

Sample # 102057003
SAF# F10-258
Sample ID B27203

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**08/17/10**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		97		percent	1			08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF102057

Sample # 102057004
SAF# F10-258
Sample ID B27204

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**08/17/10**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		98		percent	1			08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF102057

Sample # 102057005
SAF# F10-258
Sample ID B27205

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**08/17/10**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		97		percent	1			08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF102057

Sample # 102057006
SAF# F10-258
Sample ID B27206

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**08/17/10**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		99		percent	1			08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF102057

Sample # 102057007
SAF# F10-258
Sample ID B27207

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**08/17/10**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		99		percent	1			08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF102057

Sample # 102057008
SAF# F10-258
Sample ID B27208

Matrix SOIL
Sampled 08/11/10
Received 08/12/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Residue										**08/17/10**
Total Residue										
Percent Solids	%SOLIDS	LA-519-412		99		percent	1			08/17/10

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

QC Batch 151799 **Test** PCBs by EPA SW-846 Method 8082
Associated Samples 102057001, 102057002, 102057004, 102057006, 102057007, 102057008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #35494**							
Aroclor-1016	12674-11-2		<4	ug/kg					U	08/17/10
Aroclor-1221	11104-28-2		<8	ug/kg					U	08/17/10
Aroclor-1232	11141-16-5		<4	ug/kg					U	08/17/10
Aroclor-1242	53469-21-9		<4	ug/kg					U	08/17/10
Aroclor-1248	12672-29-6		250	ug/kg					B	08/17/10
Aroclor-1254	11097-69-1		<4	ug/kg					U	08/17/10
Aroclor-1260	11096-82-5		<4	ug/kg					U	08/17/10
Aroclor-1262	37324-23-5		<4	ug/kg					U	08/17/10
Aroclor-1268	11100-14-4		<4	ug/kg					U	08/17/10
LCS			**QC Sample #35495**							
Aroclor-1254	11097-69-1		95	ug/kg	118.3	75 - 128				08/17/10
MS			**QC Sample #35496**							
			Original 102057001							
Aroclor-1254	11097-69-1	<4	89	ug/kg	112.1	62 - 140				08/17/10
MSD			**QC Sample #35497**							
			Original 102057001					**Paired 35496**		
Aroclor-1254	11097-69-1	<4	92	ug/kg	114.7	62 - 140	2.30	30		08/17/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

QC Batch 152000 **Test** Hexavalent chromium
Associated Samples 102057001, 102057002, 102057003, 102057004, 102057005, 102057006, 102057007, 102057008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #35929**							
Hexavalent chromium	18540-29-9		<0.10	ug/g					U	08/15/10
LCS			**QC Sample #35930**							
Hexavalent chromium	18540-29-9		3.61	ug/g	90.3	80 - 120				08/15/10
DUP			**QC Sample #35931**							
			Original 102057001							
Hexavalent chromium	18540-29-9	<0.10	2.03E-3	ug/g			0.00	20	B	08/15/10
MS			**QC Sample #35932**							
			Original 102057001							
Hexavalent chromium	18540-29-9	<0.10	3.20	ug/g	80.1	75 - 125				08/15/10
MSD			**QC Sample #35933**							
			Original 102057001					**Paired**	**35932**	
Hexavalent chromium	18540-29-9	<0.10	3.20	ug/g	79.9	75 - 125	0.20	20		08/15/10
IMS			**QC Sample #35934**							
			Original 102057001							
Hexavalent chromium	18540-29-9	<0.10	247	ug/g	76.2	75 - 125			D	08/15/10
PSTSPK			**QC Sample #35935**							
Hexavalent chromium	18540-29-9		0.0538	ug/g	101.1	85 - 115			B	08/15/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

QC Batch 152434 **Test** ICP-2008 MS All possible metal
Associated Samples 102057001, 102057002, 102057003, 102057004, 102057005, 102057006, 102057007, 102057008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #36138**							
Manganese	7439-96-5		<0.10	ug/L					U	08/26/10
Antimony	7440-36-0		<0.30	ug/L					U	08/26/10
Barium	7440-39-3		<0.20	ug/L					U	08/26/10
Cadmium	7440-43-9		<0.10	ug/L					U	08/26/10
Chromium	7440-47-3		<0.50	ug/L					U	08/26/10
Zinc	7440-66-6		<0.80	ug/L					U	08/26/10
Lead	7439-92-1		<0.10	ug/L					U	08/26/10
Mercury	7439-97-6		<0.050	ug/L					U	08/26/10
Arsenic	7440-38-2		<0.40	ug/L					U	08/26/10
Thorium	7440-29-1		<0.10	ug/L					U	08/26/10
LCS			**QC Sample #36139**							
Manganese	7439-96-5		502	mg/kg	111.2	75 - 121				08/26/10
Antimony	7440-36-0		165	mg/kg	183.9	62 - 205				08/26/10
Barium	7440-39-3		327	mg/kg	102.8	78 - 118				08/26/10
Cadmium	7440-43-9		68.9	mg/kg	103.9	76 - 129				08/26/10
Chromium	7440-47-3		84.7	mg/kg	116.6	68 - 119				08/26/10
Zinc	7440-66-6		179	mg/kg	101.8	73 - 131				08/26/10
Lead	7439-92-1		126	mg/kg	97	79 - 124				08/26/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Mercury	7439-97-6		7.51	mg/kg	90.8	69 - 124				08/26/10
Arsenic	7440-38-2		133	mg/kg	101	79 - 125				08/26/10
Thorium	7440-29-1		398	mg/kg	99.9	79 - 109				08/26/10
MS			**QC Sample #36140**							
			Original 102048001							
Manganese	7439-96-5		6.22	mg/kg	6.3	70 - 130			N	08/19/10
Antimony	7440-36-0		91.8	mg/kg	92.6	70 - 130				08/19/10
Barium	7440-39-3		85.5	mg/kg	86.3	70 - 130				08/19/10
Cadmium	7440-43-9		96.7	mg/kg	97.6	70 - 130				08/19/10
Chromium	7440-47-3		98.8	mg/kg	99.8	70 - 130				08/19/10
Zinc	7440-66-6		85.0	mg/kg	85.8	70 - 130				08/19/10
Lead	7439-92-1		98.7	mg/kg	99.6	70 - 130				08/19/10
Mercury	7439-97-6		2.13	mg/kg	107.5	70 - 130				08/19/10
Arsenic	7440-38-2		95.5	mg/kg	96.4	70 - 130				08/19/10
Thorium	7440-29-1		101	mg/kg	101.5	70 - 130				08/19/10
MSD			**QC Sample #36141**							
			Original 102048001					**Paired**	**36140**	
Manganese	7439-96-5		-11.4	mg/kg	-11.5	70 - 130	-684.60	30	N	08/19/10
Antimony	7440-36-0		91.7	mg/kg	92.9	70 - 130	0.30	30		08/19/10
Barium	7440-39-3		98.4	mg/kg	99.7	70 - 130	14.40	30		08/19/10
Cadmium	7440-43-9		95.5	mg/kg	96.8	70 - 130	0.80	30		08/19/10
Chromium	7440-47-3		91.0	mg/kg	92.2	70 - 130	7.90	30		08/19/10
Zinc	7440-66-6		85.4	mg/kg	86.5	70 - 130	0.80	30		08/19/10
Lead	7439-92-1		98.2	mg/kg	99.5	70 - 130	0.10	30		08/19/10
Mercury	7439-97-6		2.14	mg/kg	108.5	70 - 130	0.90	30		08/19/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF102057

