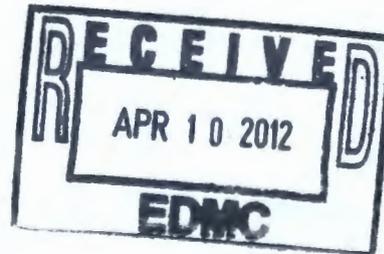




1213060

Data Validation Report for Fluor Hanford**VSR07-008
Project 200-CW-3 OU****Chemical & Radiochemical Validation - Level C**Validation Performed By: Carl Schowler Date: 06/07/2007Validation Reviewed By: Cheryl A. Schlessler Date: 06/07/2007

Date: 07 June 2007
To: Fluor Hanford Inc. (technical representative)
From: Analytical Quality Associates, Inc.
Project: 200-CW-3 Operable Unit
Subject: PCBs - Sample Data Group (SDG) WSCF20070837

INTRODUCTION

This memorandum presents the results of data validation for SDG WSCF20070837 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Method
B1NHK1	05/16/07	Soil	C	8082A
B1NHK2	05/16/07	Soil	C	8082A
B1NHK3	05/16/07	Soil	C	8082A
B1NHK4	05/16/07	Soil	C	8082A
B1NHK5	05/16/07	Soil	C	8082A
B1NHK6	05/16/07	Soil	C	8082A
B1NHL1	05/16/07	Soil	C	8082A
B1NHL2	05/16/07	Soil	C	8082A

Data validation was conducted in accordance with the FHI validation statement of work and the Sampling and Analysis Plan for Remediation of Select 200 North Area Waste Sites in the 200-CW-3 Operable Unit, DOE/RL-2006-65, Rev. 1 (SAP). Appendices 1 through 6 provide the following information as indicated below:

- Appendix 1. Glossary of Data Reporting Qualifiers
- Appendix 2. Summary of Data Qualification
- Appendix 3. Annotated Laboratory Reports
- Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
- Appendix 5. Data Validation Supporting Documentation
- Appendix 6. Additional Documentation Requested By Client

DATA QUALITY OBJECTIVES

• Holding Times and Sample Preservation

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements for PCBs are extraction within 14 days of sample collection and analysis within 40 days of sample extraction. Sample preservation requires chilling to 4 degrees Celsius.

The samples were extracted and analyzed within the prescribed holding times and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable.

Field Blanks

All field blank results were acceptable.

Equipment Blanks

All equipment blank results were acceptable.

- **Accuracy**

Accuracy is evaluated by reviewing surrogate results, matrix spike sample results, and laboratory control sample results.

Surrogates

All surrogate recoveries were acceptable. It should be noted that the data package PCB QC Report did not include the surrogate recoveries for the field samples. This information was provided by the laboratory and is included in Appendix 6 of this memorandum. The actual recovery acceptance limits are 50%-150%.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

Due to a laboratory misunderstanding, an MS/MSD pair was not performed, and an LCS/LCSD pair was performed instead. All aroclor results for all samples were non-detects and should be qualified as estimates and flagged "UJ."

Laboratory Control/Laboratory Control Duplicate Samples (LCS/LCSD)

The LCS and LCSD recoveries were acceptable. It should be noted that aroclor-1260 was the only analyte reported for the LCS/LCSD. Method 8082A guidance specifies aroclor-1016 and aroclor-1260 for LCS analyses. No sample data were qualified as a result.

- **Precision**

Precision is evaluated by reviewing MS/MSD results and field duplicate sample results. These QC results provide information on the laboratory reproducibility and whether

sampling activities are adequate to acquire consistent sample results. According to the SAP, precision criteria are only applicable when sample/replicate results are >5X to 10X the method detection limit (MDL).

MS/MSD Samples

Due to a laboratory misunderstanding, an MS/MSD pair was not performed, and an LCS/LCSD pair was performed instead. All aroclor results for all samples were non-detects and should be qualified as estimates and flagged "UJ." It should be noted that the LCS/LCSD relative percent difference (RPD) values were acceptable.

Field Duplicate Samples

All field duplicate results were acceptable.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs were below the CRDLs.

- **Completeness**

SDG WSCF20070837 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

Minor deficiencies leading to qualification of sample results as estimates were due to lack of matrix-specific accuracy and precision data. See the table in Appendix 2 for a listing of all affected sample results.

It should be noted that page six of COC R07-010-001 lists a collection date of 5-17-07, 0840 for sample B1NHL1. The actual collection date was 5-16-07, 0840.

REFERENCES

FHI, Contract #29774, *Validation of Radiological and Chemical Analytical Data*, Fluor Hanford Incorporated, August 24, 2006.

DOE/RL-2006-65, Rev.1, *Sampling and Analysis Plan for Remediation of Select 200 North Area Waste Sites in the 200-CW-3 Operable Unit*, January 2007.

Appendix 1
Glossary of Data Reporting Qualifiers

Qualifiers that may be applied by data validators in compliance with the FHI statement of work are as follows:

- **U** — The constituent was analyzed for and was not detected. The data should be considered usable for decision-making purposes.
- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the MDL. The data should be considered usable for decision-making purposes.
- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.
- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.
- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2
Summary of Data Qualification

PCB Data Qualification Summary			
SDG WSCF20070837	Reviewer: AQA	Project: 200-CW-3 OU	Page 1 of 1
Analyte(s)	Qualifier	Samples Affected	Reason
Aroclor-1016, -1221, -1232, -1242, -1248, -1254, -1260, -1262 & -1268	UJ	B1NHK1 - B1NHK6, B1NHL1 & B1NHL2	MS/MSD not performed

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000548
Client ID: B1NHK1

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Organic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
PCBs complete list Prep											05/21/07
PCBs complete list											
Aroclor-1016	12674-11-2	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1221	11104-28-2	LA-523-427	U	< 9.50	ug/kg	UJ		1.00	9.5		05/24/07
Aroclor-1232	11141-16-5	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1242	53469-21-9	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1248	12672-29-6	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1254	11097-69-1	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1260	11096-82-5	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1262	37324-23-5	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1268	11100-14-4	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07

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MDL=Minimum Detection Limit

C - The Analyte was found in the Associated Blank.(inorg)

E - Analyte is an estimate, has potentially larger errors.(org)

RQ=Result Qualifier

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

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

TP Err=Total Propagated Error

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

DF=Dilution Factor

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

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Page 2

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000549
Client ID: B1NHK2

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Organic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
PCBs complete list Prep											
PCBs complete list											
Aroclor-1016	12674-11-2	LA-523-427	U	< 4.70	ug/kg	UJ		1.00	4.7		05/24/07
Aroclor-1221	11104-28-2	LA-523-427	U	< 9.40	ug/kg	UJ		1.00	9.4		05/24/07
Aroclor-1232	11141-16-5	LA-523-427	U	< 4.70	ug/kg	UJ		1.00	4.7		05/24/07
Aroclor-1242	53469-21-9	LA-523-427	U	< 4.70	ug/kg	UJ		1.00	4.7		05/24/07
Aroclor-1248	12672-29-6	LA-523-427	U	< 4.70	ug/kg	UJ		1.00	4.7		05/24/07
Aroclor-1254	11097-89-1	LA-523-427	U	< 4.70	ug/kg	UJ		1.00	4.7		05/24/07
Aroclor-1260	11096-82-5	LA-523-427	U	< 4.70	ug/kg	UJ		1.00	4.7		05/24/07
Aroclor-1262	37324-23-5	LA-523-427	U	< 4.70	ug/kg	UJ		1.00	4.7		05/24/07
Aroclor-1268	11100-14-4	LA-523-427	U	< 4.70	ug/kg	UJ		1.00	4.7		05/24/07

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PROJECT HANFORD MANAGEMENT COMPANY

WSCF

ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000550
Client ID: BINHK3

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Organic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
PCBs complete list Prep											05/21/07
PCBs complete list											
Aroclor-1016	12674-11-2	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1221	11104-28-2	LA-523-427	U	< 9.60	ug/kg	UJ		1.00	9.6		05/24/07
Aroclor-1232	11141-16-5	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1242	53469-21-9	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1248	12672-29 6	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1254	11097-69-1	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1260	11096-82-5	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1262	37324-23-5	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1268	11100-14-4	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000551
Client ID: BINHL1

**KLAGES
WSCF**

Matrix: SOIL

Group #: WSCF20070837
Department: Organic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
PCBs complete list Prep											05/21/07
PCBs complete list											
Aroclor-1016	12674-11-2	LA-523-427	U	< 5.30	ug/kg	UJ		1.00	5.3		05/24/07
Aroclor-1221	11104-28-2	LA-523-427	U	< 11.0	ug/kg	UJ		1.00	11		05/24/07
Aroclor-1232	11141-16-5	LA-523-427	U	< 5.30	ug/kg	UJ		1.00	5.3		05/24/07
Aroclor-1242	53469-21-9	LA-523-427	U	< 5.30	ug/kg	UJ		1.00	5.3		05/24/07
Aroclor-1248	12672-29-6	LA-523-427	U	< 5.30	ug/kg	UJ		1.00	5.3		05/24/07
Aroclor-1254	11097-69-1	LA-523-427	U	< 5.30	ug/kg	UJ		1.00	5.3		05/24/07
Aroclor-1260	11096-82-5	LA-523-427	U	< 5.30	ug/kg	UJ		1.00	5.3		05/24/07
Aroclor-1262	37324-23-5	LA-523-427	U	< 5.30	ug/kg	UJ		1.00	5.3		05/24/07
Aroclor-1268	11100-14-4	LA-523-427	U	< 5.30	ug/kg	UJ		1.00	5.3		05/24/07

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000552
Client ID: B1NHL2

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Organic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
PCBs complete list Prep											05/21/07
PCBs complete list											
Aroclor-1016	12674-11-2	LA-523-427	U	< 4.30	ug/kg	UJ		1.00	4.3		05/24/07
Aroclor-1221	11104-28-2	LA-523-427	U	< 8.60	ug/kg	UJ		1.00	8.6		05/24/07
Aroclor-1232	11141-16-5	LA-523-427	U	< 4.30	ug/kg	UJ		1.00	4.3		05/24/07
Aroclor-1242	53469-21-9	LA-523-427	U	< 4.30	ug/kg	UJ		1.00	4.3		05/24/07
Aroclor-1248	12672-29-6	LA-523-427	U	< 4.30	ug/kg	UJ		1.00	4.3		05/24/07
Aroclor-1254	11097-89-1	LA-523-427	U	< 4.30	ug/kg	UJ		1.00	4.3		05/24/07
Aroclor-1260	11098-82-5	LA-523-427	U	< 4.30	ug/kg	UJ		1.00	4.3		05/24/07
Aroclor-1262	37324-23-5	LA-523-427	U	< 4.30	ug/kg	UJ		1.00	4.3		05/24/07
Aroclor-1268	11100-14-4	LA-523-427	U	< 4.30	ug/kg	UJ		1.00	4.3		05/24/07


 06-07-07

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000553
Client ID: B1NHK4

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Organic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
PCBs complete list Prep											
PCBs complete list											
Aroclor-1016	12674-11-2	LA-523-427	U	< 4.50	ug/kg	UJ		1.00	4.5		05/24/07
Aroclor-1221	11104-28-2	LA-523-427	U	< 9.00	ug/kg	UJ		1.00	9.0		05/24/07
Aroclor-1232	11141-16-5	LA-523-427	U	< 4.50	ug/kg	UJ		1.00	4.5		05/24/07
Aroclor-1242	53469-21-9	LA-523-427	U	< 4.50	ug/kg	UJ		1.00	4.5		05/24/07
Aroclor-1248	12672-29-6	LA-523-427	U	< 4.50	ug/kg	UJ		1.00	4.5		05/24/07
Aroclor-1254	11097-69-1	LA-523-427	U	< 4.50	ug/kg	UJ		1.00	4.5		05/24/07
Aroclor-1260	11096-82-5	LA-523-427	U	< 4.50	ug/kg	UJ		1.00	4.5		05/24/07
Aroclor-1262	37324-23-5	LA-523-427	U	< 4.50	ug/kg	UJ		1.00	4.5		05/24/07
Aroclor-1268	11100-14-4	LA-523-427	U	< 4.50	ug/kg	UJ		1.00	4.5		05/24/07

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Report WGPP/ver. 5.2

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000554
Client ID: B1NHK5

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Organic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
PCBs complete list Prep											
PCBs complete list											
Aroclor-1016	12674-11-2	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1221	11104-28-2	LA-523-427	U	< 9.50	ug/kg	UJ		1.00	9.5		05/24/07
Aroclor-1232	11141-16-5	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1242	53469-21-9	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1248	12672-29-6	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1254	11097-69-1	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1260	11096-82-5	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1262	37324-23-5	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07
Aroclor-1268	11100-14-4	LA-523-427	U	< 4.80	ug/kg	UJ		1.00	4.8		05/24/07

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 06-07-07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000555
Client ID: B1NHK6

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Organic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
PCBs complete list Prep											05/21/07
PCBs complete list											
Aroclor-1016	12674-11-2	LA-523-427	U	< 4.40	ug/kg	UJ		1.00	4.4		05/24/07
Aroclor-1221	11104-28-2	LA-523-427	U	< 8.80	ug/kg	UJ		1.00	8.8		05/24/07
Aroclor-1232	11141-16-5	LA-523-427	U	< 4.40	ug/kg	UJ		1.00	4.4		05/24/07
Aroclor-1242	53489-21-9	LA-523-427	U	< 4.40	ug/kg	UJ		1.00	4.4		05/24/07
Aroclor-1248	12672-29-6	LA-523-427	U	< 4.40	ug/kg	UJ		1.00	4.4		05/24/07
Aroclor-1254	11097-69-1	LA-523-427	U	< 4.40	ug/kg	UJ		1.00	4.4		05/24/07
Aroclor-1260	11096-82-5	LA-523-427	U	< 4.40	ug/kg	UJ		1.00	4.4		05/24/07
Aroclor-1262	37324-23-5	LA-523-427	U	< 4.40	ug/kg	UJ		1.00	4.4		05/24/07
Aroclor-1268	11100-14-4	LA-523-427	U	< 4.40	ug/kg	UJ		1.00	4.4		05/24/07

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 06-07-07

MDL = Minimum Detection Limit

C - The Analyte was found in the Associated Blank.(inorg)

E - Analyte is an estimate, has potentially larger errors.(org)

RQ = Result Qualifier

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

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

TP Err = Total Propagated Error

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

DF = Dilution Factor

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	WSCF20070837
Sample Matrix	SOLID
Sample Visual	N/A
SAF Number	R07-010
Data Deliverable	Summary Report

Introduction

Thirteen (13) soil samples from the 200-CW-3 Operable Unit Trench Bottoms and Side Walls were received at the WSCF Laboratory on May 17, 2007. The samples were received in a cool condition with ice present in the coolers. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *200-CW-3 Operable Unit Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 4.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report*, pages 15 through 17, for a complete listing of approved analytical methods used.

General Comments

With the exception of tritium, all samples were taken using the Multi-Increment Sampling (MIS) method. The entire sample aliquot in a given sample bottle was analyzed or extracted for analysis. QC Matrix Spikes, Matrix Spike Duplicates or Sample Duplicates were also either analyzed or extracted from the entire contents of each sample bottle used.

Tritium samples were taken as discreet samples. The QC associated with the tritium was performed on aliquots taken from the same bottle as the sample that was analyzed.

Organic Comments

Sample results are moisture corrected and reported on dry weight basis.

PCBs – The holding time for this analysis was met. A Blank, Laboratory Control Sample and Laboratory Control Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 26 for QC details.

- Due to a misunderstanding at WSCF, a Matrix Spike and Matrix Spike Duplicate were not analyzed. Instead a soil matrix Laboratory Control Samples was extracted and analyzed in duplicate in order to establish Analytical Precision. In addition surrogates (compounds spiked into all samples and QC analyzed) showed good recovery.

All QC controls are within the established limits.

Inorganic Comments

ICP-MS Metals (Total Acid Soluble) – The holding time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 44 through 48 for QC details. Analytical Notes:

- Thorium results listed in the report represent Th-232 exclusively.
- Copper and Tin present above the MDL in the Laboratory Blanks. Affected samples are “C” flagged where appropriate.
- Copper Matrix Spike and Matrix Spike Duplicate values were acceptable; however the RPD reported at 32.4% is above the acceptable limit of 30.0%.

All other QC controls are within the established limits.

Hexavalent Chromium - The holding time for this analysis was met. A Blank, Laboratory Control Sample, Sample Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with this analytical batch of less than 20 samples. See page 49 for QC details.

- The Matrix Spike and Matrix Spike recoveries were below the WSCF established limit indicating probable matrix interferences, however the Relative Percent Difference (RPD) between the two recoveries was within limits.

All other QC controls are within the established limits.

Percent Solids – analyzed for organic moisture correction.

Radiochemistry Comments

There are no holding times associated with WSCF radiochemical methods.

Plutonium Isotopic - A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 74 through 75 for QC details. Analytical Notes:

- The duplicate RPD reported at 31.77% is above the client’s acceptable limit of 30%.

All other QC controls are within the established limits.

Americium-241 – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 76 through 77 for QC details. All QC controls are within the established limits.