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Arsenic	7440-38-2		95.4	mg/kg	96.6	70 - 130	0.20	30		08/19/10
Thorium	7440-29-1		98.9	mg/kg	100.2	70 - 130	1.30	30		08/19/10

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

QC Batch 153534
Associated Samples 102057003, 102057005

Test PCBs by EPA SW-846 Method 8082

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #36491**							
Aroclor-1016	12674-11-2		<4	ug/kg					U	08/23/10
Aroclor-1221	11104-28-2		<8	ug/kg					U	08/23/10
Aroclor-1232	11141-16-5		<4	ug/kg					U	08/23/10
Aroclor-1242	53469-21-9		<4	ug/kg					U	08/23/10
Aroclor-1248	12672-29-6		<4	ug/kg					U	08/23/10
Aroclor-1254	11097-69-1		<4	ug/kg					U	08/23/10
Aroclor-1260	11096-82-5		<4	ug/kg					U	08/23/10
Aroclor-1262	37324-23-5		<4	ug/kg					U	08/23/10
Aroclor-1268	11100-14-4		<4	ug/kg					U	08/23/10
LCS			**QC Sample #36492**							
Aroclor-1254	11097-69-1		86	ug/kg	107.2	75 - 128				08/23/10
MS			**QC Sample #36493**							
			Original 102081007							
Aroclor-1254	11097-69-1		90	ug/kg	112.7	62 - 140				08/24/10
MSD			**QC Sample #36494**							
			Original 102081007					**Paired**	**36493**	
Aroclor-1254	11097-69-1		89	ug/kg	111.5	62 - 140	1.10	30		08/24/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

QC Batch 151811 **Test** Americium/Curium (AEA)
Associated Samples 102057001, 102057002, 102057003, 102057004, 102057005, 102057006, 102057007, 102057008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #35524**								
Americium-241	14596-10-2		0.0020	pCi/g						U	08/24/10
Plutonium-238	13981-16-3		-9.4E-3	pCi/g						U	08/24/10
Plutonium-239/240	PU-239/240		3.8E-3	pCi/g						U	08/24/10
Uranium-234	U-233/234		6.1E-3	pCi/g						U	08/20/10
Uranium-235	15117-96-1		6.6E-3	pCi/g						U	08/20/10
Uranium-238	U-238		0.0040	pCi/g						U	08/20/10
LCS			**QC Sample #35525**								
Americium-241	14596-10-2		5.9	pCi/sample	107.1	80 - 120					08/24/10
Plutonium-239/240	PU-239/240		5.8	pCi/sample	100.3	80 - 120					08/24/10
Uranium-234	U-233/234		8.4	pCi/sample	102.3	80 - 120					08/20/10
DUP			**QC Sample #35526**								
			Original 102057001								
Plutonium-238	13981-16-3	0.11	-0.048	pCi/g			509.70	-30 - 30	*	U	08/24/10
Americium-241	14596-10-2	0.033	0.050	pCi/g			41.00	-30 - 30	*	U	08/24/10
Plutonium-239/240	PU-239/240	0.019	0.020	pCi/g			5.10	-30 - 30		U	08/24/10
Uranium-234	U-233/234	0.19	0.16	pCi/g			17.10	-30 - 30			08/20/10
Uranium-235	15117-96-1	0.020	0.010	pCi/g			66.70	-30 - 30	*	U	08/20/10
Uranium-238	U-238	0.17	0.15	pCi/g			12.50	-30 - 30			08/20/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

QC Batch 151837 **Test** Gamma Energy Analysis-general
Associated Samples 102057001, 102057002, 102057003, 102057004, 102057005, 102057006, 102057007, 102057008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
IBLANK			**QC Sample #35579**								
Cesium-137	10045-97-3		5.8E-4	pCi/g						U	08/20/10
Cobalt-60	10198-40-0		4.9E-4	pCi/g						U	08/20/10
Europium-152	14683-23-9		-3.5E-3	pCi/g						U	08/20/10
Europium-154	15585-10-1		-5.3E-3	pCi/g						U	08/20/10
Europium-155	14391-16-3		0.015	pCi/g						U	08/20/10
LCS			**QC Sample #35580**								
Cesium-137	10045-97-3		6300	pCi/sample	103.7	80 - 120					08/20/10
Cobalt-60	10198-40-0		10000	pCi/sample	104.3	80 - 120					08/20/10
DUP			**QC Sample #35581**								
			Original 102057001								
Cesium-137	10045-97-3	0.61	0.64	pCi/g			4.90	-30 - 30			08/20/10
Cobalt-60	10198-40-0	-0.010	-4.4E-3	pCi/g			-79.70	-30 - 30	*	U	08/20/10
Europium-152	14683-23-9	0.011	-0.029	pCi/g			-444.40	-30 - 30	*	U	08/20/10
Europium-154	15585-10-1	-0.025	0.021	pCi/g			-3000.00	-30 - 30	*	U	08/20/10
Europium-155	14391-16-3	-1.3E-3	-0.018	pCi/g			-175.00	-30 - 30	*	U	08/20/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