Uranium Isotopic – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 78 through 79 for QC details.

Analytical notes:

- Uranium - 238 duplicate RPD is above normal WSCF acceptable range, however it is within the client's acceptance limits for precision.
- Uranium – 235 duplicate RPD is above normal WSCF acceptable range, however it is within the client's acceptance limits for precision.
- Uranium – 234 duplicate RPD reported at 42.1% is above the client's acceptable limit of 30%.

All other QC controls are within the established limits.

Technetium-99 - A Blank, Laboratory Control Sample, Matrix Spike and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 80 for QC details.

All QC controls are within the established limits.

Gamma Energy Analysis (GEA) – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 81 through 83 for QC details.

- Eu-152 duplicate RPD is above normal WSCF acceptable range; however it is within the client's acceptance limits for precision.

All QC controls are within the established limits.

Strontium – 89/90 – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 84 through 85 for QC details.

- Sample duplicate RPD is above normal WSCF acceptable range; however it is within the client's acceptance limits for precision.

All QC controls are within the established limits.

Tritium – A Blank, Laboratory Control Sample, Matrix Spike and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 86 for QC details. All QC controls are within the established limits.

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.



John E. Trechter
WSCF Client Services

5/31

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

R07-010-001

PAGE 1 OF 8

COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE 8C

DATA
TURNAROUND

SAMPLING LOCATION
216-N-5/Bottom

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

15 Days /
15 Days

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.
HNF-N-507-3

COA
122333E520

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

20070837

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK1		S	5-16-07	0814	1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG - ICPMS;	None
B1NHK1	W07000054E	S			1X60mL G/P	Chromium Hex - 7196;	21g Cool 4C
B1NHK1		S			1X60mL aG	PCBs - 8082;	22g Cool 4C
B1NHK1		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy {Co-60, Cs-137, Eu-152, Eu-154, Eu-155}	54g None
B1NHK1		S			1X60mL G/P	Americium-241;	757g None
B1NHK1		S			1X60mL G/P	Isotopic Plutonium;	25g None
B1NHK1		S			1X60mL G/P	Isotopic Uranium;	22g None
							22g None

ICED
Initial Date

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM
J.G. HOGAN

DATE/TIME
MAY 17 2007

RECEIVED BY/STORED IN

KLAGES

DATE/TIME
MAY 17 2007

** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
** WSCF is to report the complete list of analytes for Metals and GEAs.
** Reporting format the same as GPP, including QC.
** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox.
** Final reports are to be uploaded into HEIS.

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

MATRIX*

OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK1		S	5-16-07	0814	1X60mL G/P	Strontium-89,90 - Total Sr;	None
B1NHK1		S			1X60mL G/P	Technetium-99;	None
B1NHK1		S			1X60mL G/P	Percent Solids;	None
B1NHK2		S		0850	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	None
B1NHK2	549	S			1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHK2		S			1X60mL gG	PCBs - 8082;	Cool 4C
B1NHK2		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	None

ICED
VP Initial
 Date

23g
22g
20g
22g
23g
59g
721g

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM JG HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN <i>VP</i>
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN

** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
 ** WSCF is to report the complete list of analytes for Metals and GEA.
 ** Reporting format the same as GPP, including QC.
 ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox.
 ** Final reports are to be uploaded into HEIS.

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

Page 24 of 230

92 of 104

COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE 8C

DATA
TURNAROUND

SAMPLING LOCATION
216-N-5/Bottom

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

15 Days /
15 Days

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.

COA
122333E520

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.

N/A

BILL OF LADING/AIR BILL NO.

N/A

ICED
Initial
Date

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK2		S	5-16-07	0850	1X60mL G/P	Americium-241;	None
B1NHK2		S			1X60mL G/P	Isotopic Plutonium;	24g None
B1NHK2		S			1X60mL G/P	Isotopic Uranium;	26g None
B1NHK2		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	21g None
B1NHK2		S			1X60mL G/P	Technetium-99;	25g None
B1NHK2		S			1X60mL G/P	Percent Solids;	22g None
B1NHK3	550	S		0925	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	20g 22g None

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM
G. HOGAN

0910

DATE/TIME
MAY 17 2007

RECEIVED BY/STORED IN
KRC

0910

DATE/TIME
MAY 17 2007

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RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE BC	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED

 Initial Date

MATRIX* DL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK3		S	5-16-07	0925	1X60mL G/P	Chromium Hex - 7196;	Cool 4C 25g
B1NHK3		S			1X60mL aG	PCBs - 8082;	Cool 4C 62g
B1NHK3		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	None 726g
B1NHK3		S			1X60mL G/P	Ameridium-241;	None 23g
B1NHK3		S			1X60mL G/P	Isotopic Plutonium;	None 23g
B1NHK3		S			1X60mL G/P	Isotopic Uranium;	None 23g
B1NHK3		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	None 26g

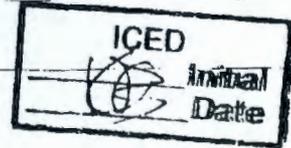
Page 26 of 230

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN 	DATE/TIME MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

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

94 of 104

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE BC	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		



MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

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SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK3		S	5-16-07	0925	1X60mL G/P	Technetium-99;	None
B1NHK3		S			1X60mL G/P	Percent Solids;	None
B1NHK7	560	S		0925	1X120mL G	Tritium - Ion Ex;	None
B1NHK8	561	S		0739	1X120mL G	Tritium - Ion Ex;	None
B1NHL1	561	S		0742	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	None
B1NHL1	551	S		0840	1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHL1		S			1X60mL aG	PCBs - 8082;	Cool 4C

28g
21g
190g
181g
20g
20g
56g

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN <i>[Signature]</i>	DATE/TIME MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEAs. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

95 of 104

COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE BC

DATA
TURNAROUND

SAMPLING LOCATION
216-N-5/Bottom

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

15 Days /
15 Days

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.
HNF-N-507-3

COA
122333ES20

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO
Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

ICED
Initial
Date

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

Page 28 of 230

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL1		S	5-17-07	0840	1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	None
B1NHL1		S	↓	↓	1X60mL G/P	Americium-241;	524g None
B1NHL1		S			1X60mL G/P	Isotopic Plutonium;	23g None
B1NHL1		S			1X60mL G/P	Isotopic Uranium;	21g None
B1NHL1		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	24g None
B1NHL1		S			1X60mL G/P	Technetium-99;	21g None
B1NHL1		S			1X60mL G/P	Percent Solids;	20g None
B1NHL1		S					23g None

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
** WSCF is to report the complete list of analytes for Metals and GEA.
** Reporting format the same as GPP, including QC.
** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox.
** Final reports are to be uploaded into HEIS.

J.G. HOGAN
RELINQUISHED BY/REMOVED FROM

MAY 17 2007

RECEIVED BY/STORED IN

MAY 17 2007

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

96 of 104

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
[Signature] Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL2		S	5-16-07	0748	1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG - ICPMS;	None
B1NHL2	552	S			1X60mL G/P	Chromium Hex - 7196;	23g Cool 4C
B1NHL2		S			1X60mL aG	PCBs - 8082;	21g Cool 4C
B1NHL2		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy {Co-60, Cs-137, Eu-152, Eu-154, Eu-155}	56g None
B1NHL2		S			1X60mL G/P	Americium-241;	610g None
B1NHL2		S			1X60mL G/P	Isotopic Plutonium;	21g None
B1NHL2		S			1X60mL G/P	Isotopic Uranium;	20g None
B1NHL2		S			1X60mL G/P	Isotopic Uranium;	20g None

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.G. HOGAN <i>[Signature]</i>	RECEIVED BY/STORED IN <i>[Signature]</i>	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.
DATE/TIME MAY 17 2007	DATE/TIME MAY 17 2007	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	

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

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COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE BC

DATA
TURNAROUND

SAMPLING LOCATION
216-N-5/Bottom

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

15 Days /
15 Days

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.
HNF-N-507-3

COA
122333ES20

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

ICED
Initial
Date

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL2		S	5-16-07	0748	1X60mL G/P	Strontium-89,90 -- Total Sr;	None
B1NHL2		S			1X60mL G/P	Technetium-99;	21g None
B1NHL2		S			1X60mL G/P	Percent Solids;	22g None
B1NHL3		S		0610	1X120mL G	Tritium - Ion Ex;	20g 109g None

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CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM
G. HOGAN
DATE/TIME
MAY 17 2007

RECEIVED BY/STORED IN
[Signature]
DATE/TIME
MAY 17 2007

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** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox.
** Final reports are to be uploaded into HEIS.