QC Batch 151969 **Test** TC99 by Liquid Scintillation
Associated Samples 102057001, 102057002, 102057003, 102057004, 102057005, 102057006, 102057007, 102057008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #35921**							
Technetium-99	14133-76-7		-0.10	pCi/g					U	08/19/10
LCS			**QC Sample #35922**							
Technetium-99	14133-76-7		8.8	pCi/g	96.5	80 - 120				08/19/10
DUP			**QC Sample #35923**							
			Original 102057001							
Technetium-99	14133-76-7	-0.10	-0.10	pCi/g			0.00	-30 - 30	U	08/19/10
MS			**QC Sample #35924**							
			Original 102057001							
Technetium-99	14133-76-7	-0.10	35	pCi/g	98.6	75 - 125				08/19/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

QC Batch 152138 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 102057001, 102057002, 102057003, 102057004, 102057005, 102057006, 102057007, 102057008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #36099**								
Strontium-89/90	SR-RAD		-0.16	pCi/g						U	08/27/10
LCS			**QC Sample #36100**								
Strontium-89/90	SR-RAD		30	pCi/g	107.9	80 - 120					08/27/10
DUP			**QC Sample #36101**								
			Original 102057001								
Strontium-89/90	SR-RAD	0.71	-0.16	pCi/g			318.50	-30 - 30	*	U	08/27/10

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

QC Batch 151799 **Test** PCBs by EPA SW-846 Method 8082
Associated Samples 102057001, 102057002, 102057004, 102057006, 102057007, 102057008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #102057001**							
Tetrachloro-m-xylene	877-09-8				113	60 - 140				08/17/10
Decachlorobiphenyl	2051-24-3				105.8	60 - 140				08/17/10
SAMPLE			**Sample #102057002**							
Tetrachloro-m-xylene	877-09-8				112.8	60 - 140				08/17/10
Decachlorobiphenyl	2051-24-3				105.2	60 - 140				08/17/10
SAMPLE			**Sample #102057004**							
Tetrachloro-m-xylene	877-09-8				38	60 - 140			X	08/17/10
Decachlorobiphenyl	2051-24-3				99.5	60 - 140				08/17/10
SAMPLE			**Sample #102057006**							
Tetrachloro-m-xylene	877-09-8				42.2	60 - 140			X	08/17/10
Decachlorobiphenyl	2051-24-3				103.7	60 - 140				08/17/10
SAMPLE			**Sample #102057007**							
Tetrachloro-m-xylene	877-09-8				109.6	60 - 140				08/17/10
Decachlorobiphenyl	2051-24-3				107.4	60 - 140				08/17/10
SAMPLE			**Sample #102057008**							

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Tetrachloro-m-xylene	877-09-8				108.4	60 - 140				08/17/10
Decachlorobiphenyl	2051-24-3				103.2	60 - 140				08/17/10
BLANK			**QC Sample #35494**							
Tetrachloro-m-xylene	877-09-8				111.8	60 - 140				08/17/10
Decachlorobiphenyl	2051-24-3				103.4	60 - 140				08/17/10
LCS			**QC Sample #35495**							
Tetrachloro-m-xylene	877-09-8				111.4	60 - 124				08/17/10
Decachlorobiphenyl	2051-24-3				105	72 - 125				08/17/10
MS			**QC Sample #35496**							
			Original	**102057001**						
Tetrachloro-m-xylene	877-09-8				59.6	51 - 120				08/17/10
Decachlorobiphenyl	2051-24-3				102.4	66 - 126				08/17/10
MSD			**QC Sample #35497**							
			Original	**102057001**				**Paired**	**35496**	
Tetrachloro-m-xylene	877-09-8				100	51 - 120	50.60			08/17/10
Decachlorobiphenyl	2051-24-3				96.6	66 - 126	5.80			08/17/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

QC Batch 151811 **Test** Americium/Curium (AEA)
Associated Samples 102057001, 102057002, 102057003, 102057004, 102057005, 102057006, 102057007, 102057008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #102057001**							
Americium-243 Tracer	14993-75-0				30.3	25 - 105				08/24/10
Uranium-232 Tracer	14158-29-3				97.8	25 - 105				08/20/10
Plutonium-242 Tracer	13982-10-0				32.7	25 - 105				08/24/10
SAMPLE			**Sample #102057002**							
Uranium-232 Tracer	14158-29-3				88.4	25 - 105				08/20/10
Americium-243 Tracer	14993-75-0				41.2	25 - 105				08/24/10
Plutonium-242 Tracer	13982-10-0				36.4	25 - 105				08/24/10
SAMPLE			**Sample #102057003**							
Americium-243 Tracer	14993-75-0				49.2	25 - 105				08/24/10
Uranium-232 Tracer	14158-29-3				103.8	25 - 105				08/20/10
Plutonium-242 Tracer	13982-10-0				52.4	25 - 105				08/24/10
SAMPLE			**Sample #102057004**							
Uranium-232 Tracer	14158-29-3				93.9	25 - 105				08/20/10
Americium-243 Tracer	14993-75-0				40.1	25 - 105				08/24/10
Plutonium-242 Tracer	13982-10-0				44.7	25 - 105				08/24/10
SAMPLE			**Sample #102057005**							

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Americium-243 Tracer	14993-75-0				35.3	25 - 105				08/24/10
Uranium-232 Tracer	14158-29-3				92.6	25 - 105				08/20/10
Plutonium-242 Tracer	13982-10-0				49.3	25 - 105				08/24/10
SAMPLE			**Sample #102057006**							
Americium-243 Tracer	14993-75-0				44.5	25 - 105				08/24/10
Uranium-232 Tracer	14158-29-3				91.8	25 - 105				08/20/10
Plutonium-242 Tracer	13982-10-0				45.9	25 - 105				08/24/10
SAMPLE			**Sample #102057007**							
Uranium-232 Tracer	14158-29-3				81.6	25 - 105				08/20/10
Americium-243 Tracer	14993-75-0				41.9	25 - 105				08/24/10
Plutonium-242 Tracer	13982-10-0				35	25 - 105				08/24/10
SAMPLE			**Sample #102057008**							
Americium-243 Tracer	14993-75-0				35.3	25 - 105				08/24/10
Uranium-232 Tracer	14158-29-3				92.6	25 - 105				08/20/10
Plutonium-242 Tracer	13982-10-0				48.3	25 - 105				08/24/10
BLANK			**QC Sample #35524**							
Uranium-232 Tracer	14158-29-3				75.7	25 - 105				08/20/10
Americium-243 Tracer	14993-75-0				80.4	25 - 105				08/24/10
Plutonium-242 Tracer	13982-10-0				83.6	25 - 105				08/24/10
LCS			**QC Sample #35525**							
Americium-243 Tracer	14993-75-0				75.8	25 - 105				08/24/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium-232 Tracer	14158-29-3				64.1	25 - 105				08/20/10
Plutonium-242 Tracer	13982-10-0				90.1	25 - 105				08/24/10
DUP			**QC Sample #35526**							
			Original 102057001							
Americium-243 Tracer	14993-75-0				34.4	25 - 105	0.00			08/24/10
Uranium-232 Tracer	14158-29-3				93.7	25 - 105	0.00			08/20/10
Plutonium-242 Tracer	13982-10-0				41.4	25 - 105	0.00			08/24/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

QC Batch 152138 **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 102057001, 102057002, 102057003, 102057004, 102057005, 102057006, 102057007, 102057008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #102057001**							
Strontium-85	13967-73-2				73.7	25 - 105				08/27/10
SAMPLE			**Sample #102057002**							
Strontium-85	13967-73-2				79.4	25 - 105				08/27/10
SAMPLE			**Sample #102057003**							
Strontium-85	13967-73-2				79.2	25 - 105				08/27/10
SAMPLE			**Sample #102057004**							
Strontium-85	13967-73-2				86.1	25 - 105				08/27/10
SAMPLE			**Sample #102057005**							
Strontium-85	13967-73-2				69.9	25 - 105				08/27/10
SAMPLE			**Sample #102057006**							
Strontium-85	13967-73-2				88.9	25 - 105				08/27/10
SAMPLE			**Sample #102057007**							
Strontium-85	13967-73-2				78.1	25 - 105				08/27/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF102057

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #102057008**							
Strontium-85	13967-73-2				77	25 - 105				08/27/10
BLANK			**QC Sample #36099**							
Strontium-85	13967-73-2				70.7	25 - 105				08/27/10
LCS			**QC Sample #36100**							
Strontium-85	13967-73-2				70.2	25 - 105				08/27/10
DUP			**QC Sample #36101**							
			Original 102057001							
Strontium-85	13967-73-2				82.6	25 - 105	15.40			08/27/10

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

QC Batch 153534
Associated Samples 102057003, 102057005

Test PCBs by EPA SW-846 Method 8082

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #102057003**							
Tetrachloro-m-xylene	877-09-8				107.8	60 - 140				08/23/10
Decachlorobiphenyl	2051-24-3				96.1	60 - 140				08/23/10
SAMPLE			**Sample #102057005**							
Tetrachloro-m-xylene	877-09-8				106.7	60 - 140				08/23/10
Decachlorobiphenyl	2051-24-3				94.4	60 - 140				08/23/10
BLANK			**QC Sample #36491**							
Tetrachloro-m-xylene	877-09-8				98.1	60 - 140				08/23/10
Decachlorobiphenyl	2051-24-3				87.5	60 - 140				08/23/10
LCS			**QC Sample #36492**							
Tetrachloro-m-xylene	877-09-8				101	60 - 124				08/23/10
Decachlorobiphenyl	2051-24-3				89.5	72 - 125				08/23/10
MS			**QC Sample #36493**							
			Original 102081007							
Tetrachloro-m-xylene	877-09-8				111.7	51 - 120				08/24/10
Decachlorobiphenyl	2051-24-3				95.7	66 - 126				08/24/10
MSD			**QC Sample #36494**							
			Original 102081007					**Paired**	**36493**	

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF102057

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Tetrachloro-m-xylene	877-09-8				105.7	51 - 120	5.50			08/24/10
Decachlorobiphenyl	2051-24-3				92	66 - 126	3.90			08/24/10

Analytical Comment Report

Attention: Michael Neely **Group #** WSCF102057

102057004	B27204
Department	Organic, Semivolatiles
Analyte	Tetrachloro-m-xylene - PCBs by EPA SW-846 Method 8082 [1] Surrogate recovery oustide established laboratory contol limits. DTS

102057006	B27206
Department	Organic, Semivolatiles
Analyte	Tetrachloro-m-xylene - PCBs by EPA SW-846 Method 8082 [1] Surrogate recovery outside established laboratory control limits. DTS

Analytical Comment Report

Attention: Michael Neely

Group # WSCF102057

Quality Control Comments

Department Organic, Semivolatiles

35494	BLANK for HBN 151799

Blank contained Aroclor 1248 from a previously extracted sample in the accelerated solvent extraction (ASE) system. The ASE was flushed and cleaned and several blanks were re-extracted. Analysis of these instrument blanks were clean. All samples in the batch and subsequent blanks contained no detected Aroclor 1248. It was an isolated incident resulting from a sample highly contaminated with Ar-1248 extracted in the previous batch that contaminated some surfaces in the ASE. Flushing the ASE resolved the problem and no samples were cross contaminated in this batch.