RELINQUISHED BY/REMOVED FROM

RECEIVED BY/STORED IN

RELINQUISHED BY/REMOVED FROM

RECEIVED BY/STORED IN

RELINQUISHED BY/REMOVED FROM

RECEIVED BY/STORED IN

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED

 Initial Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK4	553	S	5-16-07	0930	1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG - ICPMS;	None
B1NHK4		S			1X60mL G/P	Chromium Hex - 7196;	22g Cool 4C
B1NHK4		S			1X60mL aG	PCBs - 8082;	28g Cool 4C
B1NHK4		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy {Co-60, Cs-137, Eu-152, Eu-154, Eu-155}	53g None
B1NHK4		S			1X60mL G/P	Americium-241;	719g None
B1NHK4		S			1X60mL G/P	Isotopic Plutonium;	24g None
B1NHK4		S			1X60mL G/P	Isotopic Uranium;	24g None
							25g

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN 	DATE/TIME MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analyses for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
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		

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

COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE 8C

DATA TURNAROUND

SAMPLING LOCATION
216-N-5/Sidewall

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

15 Days /
15 Days

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.
HNF-N-507-3

COA
122333ES20

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO
Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

ICED
Initial
Date

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

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SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK4		S	5-16-07	0930	1X60mL G/P	Strontium-89,90 -- Total Sr;	None
B1NHK4		S			1X60mL G/P	Technetium-99;	26g None
B1NHK4		S			1X60mL G/P	Percent Solids;	25g None
B1NHK5	554	S		1058	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	23g None
B1NHK5		S			1X60mL G/P	Chromium Hex - 7196;	20g Cool 4C
B1NHK5		S			1X60mL aG	PCBs - 8082;	24g Cool 4C
B1NHK5		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	63g None
							703g

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J. Hogan	MAY 17 2007	[Signature]	MAY 17 2007

** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
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 ** Reporting format the same as GPP, including QC.
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 ** Final reports are to be uploaded into HEIS.

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

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED

 Initial Date

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHKS		S	5-16-07	1058	1X60mL G/P	Ameridium-241;	None
B1NHKS		S			1X60mL G/P	Isotopic Plutonium;	21g None
B1NHKS		S			1X60mL G/P	Isotopic Uranium;	22g None
B1NHKS		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	23g None
B1NHKS		S			1X60mL G/P	Technetium-99;	21g None
B1NHKS		S			1X60mL G/P	Percent Solids;	22g None
B1NHK6	555	S		1112	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG-ICPMS;	21g 20g None

Page 33 of 230

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEAs. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
J.G. HOGAN	MAY 17 2007		MAY 17 2007		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE BC	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED
JB
 Initial Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK6		S	5-16-07	1112	1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHK6		S			1X60mL aG	PCBs - 8082;	24g Cool 4C
B1NHK6		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	56g None
B1NHK6		S			1X60mL G/P	Americium-241;	694g None
B1NHK6		S			1X60mL G/P	Isotopic Plutonium;	25g None
B1NHK6		S			1X60mL G/P	Isotopic Uranium;	22g None
B1NHK6		S			1X60mL G/P	Strontium-89,90 - Total Sr;	24g None
							22g

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
J.G. HOGAN <i>JGH</i>	MAY 17 2007	<i>KL</i>	MAY 17 2007		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED
JB Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK6		S	5-16-07	1112	1X60mL G/P	Technetium-99;	None
B1NHK6		S		1112	1X60mL G/P	Percent Solids;	21g None
B1NHK9		S		1125	1X120mL G	Tritium - Ion Ex;	21g None
B1NH10		S		1129	1X120mL G	Tritium - Ion Ex;	134g None
B1NJL6		S		1120	1X250mL G	Tritium - Ion Ex;	108g None

Wet access 7

SSS

SSG

W
5-16-07

↓

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
J.G. HOGAN	MAY 17 2007	<i>[Signature]</i>	MAY 17 2007		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

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Appendix 5

Data Validation Supporting Documentation

PESTICIDE/PCB DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 200-CW-3 OU			DATA PACKAGE: VSR07-008		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 06-07-2007	
			SDG: WSCF20070837		
ANALYSES PERFORMED					
SW-846 8081	SW-846 8081 (TCLP)	SW-846 8082 X	SW-846 8081 (TCLP)		
SAMPLES/MATRIX All soil samples, B1NHK1 - B1NHK6, B1NHL1 & B1NHL2					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? Yes No N/A

Comments: Page 6 of COC R07-010-001 lists a collection date of 5-17-07 0840 for sample B1NHL1. The actual collection date is 5-16-07 0840.

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations acceptable? Yes No N/A

Continuing calibrations acceptable? Yes No N/A

Standards traceable? Yes No N/A

Standards expired? Yes No N/A

Calculation check acceptable? Yes No N/A

DDT and endrin breakdowns acceptable? Yes No N/A

Comments: _____

PESTICIDE/PCB DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

Calibration blanks analyzed? (Levels D, E) Yes No N/A

Calibration blank results acceptable? (Levels D, E) Yes No N/A

Laboratory blanks analyzed? Yes No N/A

Laboratory blank results acceptable? Yes No N/A

Field/trip blanks analyzed? (Levels C, D, E) Yes No N/A

Field/trip blank results acceptable? (Levels C, D, E) Yes No N/A

Transcription/calculation errors? (Levels D, E) Yes No N/A

Comments: None

4. ACCURACY (Levels C, D, and E)

Surrogates analyzed? Yes No N/A

Surrogate recoveries acceptable? Yes No N/A

Surrogates traceable? (Levels D, E) Yes No N/A

Surrogates expired? (Levels D, E) Yes No N/A

MS/MSD samples analyzed? Yes No N/A

MS/MSD results acceptable? Yes No N/A

MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A

MS/MSD standards expired? (Levels D, E) Yes No N/A

LCS/BSS samples analyzed? Yes No N/A

LCS/BSS results acceptable? Yes No N/A

Standards traceable? (Levels D, E) Yes No N/A

Standards expired? (Levels D, E) Yes No N/A

Transcription/calculation errors? (Levels D, E) Yes No N/A

Performance audit sample(s) analyzed? Yes No N/A

Performance audit sample results acceptable? Yes No N/A

Comments: For LCS and LCSD, aroclor-1260 only was reported. It should be noted
that Method 8082A recommends aroclor-1016 and aroclor-1260 to be
reported for LCS samples.
MS/MSD not analyzed due to laboratory misunderstanding.

PESTICIDE/PCB DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

- Duplicate RPD values acceptable? Yes No N/A
- Duplicate results acceptable? Yes No N/A
- MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A
- MS/MSD standards expired? (Levels D, E) Yes No N/A
- Field duplicate RPD values acceptable? Yes No N/A
- Field split RPD values acceptable? Yes No N/A
- Transcription/calculation errors? (Levels D, E) Yes No N/A

Comments: Duplicate RPD above refers to LCS/LCSD. MS/MSD not performed.

6. SYSTEM PERFORMANCE (Levels D and E)

- Chromatographic performance acceptable? Yes No N/A
- Positive results resolved acceptably? Yes No N/A

Comments: _____

7. HOLDING TIMES (all levels)

- Samples properly preserved? Yes No N/A
- Sample holding times acceptable? Yes No N/A

Comments: None

PESTICIDE/PCB DATA VALIDATION CHECKLIST

8. COMPOUND IDENTIFICATION, QUANTITATION, AND DETECTION LIMITS (all levels)

- Compound identification acceptable? (Levels D, E) Yes No N/A
- Compound quantitation acceptable? (Levels D, E) Yes No N/A
- Results reported for all requested analyses? Yes No N/A
- Results supported in the raw data? (Levels D, E) Yes No N/A
- Samples properly prepared? (Levels D, E) Yes No N/A
- Detection limits meet RDL? Yes No N/A
- Transcription/calculation errors? (Levels D, E) Yes No N/A

Comments: None

9. SAMPLE CLEANUP (Levels D and E)

- Fluorocil ® (or other absorbent) cleanup performed? Yes No N/A
- Lot check performed? Yes No N/A
- Check recoveries acceptable? Yes No N/A
- GPC cleanup performed? Yes No N/A
- GPC check performed? Yes No N/A
- GPC check recoveries acceptable? Yes No N/A
- GPC calibration performed? Yes No N/A
- GPC calibration check performed? Yes No N/A
- GPC calibration check retention times acceptable? Yes No N/A
- Check/calibration materials traceable? Yes No N/A
- Check/calibration materials Expired? Yes No N/A
- Analytical batch QC given similar cleanup? Yes No N/A
- Transcription/Calculation Errors? Yes No N/A