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 19 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

ACKNOWLEDGEMENT OF SAMPLES RECEIVED

WSCF Laboratory
PO Box 650 S3-30
Richland, WA 99352

ATTN: Michael Neely

Customer Code: CHPRC
PO #: 401352ES20
Work Order #: 102057
Profile #: F10-258-055
Proj. Mgr.:
Phone:

The following samples were received from you on 8/12/2010 7:30:00 AM. 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	Matrix	Collected	Received
		Tests scheduled		
102057001	B27200	SOIL	8/11/2010 13:30	8/12/2010 07:30
		2008-S; AEA-AM-S; AEA-PU-S; AEA-U-S; CR6-S; DRY-WEIGHT; GEA-S; PCB-SA; SR89/90-S; TC99-S		
102057002	B27202	SOIL	8/11/2010 13:16	8/12/2010 07:30
		2008-S; AEA-AM-S; AEA-PU-S; AEA-U-S; CR6-S; DRY-WEIGHT; GEA-S; PCB-SA; SR89/90-S; TC99-S		
102057003	B27203	SOIL	8/11/2010 12:40	8/12/2010 07:30
		2008-S; AEA-AM-S; AEA-PU-S; AEA-U-S; CR6-S; DRY-WEIGHT; GEA-S; PCB-SA; SR89/90-S; TC99-S		
102057004	B27204	SOIL	8/11/2010 12:56	8/12/2010 07:30
		2008-S; AEA-AM-S; AEA-PU-S; AEA-U-S; CR6-S; DRY-WEIGHT; GEA-S; PCB-SA; SR89/90-S; TC99-S		
102057005	B27205	SOIL	8/11/2010 12:38	8/12/2010 07:30
		2008-S; AEA-AM-S; AEA-PU-S; AEA-U-S; CR6-S; DRY-WEIGHT; GEA-S; PCB-SA; SR89/90-S; TC99-S		
102057006	B27206	SOIL	8/11/2010 12:58	8/12/2010 07:30
		2008-S; AEA-AM-S; AEA-PU-S; AEA-U-S; CR6-S; DRY-WEIGHT; GEA-S; PCB-SA; SR89/90-S; TC99-S		
102057007	B27207	SOIL	8/11/2010 13:17	8/12/2010 07:30
		2008-S; AEA-AM-S; AEA-PU-S; AEA-U-S; CR6-S; DRY-WEIGHT; GEA-S; PCB-SA; SR89/90-S; TC99-S		
102057008	B27208	SOIL	8/11/2010 13:17	8/12/2010 07:30
		2008-S; AEA-AM-S; AEA-PU-S; AEA-U-S; CR6-S; DRY-WEIGHT; GEA-S; PCB-SA; SR89/90-S; TC99-S		

Waste Sampling and Characterization Facility
P.O. Box 1970 S3-30, Richland WA 99352
Phone: (509) 373-7004/FAX: (509) 373-7134

Test Acronym Description

Test Acronym	Description
2008-S	ICP-MS (S)
AEA-AM-S	Americium (AEA) (S)
AEA-PU-S	Plutonium (AEA) (S)
AEA-U-S	Uranium Isotopic (AEA) (S)
CR6-S	Cr6 (S)
DRY-WEIGHT	Dry Weight as Pct Moisture
GEA-S	Gamma Energy Analysis (S)
PCB-SA	PCB (8082) (S) ASE
SR89/90-S	Strontium 89/90 (GPC) (S)
TC99-S	Technetium-99 (S)

CHEMHILL Waste Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-258-055 PAGE 1 OF 2

COLLECTOR: Scales

COMPANY CONTACT: WISKIRK, DL

TELEPHONE NO.: 376-2858

PROJECT COORDINATOR: WISKIRK, DL

PRICE CODE: BC

DATA TURNAROUND: 15 Days / 15 Days

SAMPLING LOCATION: 216-N-4-V-12

PROJECT DESIGNATION: 216-N-4 Sampling and Analysis - Verification - Surface

SAF NO.: F10-078

AIR QUALITY: ☐

ICE CHEST NO.: N/A

FIELD LOGBOOK NO.: HNF-N-507-14 pg 45

ACTUAL SAMPLE DEPTH: Surface

COA: 307222512

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

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

MATRIX*: Air, Liquid, Oil, Solid, Soil, Soil-Rock, Tissue, Vegetation, Wastewater, Wipe, Other

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool-4C	Cool-4C	None	None
HOLDING TIME	6 Months	6 Months	6 Months	6 Months
TYPE OF CONTAINER	GP	AG	Square Bottle Poly	GP
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml	250ml	500ml	250ml
SAMPLE ANALYSIS	See Special Instructions	90Sr - Total	See Special Instructions	See Special Instructions

102 057

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
827220 001	SOL	8/11/10	1330	X	X	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
SW Scales	8/11/10 1540	SSOL	8-11-10 1540
SSOL	8-12-10 0700	Relinquished	8-12-10 0700
Relinquished	8-12-10 0730	TA Fraley	8-12-10 0730

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION: RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION: DISPOSAL METHOD

DISPOSED BY

DATE/TIME

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-250-065 PAGE 2 OF 2

COLLECTOR: Scales	COMPANY CONTACT: WRIGHT, D.	TELEPHONE NO.: 376 2858	PROJECT COORDINATOR: WRIGHT, D.	PRICE CODE: 8C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: 316-N-4-4-13	PROJECT DESIGNATION: 216-N-4 Sampling and Analysis - Verification - Surface		SAF NO.: F10-250	AIR QUALITY: [ ]	
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HWF-W-507-14 pg 45	ACTUAL SAMPLE DEPTH: Surface	COA: 302222E310	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPER TO: Waste Sorting & Characterization	OFFSITE PROPERTY NO: N/A		BILL OF LADING/AIR BILL NO.: N/A		

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF is 401352E520.□** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.□** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.

(1) ICPMS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Manganese, Zinc); ICPMS - 200.8 (Add-on) (Arsenic, Lead, Thorium-232); 200.8_HG - ICPMS (Mercury); Chromium Hex - 7196;

(2) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155);

(3) Americium-241; Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238); Strontium-89,90 -- Total Sr; Technetium-99 (Technetium-99);

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-258-057 PAGE 1 OF 2

COLLECTOR	Scales
SAMPLING LOCATION	216-N-4-15 Surface
ICE CHEST NO.	n/a
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	WIDRIG, DL
TELEPHONE NO.	376-2658
PROJECT DESIGNATION	216-N-4 Sampling and Analysis Verification Surface
FIELD LOGBOOK NO.	HNF-N-507-14 pg 45
ACTUAL SAMPLE DEPTH	Surface
OFFSITE PROPERTY NO.	N/A
PROJECT COORDINATOR	WIDRIG, DL
SAF NO.	F10-258
COA	302270E516
BILL OF LADING/AIR BILL NO.	N/A
PRICE CODE	BC
AIR QUALITY	
DATA TURNAROUND	15 Days / 15 Days
METHOD OF SHIPMENT	GOVERNMENT VEHICLE

MATRIX*: Solid, Liquid, Soil/Gravel, Sludge, Drum solids, Drum liquid, Oil, Soil, Air Adsorbent, Air Tedlar, Air Vegetation, Air Water, Air Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Materials at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1994)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool<4C	Cool<4C	None	None
HOLDING TIME	6 Months	6 Months	6 Months	6 Months
TYPE OF CONTAINER	G/P	WG	Sealed Bag - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	250mL	500mL	125mL
SAMPLE ANALYSES	See Attached Instructions	Hold - WG	See Attached Instructions	See Attached Instructions

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B27202	SOIL	8/11/10	1316	X	X	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Joe Scales	8/11/10 1540	SSU 1	8-11-10 1540
SSU-1	8-12-10 0700	R Ellingsworth	8-12-10 0700
R Ellingsworth	8-12-10 0730	TA Hazim Qureshi	8-12-10 0730

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ORIGINAL

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

CH2MHILL Plateau Remediation Company

CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST

F10-258-057

PAGE 2 OF 2

COLLECTOR: Scales	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WIDRIG, DL	PRICE CODE: 8C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: 216 N 4 V 15 Surface	PROJECT DESIGNATION: 216 N 4 Sampling and Analysis Verification Surface		SAF NO.: F10-256	AIR QUALITY:	
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507-14 pg 45	ACTUAL SAMPLE DEPTH: Surface	COA: 302228570	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: Weeks Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF is 401352ES20.13** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKT applies to this SAF.13** The laboratory shall report only the requested constituents of concern in all final data reports, and CODs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.

(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Manganese, Zinc); ICP/MS - 200.8 (Add-on) (Arsenic, Lead, Thorium-232); 200.E_HG - ICPMS (Mercury); Chromium Hex - 7196;

(2) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155);

(3) Americium-241; Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238); Strontium-89,90 -- Total Sr; Technetium-99 (Technetium-99);

ORIGINAL

A 6000-418(08/00)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-258-058 PAGE 1 OF 2

COLLECTOR: Chamberlain

COMPANY CONTACT: WEDRIG, DL

TELEPHONE NO.: 376-3858

PROJECT COORDINATOR: WEDRIG, DL

PRICE CODE: BC

DATA TURNAROUND: 15 Days / 15 Days

SAMPLING LOCATION: 216-A-44-16

PROJECT DESIGNATION: 216-A-4 Sampling and Analysis - Verification - Surface

SAF NO.: F10-258

AIR QUALITY:

ICE CHEST NO.:

FIELD LOGBOOK NO.: HNF-N-307-14 Pg 45

ACTUAL SAMPLE DEPTH: Surface

COA: 322222518

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

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

MATRIX*: Air, Sediment, Soil, Tissue, Vegetation, Water, Wipe, Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not reportable per DOE Order 5400.5 (10/8/1993)

SPECIAL HANDLING AND/OR STORAGE:

PRESERVATION	Non-IC	Non-IC	None	None
HOLDING TIME	6 months	1 year	6 months	6 months
TYPE OF CONTAINER	GP	GC	Sterile Poly	GC
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml	125ml	500ml	125ml
SAMPLE ANALYSIS	[illegible]	[illegible]	[illegible]	[illegible]

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B27203	SOIL	8-11-10	1240	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Greg Chamberlain	8-11-10 1540	SSU I	8-11-10 1540
SSU-I	8-12-10 0700	R Shingsworth	8-12-10 0700
R Shingsworth	8-12-10 0730	TA Pirkle	8-12-10 0730

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-254-058 PAGE 2 OF 2

COLLECTOR: Chamberlain	COMPANY CONTACT: WEBING, DL	TELEPHONE NO.: 376-2854	PROJECT COORDINATOR: WEBING, DL	PRICE CODE: SC	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: 2;4-N-4-N-16	PROJECT DESIGNATION: 2;4-N-4 Sampling and Analysis - Verification - Surface		SAF NO.: F10-254	AIR QUALITY	
ICE CHEST NO.	FIELD LOGBOOK NO.: MAF-11-507-14 Pg 45	ACTUAL SAMPLE DEPTH: Surface	COA: 302222510	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 CACN for all analytical work at WSCF is 401352ES20.☐** The 200 Area SAGRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.

(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Manganese, Zinc); ICP/MS - 200.8 (Add-on) (Arsenic, Lead, Thorium-232); 200.8 HG - ICPMS (Mercury); Chromium Hex - 7196;

(2) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155);

(3) Americium-241; Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238); Strontium-89,90 -- Total Sr; Technetium-99 (Technetium-99);

☐ ORIGINAL

A-6000-018(03/05)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

PID-258-059

PAGE 1 OF 2

COLLECTOR: Scales

COMPANY CONTACT: WORIG, DL

TELEPHONE NO.: 375-2693

PROJECT COORDINATOR: WORIG, DL

PRTCS CODE: BC

DATA TURNAROUND: 15 Days / 15 Days

SAMPLING LOCATION: 218-W-4A-17

PROJECT DESIGNATION: 218-W-4 Sampling and Analysis - Verification Sampling

SAF NO.: 331-158

AIR QUALITY: ☐

ICE CHEST NO.: N/A

FIELD LOGBOOK NO.: HNPN-507-14 pg 145

ACTUAL SAMPLE DEPTH: Surface

COA: 302220100

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

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

MATRIX: X=Air, DL=Drum Liquid, DW=Drum Solids, L=Liquid, DWS, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not regulated per DOE Order 5400.5 (1989/1990)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool-4C	Cool-4C	None	None
HOLDING TIME	6 Months	1 Yr/14 Yr	6 Months	6 Months
TYPE OF CONTAINER	G/P	P	Square Bottle - Poly	G/P
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	250mL	500mL	125mL
SAMPLE ANALYSIS	[illegible]	[illegible]	[illegible]	[illegible]

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
S07254 SC-1	SOIL	8/11/10	1256	X	X	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: Joe Scales	DATE/TIME: 8/11/10 1540	RECEIVED BY/STORED IN: SSU 1	DATE/TIME: 8-11-10 1540
RELINQUISHED BY/REMOVED FROM: SSU-1	DATE/TIME: 8-12-10 0700	RECEIVED BY/STORED IN: R Ellingsworth	DATE/TIME: 8-12-10 0700
RELINQUISHED BY/REMOVED FROM: R Ellingsworth	DATE/TIME: 8-12-10 0730	RECEIVED BY/STORED IN: TA Forman	DATE/TIME: 8-12-10 0730
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION: RECEIVED BY — TITLE — DATE/TIME