Comments: _____

Appendix 6

Additional Documentation Requested By Client

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: PCBs complete list

Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	Aroclor-1016	12674-11-2	< 10	n/a	UGKG					U	05/24/07
BLANK	Aroclor-1221	11104-28-2	< 20	n/a	ug/Kg					U	05/24/07
BLANK	Aroclor-1232	11141-16-5	< 10	n/a	ug/Kg					U	05/24/07
BLANK	Aroclor-1242	53469-21-9	< 10	n/a	ug/Kg					U	05/24/07
BLANK	Aroclor-1248	12672-29-6	< 10	n/a	ug/Kg					U	05/24/07
BLANK	Aroclor-1254	11097-69-1	< 10	n/a	ug/Kg					U	05/24/07
BLANK	Aroclor-1260	11096-82-5	< 10	n/a	ug/Kg					U	05/24/07
BLANK	Aroclor-1262	37324-23-5	< 10	n/a	ug/Kg					U	05/24/07
BLANK	Aroclor-1268	11100-14-4	< 10	n/a	ug/Kg					U	05/24/07
BLANK	Decachlorobiphenyl	2051-24-3	155.00	77.500	% Recov	50.000	150.000				05/24/07
BLANK	Tetrachloro-m-xylene	877-09-8	185.42	92.700	% Recov	50.000	150.000				05/24/07
LCS	Aroclor-1260	11096-82-5	178.72	89.400	% Recov	70.000	130.000				05/24/07
LCS	Decachlorobiphenyl	2051-24-3	155.76	77.900	% Recov	50.000	150.000				05/24/07
LCS	Tetrachloro-m-xylene	877-09-8	191.61	95.800	% Recov	50.000	150.000				05/24/07
LCS-DUP	Aroclor-1260	11096-82-5	179.64	89.800	% Recov	70.000	130.000				05/24/07
LCS-DUP	Decachlorobiphenyl	2051-24-3	155.88	77.900	% Recov	50.000	150.000				05/24/07
LCS-DUP	Tetrachloro-m-xylene	877-09-8	184.27	92.100	% Recov	50.000	150.000				05/24/07

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FORM 2
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: _____ Contract: _____
 Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: P070524S
 GC Column(1):DB-5 ID:0.25 (mm)

	CLIENT SAMPLE NO.	S1 %REC #	TCX %REC #	S3 %REC #	S4 %REC #	S5 %REC #	S6 %REC #	TOT OUT
	=====	=====	=====	=====	=====	=====	=====	=====
01	PBLK361	78	93					
02	LCS361	78	96					
03	LCSD361	78	92					
04	B1NHK1	70	86					
05	B1NHK2	69*	79					
06	B1NHK3	73	89					
07	B1NHL1	82	96					
08	B1NHL2	80	97					
09	B1NHK4	100	112					
10	B1NHK5	70	92					
11	B1NHK6	68*	90					
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

QC LIMITS

S1 = Decachlorobiphenyl (DC (70-130)
 S2 (TCX) = Tetrachloro-m-Xylene (70-130)

Column to be used to flag recovery values
 * Values outside of QC limits
 D Surrogate diluted out

Date: 07 June 2007
 To: Fluor Hanford Inc. (technical representative)
 From: Analytical Quality Associates, Inc.
 Project: 200-CW-3 Operable Unit
 Subject: Inorganics - Sample Data Group (SDG) WSCF20070837

INTRODUCTION

This memorandum presents the results of data validation for SDG WSCF20070837 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B1NHK1	05/16/07	Soil	C	200.8
B1NHK2	05/16/07	Soil	C	200.8
B1NHK3	05/16/07	Soil	C	200.8
B1NHK4	05/16/07	Soil	C	200.8
B1NHK5	05/16/07	Soil	C	200.8
B1NHK6	05/16/07	Soil	C	200.8
B1NHL1	05/16/07	Soil	C	200.8
B1NHL2	05/16/07	Soil	C	200.8

Data validation was conducted in accordance with the FHI validation statement of work and the Sampling and Analysis Plan for Remediation of Select 200 North Area Waste Sites in the 200-CW-3 Operable Unit, DOE/RL-2006-65, Rev. 1 (SAP). Appendices 1 through 6 provide the following information as indicated below:

- Appendix 1. Glossary of Data Reporting Qualifiers
- Appendix 2. Summary of Data Qualification
- Appendix 3. Annotated Laboratory Reports
- Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
- Appendix 5. Data Validation Supporting Documentation
- Appendix 6. Additional Documentation Requested By Client

DATA QUALITY OBJECTIVES

• **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements for ICP metals are analysis within 180 days of sample collection, except for mercury that has a 28-day holding time from sample collection to analysis. There are no specific sample preservation requirements.

The samples were analyzed within the prescribed holding time and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable with the following exceptions. The Cu and Sn laboratory blank results were > the method detection limits (MDLs). The Cu results for samples B1NHL1 (equipment blank) and B1NHL2 (field blank) were detects at <5X the blank result and should be qualified as non-detect estimates and flagged "UJ." The remaining Cu sample results were detects >5X the blank result and should not be qualified due to the blank infraction. The Sn results for all samples *except* B1NHL1 and B1NHL2 were detects at <5X the blank result and should be qualified as non-detect estimates and flagged "UJ." The Sn results for samples B1NHL1 and B1NHL2 were non-detects and should not be qualified.

Field Blanks

All field blank results were acceptable with the following possible exceptions. Al, Cu, Mn & Se were detected in field blank B1NHL2. The Cu result has been flagged "UJ" due to laboratory blank contamination. The exact matrix of the field blank, and possible indigenous analytes, were not supplied in the data package.

Equipment Blanks

All equipment blank results were acceptable with the following possible exceptions. Al, Ba, Cr, Cu, Mn, Mo, Se, Sr & Th were detected in equipment blank B1NHL1. The Cu result has been flagged "UJ" due to laboratory blank contamination. The exact matrix of the equipment blank, and possible indigenous analytes, were not supplied in the data package.

- **Accuracy**

Accuracy is evaluated by reviewing matrix spike sample results and laboratory control sample results.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

All MS/MSD recoveries were acceptable.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

- **Precision**

Precision is evaluated by reviewing MS/MSD results and field duplicate sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, precision criteria are only applicable when sample/replicate results are >5X to 10X the MDL.

MS/MSD Samples

All MS/MSD relative percent difference (RPD) values were acceptable with the following exception. The RPD for Cu was >30%. The Cu results for all samples *except* B1NHL1 and B1NHL2 were detects and should be qualified as estimates and flagged "J." The Cu results for samples B1NHL1 and B1NHL2 were detects and would be qualified as estimates and flagged "J", but have been flagged "UJ" due to laboratory blank contamination.

Field Duplicate Samples

All field duplicate results were acceptable with the following exceptions. Samples B1NHK1 and B1NHK2 had a U RPD = 97%, and samples B1NHK4 and B1NHK5 had an Mn RPD = 89%. No sample data were qualified as a result per data validation procedure guidance.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs were below the CRDLs with the following exceptions. All sample MDLs for barium were approximately 2X the CRDL of 0.1 mg/kg. All barium sample results were > the MDLs *except* sample B1NHL2. No sample data were qualified as a result.

- **Completeness**

SDG WSCF20070837 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

Minor deficiencies leading to qualification of sample results as estimates were due to laboratory blank infractions for Cu and Sn, and an MS/MSD RPD infraction for Cu. See the table in Appendix 2 for a listing of all affected sample results.

It should be noted that the laboratory "X" flagged the Sn result for sample B1NHK4. There was no explanation in the lab narrative or documentation in the data package concerning this flag. It is believed that this result should be "C" flagged by the lab. The result was flagged "UJ" during the data validation process.

It should also be noted that page six of COC R07-010-001 lists a collection date of 5-17-07, 0840 for sample B1NHL1. The actual collection date was 5-16-07, 0840.

REFERENCES

FHI, Contract #29774, *Validation of Radiological and Chemical Analytical Data*, Fluor Hanford Incorporated, August 24, 2006.

DOE/RL-2006-65, Rev.1, *Sampling and Analysis Plan for Remediation of Select 200 North Area Waste Sites in the 200-CW-3 Operable Unit*, January 2007.

Appendix 1
Glossary of Data Reporting Qualifiers

Qualifiers that may be applied by data validators in compliance with the FHI statement of work are as follows:

- **U** — The constituent was analyzed for and was not detected. The data should be considered usable for decision-making purposes.
- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the MDL. The data should be considered usable for decision-making purposes.
- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.
- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.
- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2
Summary of Data Qualification

Inorganic Data Qualification Summary			
SDG WSCF20070837	Reviewer: AQA	Project: 200-CW-3	Page 1 of 1
Analyte(s)	Qualifier	Samples Affected	Reason
Cu	UJ	B1NHL1 & B1NHL2	Laboratory blank contamination & poor MS/MSD precision
Cu	J	B1NHK1 - B1NHK6	Poor MS/MSD precision
Sn	UJ	B1NHK1 - B1NHK6	Laboratory blank contamination

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample #: W070000548
Client ID: B1NHK1

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

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

Hexavalent Chromium Prep											05/23/07
Hexavalent Chromium											05/23/07
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg			1.00	0.10		05/21/07
ICP-200.8 MS All possible meta Prep											05/24/07
ICP-200.8 MS All possible meta											06-07-07
Aluminum	7429-90-5	LA-505-412		4.98e + 03	mg/kg			0.98	4.89		05/25/07
Manganese	7439-96-5	LA-505-412		262	mg/kg			0.98	0.0979		05/25/07
Nickel	7440-02-0	LA-505-412		7.78	mg/kg			0.98	0.196		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0979	mg/kg			0.98	0.0979		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.294	mg/kg			0.98	0.294		05/25/07
Barium	7440-39-3	LA-505-412		58.3	mg/kg			0.98	0.196		05/25/07
Beryllium	7440-41-7	LA-505-412		0.258	mg/kg			0.98	0.0489		05/25/07
Cadmium	7440-43-9	LA-505-412		0.0993	mg/kg			0.98	0.0979		05/25/07
Chromium	7440-47-3	LA-505-412		5.96	mg/kg			0.98	0.489		05/25/07
Cobalt	7440-48-4	LA-505-412		6.68	mg/kg			0.98	0.0489		05/25/07
Copper	7440-50-8	LA-505-412	X	13.4	mg/kg	J		0.98	0.0979		05/25/07
Vanadium	7440-62-2	LA-505-412		28.1	mg/kg			0.98	0.196		05/25/07
Zinc	7440-68-6	LA-505-412		32.4	mg/kg			0.98	0.783		05/25/07
Lead	7439-92-1	LA-505-412		4.86	mg/kg			0.98	0.0979		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0489	mg/kg			0.98	0.0489		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.230	mg/kg			0.98	0.0489		05/25/07
Thorium	7440-29-1	LA-505-412		2.45	mg/kg			0.98	0.0979		05/25/07
Uranium	7440-61-1	LA-505-412		0.380	mg/kg			0.98	0.0489		05/25/07
Arsenic	7440-38-2	LA-505-412		2.46	mg/kg			0.98	0.391		05/25/07
Selenium	7782-49-2	LA-505-412		0.653	mg/kg			0.98	0.294		05/25/07

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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

C - The Analyte was found in the Associated Blank.(inorg)

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

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

E - Analyte is an estimate, has potentially larger errors.(org)

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000548
Client ID: B1NHK1

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-28-0	LA-505-412		0.120	mg/kg			0.98	0.0979		05/25/07
Strontium	7440-24-6	LA-505-412		24.0	mg/kg	LS		0.98	0.0979		05/25/07
Tin	7440-31-5	LA-505-412	C	0.340	mg/kg	UJ	06-07-07	0.98	0.0489		05/25/07
Total solids											
Total solids	TS	LA-519-412		98.1	Percent			1.00	0.0		05/22/07

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MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

C - The Analyte was found in the Associated Blank.(inorg)

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

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

E - Analyte is an estimate, has potentially larger errors.(org)

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

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000549
Client ID: B1NHK2

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

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

~~Hexavalent Chromium Prep~~

~~Hexavalent Chromium~~

Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg			1.00	0.10		05/21/07
--------------------------------	-----------------------	-----------------------	--------------	-----------------------	------------------	-------------	-------------	-----------------	-----------------	-------------	---------------------

ICP-200.8 MS All possible meta Prep

ICP-200.8 MS All possible meta

Aluminum	7429-90-5	LA-505-412		5.17e+03	mg/kg			0.98	4.92		05/25/07
Manganese	7439-96-5	LA-505-412		260	mg/kg			0.98	0.0984		05/25/07
Nickel	7440-02-0	LA-505-412		8.82	mg/kg			0.98	0.197		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0984	mg/kg			0.98	0.0984		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.295	mg/kg			0.98	0.295		05/25/07
Barium	7440-39-3	LA-505-412		58.1	mg/kg			0.98	0.197		05/25/07
Beryllium	7440-41-7	LA-505-412		0.329	mg/kg			0.98	0.0492		05/25/07
Cadmium	7440-43-9	LA-505-412		0.161	mg/kg			0.98	0.0984		05/25/07
Chromium	7440-47-3	LA-505-412		6.48	mg/kg			0.98	0.492		05/25/07
Cobalt	7440-48-4	LA-505-412		6.41	mg/kg			0.98	0.0492		05/25/07
Copper	7440-50-8	LA-505-412	X	12.6	mg/kg	J	LS 06-07-07	0.98	0.0984		05/25/07
Vanadium	7440-62-2	LA-505-412		29.0	mg/kg			0.98	0.197		05/25/07
Zinc	7440-66-6	LA-505-412		32.0	mg/kg			0.98	0.788		05/25/07
Lead	7439-92-1	LA-505-412		4.55	mg/kg			0.98	0.0984		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0492	mg/kg			0.98	0.0492		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.566	mg/kg			0.98	0.0492		05/25/07
Thorium	7440-29-1	LA-505-412		2.72	mg/kg			0.98	0.0984		05/25/07
Uranium	7440-61-1	LA-505-412		1.09	mg/kg			0.98	0.0492		05/25/07
Arsenic	7440-38-2	LA-505-412		2.67	mg/kg			0.98	0.394		05/25/07
Selenium	7782-49-2	LA-505-412		0.642	mg/kg			0.98	0.295		05/25/07

MDL=Minimum Detection Limit

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E - Analyte is an estimate, has potentially larger errors.(org)

RQ=Result Qualifier

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

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

TP Err=Total Propagated Error

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

DF=Dilution Factor

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000549
Client ID: BINHK2

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-28-0	LA-505-412		0.662	mg/kg			0.98	0.0984		05/25/07
Strontium	7440-24-6	LA-505-412		24.0	mg/kg	LS		0.98	0.0984		05/25/07
Tin	7440-31-5	LA-505-412	C	0.350	mg/kg	UJ	06-07-07	0.98	0.0492		05/25/07
Total solids											
Total solids	TS	LA-519-412		98.7	Percent			1.00	0.0		05/22/07

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MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

C - The Analyte was found in the Associated Blank.(inorg)

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

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

E - Analyte is an estimate, has potentially larger errors.(org)

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

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample #: W070000550
Client ID: B1NHK3

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-205-403	U	0.100	mg/kg			1.00	0.10		05/31/07
ICP-200.8 MS All possible meta Prep											
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		5.26e+03	mg/kg			1.00	4.99		05/25/07
Manganese	7439-96-5	LA-505-412		260	mg/kg			1.00	0.0998		05/25/07
Nickel	7440-02-0	LA-505-412		7.93	mg/kg			1.00	0.200		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0998	mg/kg			1.00	0.0998		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.299	mg/kg			1.00	0.299		05/25/07
Barium	7440-39-3	LA-505-412		59.7	mg/kg			1.00	0.200		05/25/07
Beryllium	7440-41-7	LA-505-412		0.273	mg/kg			1.00	0.0499		05/25/07
Cadmium	7440-43-9	LA-505-412		0.120	mg/kg			1.00	0.0998		05/25/07
Chromium	7440-47-3	LA-505-412		6.81	mg/kg			1.00	0.499		05/25/07
Cobalt	7440-48-4	LA-505-412		6.74	mg/kg			1.00	0.0499		05/25/07
Copper	7440-50-8	LA-505-412	X	14.3	mg/kg	J	LS 06-07-07	1.00	0.0998		05/25/07
Vanadium	7440-62-2	LA-505-412		30.6	mg/kg			1.00	0.200		05/25/07
Zinc	7440-66-6	LA-505-412		34.5	mg/kg			1.00	0.799		05/25/07
Lead	7439-92-1	LA-505-412		4.54	mg/kg			1.00	0.0998		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0499	mg/kg			1.00	0.0499		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.330	mg/kg			1.00	0.0499		05/25/07
Thorium	7440-29-1	LA-505-412		3.02	mg/kg			1.00	0.0998		05/25/07
Uranium	7440-61-1	LA-505-412		0.459	mg/kg			1.00	0.0499		05/25/07
Arsenic	7440-38-2	LA-505-412		3.02	mg/kg			1.00	0.399		05/25/07
Selenium	7782-49-2	LA-505-412		0.686	mg/kg			1.00	0.299		05/25/07

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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

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

E - Analyte is an estimate, has potentially larger errors.(org)

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000550
Client ID: BINHK3

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-28-0	LA-505-412		0.249	mg/kg			1.00	0.0998		05/25/07
Strontium	7440-24-8	LA-505-412		25.4	mg/kg		LS	1.00	0.0998		05/25/07
Tin	7440-31-5	LA-505-412	C	0.400	mg/kg	UJ	06-07-07	1.00	0.0499		05/25/07
Total solids											
Total solids	15	LA-505-412		30.0	Percent			1.00	0.0		05/22/07