FINAL SAMPLE DISPOSITION: DISPOSAL METHOD — DISPOSED BY — DATE/TIME

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-258-039 PAGE 2 OF 2

COLLECTOR: Scales	COMPANY CONTACT: WORRIS, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WORRIS, DL
SAMPLING LOCATION: 216-N-4-V-17	PROJECT DESIGNATION: 216-N-4 Sampling and Analysis - Verification - Surface		SAF NO.: F10-258
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507-14 pg 45	ACTUAL SAMPLE DEPTH: Surface	COA: 30222215550
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: SC

DATA TURNAROUND: 15 Days / 15 Days

AIR QUALITY:

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF is 401JS2ES23.CI** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.CI** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.

(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Manganese, Zinc); ICP/MS - 200.8 (Add-on) (Arsenic, Lead, Thorium-232); 200.8_HG - 1631E (Mercury); Chromium Hex - 7196;

(2) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155);

(3) Americium-241; Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238); Strontium-89/90 - Total Sr; Technetium-99 (Technetium-99);

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

FLD-258-060 PAGE 1 OF 2

COLLECTOR: Scales
SAMPLING LOCATION: 216-N-4-V-18 Surface
ICE CHEST NO.: N/A
SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: WIDRIG, D.
TELEPHONE NO.: 376-2516
PROJECT DESIGNATION: 216-N-4 Sampling and Analysis - Verification - Surface
FIELD LOGBOOK NO.: HNF-N-501-14 pg 45
ACTUAL SAMPLE DEPTH: Surface
OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: WIDRIG, D.
SAF NO.: 710-258
COA: 302222C510
BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: 8C
AIR QUALITY: ☐
DATA TURNAROUND: 15 Days / 15 Days
METHOD OF SHIPMENT: GOVERNMENT VEHICLE

MATRIX*: A-Air; B-Bulk; C-Charcoal; D-Debris; S-Soil; SL-Sediment; V-Vegetation; W-Water; X-Other

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool-4C	Cool-4C	None	None
HOLDING TIME	6 Months	3 Months	6 Months	6 Months
TYPE OF CONTAINER	GJV	GJ	Square Bottle - Poly	GJV
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250ml	250ml	500ml	125ml
SAMPLE ANALYSIS	90-Day Gamma Spectrum	None - Note	90-Day Gamma Spectrum	90-Day Gamma Spectrum

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
E27205	SOIL	8/11/10	1238	X	X	X	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Joe Scales	8/11/10 1540	SSL 1	8-11-10 1540
SSL 1	8-12-10 0700	Rellinger	8-12-10
Rellinger	8-12-10 0730	TA Frazier	8-12-10 0730

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

P10-258-660

PAGE 2 OF 2

COLLECTOR: Scales	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2053	PROJECT COORDINATOR: WIDRIG, DL	PRICE CODE: 8C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: 216-N-1-V-18 Surface	PROJECT DESIGNATION: 216-N-1 Sampling and Analysis Verification - Surface		SAF NO.: F10-256	AIR QUALITY: ☐	
ICE CHEST NO.: N/A	FIELD LOGBOOK NO.: HNF-N-507-14 pg 45	ACTUAL SAMPLE DEPTH: Surface	COA: 102222653D	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 CACN for all analytical work at WSCF is 461352ES20.□** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GCT applies to this SAF.□** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.

(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Manganese, Zinc); ICP/MS - 200.8 (Add-on) (Arsenic, Lead, Thorium-232); 200.8_HG - ICPMS (Mercury); Chromium Hex - 7196;

(2) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155);

(3) Americium-241; Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238); Strontium-89,90 -- Total Sr; Technetium-99 (Technetium-99);

ORIGINAL

A-6003-018(01/06)

CH2MHILL Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-259-061 PAGE 1 OF 2

COLLECTOR: Chamberlain

COMPANY CONTACT: WIDRIG, DL

TELEPHONE NO.: 376-2851

PROJECT COORDINATOR: WIDRIG, DL

PRILY CODE: BC

DATA TURNAROUND: 15 Days / 15 Days

SAMPLING LOCATION: 216-N-4 V-19

PROJECT DESIGNATION: 216-N-4 Sampling and Analysis Verification - Surface

SAF NO.: F10-258

AIR QUALITY:

ICE CHEST NO.:

FIELD LOGBOOK NO.: HNF-N-507-14 P.45

ACTUAL SAMPLE DEPTH: Surface

COA: 322222510

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, DS=Drum Solids, DW=Drum Water, S=Soil, SL=Sludge, O=Oil, SD=Sediment, T=Tissue, VEG=Vegetation, SW=Water, WI=Wipe, Z=Other

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool-4C	Cool-4C	None	None
HOLDING TIME	6 Months	1 yr/1 yr	6 months	6 Months
TYPE OF CONTAINER	Poly	Jar	Glass Bottle	Poly
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	250mL	500mL	1Liter
SAMPLE ANALYSIS	[illegible]	[illegible]	[illegible]	[illegible]

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME				
927206	006	SOIL	8-11-10	1258	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chamberlain	8-11-10 1540	SSU	8-11-10 1540
SSU-1	8-12-10 0700	R Blumenschein	8-12-10 0700
R Blumenschein	8-12-10 0730	TA Frazier	8-12-10 0730

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION: RECEIVED BY: TITLE: DATE/TIME:

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-258-061

PAGE 2 OF 2

COLLECTOR: Chamberlain	COMPANY CONTACT: Wilkins, DL	TELEPHONE NO.: 376-2658	PROJECT COORDINATOR: Wilkins, DL	PRICE CODE: 8C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: 216-N-4 V-49	PROJECT DESIGNATION: 216-N-4 Sampling and Analysis Verification Surface		SAF NO.: F10-258	AIR QUALITY:	
ICE CHEST NO.:	FIELD LOGBOOK NO.: HNF-N-507-14 Pg 45	ACTUAL SAMPLE DEPTH: Surface	COA: 302222510	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 CACN for all analytical work at WSCF is 401332ES20.☐** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.

(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Manganese, Zinc); ICP/MS - 200.8 (Add on) (Arsenic, Lead, Thorium-232); 200.8_HG - ICPMS (Mercury); Chromium Hex - 7196;

(2) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155);

(3) Americium-241; Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238); Strontium-89,90 -- Total Sr; Technetium-99 (Technetium-99);

ORIGINAL

CH2MHill Platteau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-258-062

PAGE 1 OF 2

COLLECTOR: Chamberlain

COMPANY CONTACT: WIDRIG, DL

TELEPHONE NO.: 376-2898

PROJECT COORDINATOR: WIDRIG, DL

PRICE CODE: 8C

DATA TURNAROUND: 15 Days / 15 Days

SAMPLING LOCATION: 216-N-4-V-26

PROJECT DESIGNATION: 216-N-5 Sampling and Analysis - Vertical or Surface

SAF NO.: F10-258

AIR QUALITY:

ICE CHEST NO.:

FIELD LOGBOOK NO.: HNF-N-507-14 Pg 45

ACTUAL SAMPLE DEPTH: Surface

COA: 3072326510

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

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

MATRIX*: L-Liquid, DL-Drum Liquids, DS-Drum Solids, C-Concrete, D-Oil, S-Soil, SD-Sediment, T-Tissue, V-Vegetation, W-Water, WI-Wipe, X-Other

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool<4C	Cool<4C	None	None
HOLDING TIME	6 Months	1 Week	6 Months	6 Months
TYPE OF CONTAINER	Glass	Jar	Vacuum Bottle - Poly	Glass
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	250mL	500mL	125mL
SAMPLE ANALYSIS	SEE PAGE 2 FOR SPECIAL INSTRUCTIONS	PCB - NRD	SEE PAGE 2 FOR SPECIAL INSTRUCTIONS	SEE PAGE 2 FOR SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
327837 007	SOIL	8-11-10	1317	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN / PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chamberlain	8-11-10 1540	SSA 3	8-11-10 1540
SSA-1	8-12-10 0700	R Ellingsworth	8-12-10 0700
R Ellingsworth	8-12-10 0730	TA Frazier	8-12-10 0730

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION: RECEIVED BY

FINAL SAMPLE DISPOSITION: DISPOSAL METHOD

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

CH2MHill Hanford Remediation Company

CHAIN OF CUSTODY /SAMPLE ANALYSIS REQUEST

F10-258-052

PAGE 2 OF 2

COLLECTOR: Chamberlain	COMPANY CONTACT: WORIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WORIG, DL	PRICE CODE: 8C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: 216-N-8-V-26	PROJECT DESIGNATION: 216-N-4 Sampling and Analysis - Verification - Surface		SAF NO.: F10-258	AIR QUALITY: ( )	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-587-14 Pg 45	ACTUAL SAMPLE DEPTH: Surface	COA: 30222ES10	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 CACN for all analytical work at WSCF is 401352ES20.□** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.□** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.

(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Manganese, Zinc); ICP/MS - 200.8 (Add on) (Arsenic, Lead, Thorium-232); 200.8, HG - ICPMS (Mercury); Chromium Hex - 7196;

(2) Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155);

(3) Americium-241; Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238); Strontium-89,90 -- Total Sr; Technetium-99 (Technetium-99);

ORIGINAL

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-258-003 PAGE 1 OF 2

COLLECTOR: Chamberlain

SAMPLING LOCATION: 216-H-4-N-20 D

ICE CHEST NO.:

SHIPPED TO: Waste Sampling & Characterization

COMPANY CONTACT: WERNIG, DL

TELEPHONE NO.: 376-2358

PROJECT DESIGNATION: 216-H-4 Sampling and Analysis - Verification - Surface

FIELD LOGBOOK NO.: HNF-N-507-14 Pg 45

ACTUAL SAMPLE DEPTH: Surface

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: WERNIG, DL

SAF NO.: F10-234

COA: 0522228516

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

PRICE CODE: BC

AIR QUALITY: ☐

DATA TURNAROUND: 15 Days / 15 Days

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

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

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

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool-4C	Cool-4C	None	None
HOLDING TIME	6 months	3 yrs/1 yr	6 months	6 months
TYPE OF CONTAINER	GP	G	Square Bottle Poly	GP
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	250mL	250mL	500mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
927208	SOIL	8-11-10	1307	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
G. Chamberlain	8-11-10 1540	SSU 1	8-11-10 1540
SSU-1	8-12-10 0700	Relinquished	8-12-10 0700
Relinquished	8-12-10 0730	TA Fraziers	8-12-10 0730

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

☐ ORIGINAL

LABORATORY SECTION: RECEIVED BY

FINAL SAMPLE DISPOSITION: DISPOSAL METHOD

DISPOSED BY

DATE/TIME

CH2MHILL Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F10-258-063

PAGE 2 OF 2

COLLECTOR: Chamberlain	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 376-2858	PROJECT COORDINATOR: WIDRIG, DL	PRICE CODE: 8C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: 216-N-4-W-26-D	PROJECT DESIGNATION: 216-N-4 Sampling and Analysis - Verification - Surface		SAF NO.: F10-258	AIR QUALITY: ☐	
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-507-14 Pg 45	ACTUAL SAMPLE DEPTH: Surface	COA: 302232E510	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 CACN for all analytical work at WSCF is 401352ES20.☐** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.☐** The laboratory shall report only the requested constituents of concern in all final data reports, and EDDs. QC results for non-requested constituents need not be reported, but samples chosen for matrix spike, and all spike compounds shall be identified in the final data report case narrative. No TICs shall be reported.
(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Manganese, Zinc); ICP/MS - 200.8 (Add-on) (Arsenic, Lead, Thorium-232); 200.8_HG - ICPMS (Mercury); Chromium Hex - 7196;
(2) Gamma Spectroscopy (Cesium 137, Cobalt-60, Europium-152, Europium-154, Europium-155);
(3) Americium-241; Isotopic Plutonium; Isotopic Uranium (Uranium-233/234, Uranium-235, Uranium-238); Strontium-89,90 -- Total Sr; Technetium-99 (Technetium-99);

ORIGINAL