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MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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

C - The Analyte was found in the Associated Blank.(inorg)

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

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

E - Analyte is an estimate, has potentially larger errors.(org)

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample #: W070000551
Client ID: BINHL1

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg			1.00	0.10		05/24/07
ICP-200.8 MS All possible meta Prep											
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		18.8	mg/kg			0.99	4.93		05/25/07
Manganese	7439-96-5	LA-505-412		1.33	mg/kg			0.99	0.0987		05/25/07
Nickel	7440-02-0	LA-505-412	U	< 0.197	mg/kg			0.99	0.197		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0987	mg/kg			0.99	0.0987		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.296	mg/kg			0.99	0.296		05/25/07
Barium	7440-39-3	LA-505-412		0.214	mg/kg			0.99	0.197		05/25/07
Beryllium	7440-41-7	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Cadmium	7440-43-9	LA-505-412	U	< 0.0987	mg/kg			0.99	0.0987		05/25/07
Chromium	7440-47-3	LA-505-412		0.882	mg/kg			0.99	0.493		05/25/07
Cobalt	7440-48-4	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Copper	7440-50-8	LA-505-412	CX	0.471	mg/kg		UJ	0.99	0.0987		05/25/07
Vanadium	7440-62-2	LA-505-412	U	< 0.197	mg/kg			0.99	0.197		05/25/07
Zinc	7440-66-6	LA-505-412	U	< 0.789	mg/kg			0.99	0.789		05/25/07
Lead	7439-92-1	LA-505-412	U	< 0.0987	mg/kg			0.99	0.0987		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.0754	mg/kg			0.99	0.0493		05/25/07
Thorium	7440-29-1	LA-505-412		0.144	mg/kg			0.99	0.0987		05/25/07
Uranium	7440-61-1	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Arsenic	7440-38-2	LA-505-412	U	< 0.395	mg/kg			0.99	0.395		05/25/07
Selenium	7782-49-2	LA-505-412		0.487	mg/kg			0.99	0.296		05/25/07

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000551
Client ID: B1NHL1

**KLAGES
WSCF**

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-28-0	LA-505-412	U	< 0.0987	mg/kg			0.99	0.0987		05/25/07
Strontium	7440-24-6	LA-505-412		0.156	mg/kg			0.99	0.0987		05/25/07
Tin	7440-31-5	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Total solids											
Total solids	75	LA-513-412		166	Percent			1.00	0.6		05/22/07 LS
											06-07-07

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MDL=Minimum Detection Limit
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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
 SAF Number: R07-010
 Sample #: W070000552
 Client ID: B1NHL2

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
 Department: Inorganic
 Sampled: 05/16/07
 Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
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Hexavalent Chromium Prep											
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg			1.00	0.10		05/21/07
ICP-200.8 MS All possible meta Prep											LS
ICP-200.8 MS All possible meta											06-07-07
Aluminum	7429-90-5	LA-505-412		23.8	mg/kg			0.99	4.93		05/25/07
Manganese	7439-96-5	LA-505-412		0.315	mg/kg			0.99	0.0986		05/25/07
Nickel	7440-02-0	LA-505-412	U	< 0.197	mg/kg			0.99	0.197		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.296	mg/kg			0.99	0.296		05/25/07
Barium	7440-39-3	LA-505-412	U	< 0.197	mg/kg			0.99	0.197		05/25/07
Beryllium	7440-41-7	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Cadmium	7440-43-9	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Chromium	7440-47-3	LA-505-412	U	< 0.493	mg/kg			0.99	0.493		05/25/07
Cobalt	7440-48-4	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Copper	7440-50-8	LA-505-412	CX	0.232	mg/kg		UJ	0.99	0.0986		05/25/07
Vanadium	7440-62-2	LA-505-412	U	< 0.197	mg/kg			0.99	0.197		05/25/07
Zinc	7440-66-6	LA-505-412	U	< 0.788	mg/kg			0.99	0.788		05/25/07
Lead	7439-92-1	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Molybdenum	7439-98-7	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Thorium	7440-29-1	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Uranium	7440-61-1	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Arsenic	7440-38-2	LA-505-412	U	< 0.394	mg/kg			0.99	0.394		05/25/07
Selenium	7782-49-2	LA-505-412		0.312	mg/kg			0.99	0.296		05/25/07

MDL = Minimum Detection Limit

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DF = Dilution Factor

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000552
Client ID: BINHL2

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-28-0	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Strontium	7440-24-6	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Tin	7440-31-5	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Total solids											
Total solids	TS	LA-519-412		100	Percent			1.00	0.0		05/22/07

LS
06-07-07

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MDL = Minimum Detection Limit
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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample #: W070000553
Client ID: B1NHK4

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											05/21/07
Hexavalent Chromium											05/21/07
Hexavalent Chromium	18340-29-5	LA-269-403	U	< 0.100	mg/kg			1.00	0.10		06-07-07
ICP-200.8 MS All possible meta Prep											05/24/07
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		4.56e+03	mg/kg			0.98	4.89		05/25/07
Manganese	7439-96-5	LA-505-412		238	mg/kg			0.98	0.0978		05/25/07
Nickel	7440-02-0	LA-505-412		6.38	mg/kg			0.98	0.196		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0978	mg/kg			0.98	0.0978		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.293	mg/kg			0.98	0.293		05/25/07
Barium	7440-39-3	LA-505-412		50.2	mg/kg			0.98	0.196		05/25/07
Beryllium	7440-41-7	LA-505-412		0.246	mg/kg			0.98	0.0489		05/25/07
Cadmium	7440-43-9	LA-505-412	U	< 0.0978	mg/kg			0.98	0.0978		05/25/07
Chromium	7440-47-3	LA-505-412		3.76	mg/kg			0.98	0.489		05/25/07
Cobalt	7440-48-4	LA-505-412		6.70	mg/kg			0.98	0.0489		05/25/07
Copper	7440-50-8	LA-505-412	X	13.3	mg/kg		J	0.98	0.0978		05/25/07
Vanadium	7440-62-2	LA-505-412		29.0	mg/kg			0.98	0.196		05/25/07
Zinc	7440-66-6	LA-505-412		31.0	mg/kg			0.98	0.782		05/25/07
Lead	7439-92-1	LA-505-412		3.84	mg/kg			0.98	0.0978		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0489	mg/kg			0.98	0.0489		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.194	mg/kg			0.98	0.0489		05/25/07
Thorium	7440-29-1	LA-505-412		1.92	mg/kg			0.98	0.0978		05/25/07
Uranium	7440-61-1	LA-505-412		0.378	mg/kg			0.98	0.0489		05/25/07
Arsenic	7440-38-2	LA-505-412		2.74	mg/kg			0.98	0.391		05/25/07
Selenium	7782-49-2	LA-505-412		0.703	mg/kg			0.98	0.293		05/25/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
 SAF Number: R07-010
 Sample # W070000553
 Client ID: BINHK4

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
 Department: Inorganic
 Sampled: 05/16/07
 Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-28-0	LA-505-412	U	< 0.0978	mg/kg			0.98	0.0978		05/25/07
Strontium	7440-24-6	LA-505-412		26.2	mg/kg		LS	0.98	0.0978		05/25/07
Tin	7440-31-5	LA-505-412	X	0.300	mg/kg	UJ	06-07-07	0.98	0.0489		05/25/07
Total solids											
Total Solids	15	LA-513-412		34.2	Percent			1.00	0.0		05/22/07

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MDL = Minimum Detection Limit

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample #: W070000554
Client ID: B1NHK5

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											05/21/07
Hexavalent Chromium											05/21/07
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg			1.00	0.10		05/24/07
ICP-200.8 MS All possible meta Prep											06-07-07
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		4.46e + 03	mg/kg			0.99	4.93		05/25/07
Manganese	7439-96-5	LA-505-412		619	mg/kg			0.99	0.0986		05/25/07
Nickel	7440-02-0	LA-505-412		8.18	mg/kg			0.99	0.197		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.296	mg/kg			0.99	0.296		05/25/07
Barium	7440-39-3	LA-505-412		60.2	mg/kg			0.99	0.197		05/25/07
Beryllium	7440-41-7	LA-505-412		0.248	mg/kg			0.99	0.0493		05/25/07
Cadmium	7440-43-9	LA-505-412		0.107	mg/kg			0.99	0.0986		05/25/07
Chromium	7440-47-3	LA-505-412		3.62	mg/kg			0.99	0.493		05/25/07
Cobalt	7440-48-4	LA-505-412		7.49	mg/kg			0.99	0.0493		05/25/07
Copper	7440-50-8	LA-505-412	X	14.7	mg/kg	J		0.99	0.0986		05/25/07
Vanadium	7440-62-2	LA-505-412		31.6	mg/kg			0.99	0.197		05/25/07
Zinc	7440-66-6	LA-505-412		33.4	mg/kg			0.99	0.789		05/25/07
Lead	7439-92-1	LA-505-412		3.77	mg/kg			0.99	0.0986		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.578	mg/kg			0.99	0.0493		05/25/07
Thorium	7440-29-1	LA-505-412		1.91	mg/kg			0.99	0.0986		05/25/07
Uranium	7440-61-1	LA-505-412		0.384	mg/kg			0.99	0.0493		05/25/07
Arsenic	7440-38-2	LA-505-412		2.85	mg/kg			0.99	0.394		05/25/07
Selenium	7782-49-2	LA-505-412		0.820	mg/kg			0.99	0.296		05/25/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000554
Client ID: BINHK5

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-28-0	LA-505-412		0.304	mg/kg			0.99	0.0986		05/25/07
Strontium	7440-24-6	LA-505-412		28.4	mg/kg	LS		0.99	0.0986		05/25/07
Tin	7440-31-5	LA-505-412	C	0.310	mg/kg	UJ	06-07-07	0.99	0.0493		05/25/07
Total solids											
Total Solids	TS	LA-515-412		94.9	Percent			1.00	0.0		05/22/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample #: W070000555
Client ID: BINHK6

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
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~~Hexavalent Chromium Prep~~

~~Hexavalent Chromium~~

Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg			1.00	0.10		05/21/07
ICP-200.8 MS All possible meta Prep											05/24/07
ICP-200.8 MS All possible meta											06-07-07

Aluminum	7429-90-5	LA-505-412		4.53e +03	mg/kg			0.98	4.92		05/25/07
Manganese	7439-96-5	LA-505-412		281	mg/kg			0.98	0.0985		05/25/07
Nickel	7440-02-0	LA-505-412		8.19	mg/kg			0.98	0.197		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0985	mg/kg			0.98	0.0985		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.295	mg/kg			0.98	0.295		05/25/07
Barium	7440-39-3	LA-505-412		53.6	mg/kg			0.98	0.197		05/25/07
Beryllium	7440-41-7	LA-505-412		0.251	mg/kg			0.98	0.0492		05/25/07
Cadmium	7440-43-9	LA-505-412	U	< 0.0985	mg/kg			0.98	0.0985		05/25/07
Chromium	7440-47-3	LA-505-412		4.25	mg/kg			0.98	0.492		05/25/07
Cobalt	7440-48-4	LA-505-412		7.10	mg/kg			0.98	0.0492		05/25/07
Copper	7440-50-8	LA-505-412	X	14.0	mg/kg	J	LS 06-07-07	0.98	0.0985		05/25/07
Vanadium	7440-62-2	LA-505-412		30.6	mg/kg			0.98	0.197		05/25/07
Zinc	7440-66-6	LA-505-412		32.4	mg/kg			0.98	0.788		05/25/07
Lead	7439-92-1	LA-505-412		3.98	mg/kg			0.98	0.0985		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0492	mg/kg			0.98	0.0492		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.190	mg/kg			0.98	0.0492		05/25/07
Thorium	7440-29-1	LA-505-412		1.92	mg/kg			0.98	0.0985		05/25/07
Uranium	7440-61-1	LA-505-412		0.366	mg/kg			0.98	0.0492		05/25/07
Arsenic	7440-38-2	LA-505-412		2.44	mg/kg			0.98	0.394		05/25/07
Selenium	7782-49-2	LA-505-412		0.754	mg/kg			0.98	0.295		05/25/07

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E - Analyte is an estimate, has potentially larger errors.(org)

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

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000555
Client ID: BINHK6

**KLAGES
WSCF**

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-28-0	LA-505-412	U	< 0.0985	mg/kg			0.98	0.0985		05/25/07
Strontium	7440-24-6	LA-505-412		25.0	mg/kg	LS		0.98	0.0985		05/25/07
Tin	7440-31-5	LA-505-412	C	0.290	mg/kg	UJ	06-07-07	0.98	0.0492		05/25/07
Total solids											
Total solids	TS	LA-519-412		94.6	Percent			1.00	0.0		05/22/07

Page 68 of 230

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

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

C - The Analyte was found in the Associated Blank. (inorg)

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

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

E - Analyte is an estimate, has potentially larger errors. (org)

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	WSCF20070837
Sample Matrix	SOLID
Sample Visual	N/A
SAF Number	R07-010
Data Deliverable	Summary Report

Introduction

Thirteen (13) soil samples from the 200-CW-3 Operable Unit Trench Bottoms and Side Walls were received at the WSCF Laboratory on May 17, 2007. The samples were received in a cool condition with ice present in the coolers. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *200-CW-3 Operable Unit Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 4.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report*, pages 15 through 17, for a complete listing of approved analytical methods used.

General Comments

With the exception of tritium, all samples were taken using the Multi-Increment Sampling (MIS) method. The entire sample aliquot in a given sample bottle was analyzed or extracted for analysis. QC Matrix Spikes, Matrix Spike Duplicates or Sample Duplicates were also either analyzed or extracted from the entire contents of each sample bottle used.

Tritium samples were taken as discreet samples. The QC associated with the tritium was performed on aliquots taken from the same bottle as the sample that was analyzed.

Organic Comments

Sample results are moisture corrected and reported on dry weight basis.

PCBs – The holding time for this analysis was met. A Blank, Laboratory Control Sample and Laboratory Control Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 26 for QC details.

- Due to a misunderstanding at WSCF, a Matrix Spike and Matrix Spike Duplicate were not analyzed. Instead a soil matrix Laboratory Control Samples was extracted and analyzed in duplicate in order to establish Analytical Precision. In addition surrogates (compounds spiked into all samples and QC analyzed) showed good recovery.

All QC controls are within the established limits.

Inorganic Comments

ICP-MS Metals (Total Acid Soluble) – The holding time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 44 through 48 for QC details. Analytical Notes:

- Thorium results listed in the report represent Th-232 exclusively.
- Copper and Tin present above the MDL in the Laboratory Blanks. Affected samples are “C” flagged where appropriate.
- Copper Matrix Spike and Matrix Spike Duplicate values were acceptable; however the RPD reported at 32.4% is above the acceptable limit of 30.0%.

All other QC controls are within the established limits.

Hexavalent Chromium - The holding time for this analysis was met. A Blank, Laboratory Control Sample, Sample Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with this analytical batch of less than 20 samples. See page 49 for QC details.

- The Matrix Spike and Matrix Spike recoveries were below the WSCF established limit indicating probable matrix interferences, however the Relative Percent Difference (RPD) between the two recoveries was within limits.

All other QC controls are within the established limits.

Percent Solids – analyzed for organic moisture correction.

Radiochemistry Comments

There are no holding times associated with WSCF radiochemical methods.

Plutonium Isotopic - A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 74 through 75 for QC details. Analytical Notes:

- The duplicate RPD reported at 31.77% is above the client’s acceptable limit of 30%.

All other QC controls are within the established limits.

Americium-241 – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 76 through 77 for QC details. All QC controls are within the established limits.

Uranium Isotopic – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 78 through 79 for QC details.

Analytical notes:

- Uranium - 238 duplicate RPD is above normal WSCF acceptable range, however it is within the client's acceptance limits for precision.
- Uranium – 235 duplicate RPD is above normal WSCF acceptable range, however it is within the client's acceptance limits for precision.
- Uranium – 234 duplicate RPD reported at 42.1% is above the client's acceptable limit of 30%.

All other QC controls are within the established limits.

Technetium-99 - A Blank, Laboratory Control Sample, Matrix Spike and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 80 for QC details. All QC controls are within the established limits.

Gamma Energy Analysis (GEA) – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 81 through 83 for QC details.

- Eu-152 duplicate RPD is above normal WSCF acceptable range; however it is within the client's acceptance limits for precision.

All QC controls are within the established limits.

Strontium – 89/90 – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 84 through 85 for QC details.

- Sample duplicate RPD is above normal WSCF acceptable range; however it is within the client's acceptance limits for precision.

All QC controls are within the established limits.

Tritium – A Blank, Laboratory Control Sample, Matrix Spike and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 86 for QC details. All QC controls are within the established limits.

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.



John E. Trechter
WSCF Client Services

5/31

COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE 8C

DATA
TURNAROUND
15 Days /
15 Days

SAMPLING LOCATION
216-N-5/Bottom

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.
HNF-N-507-3

COA
122333E520

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

20070837

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK1		S			1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG-ICPMS;	None
B1NHK1	W070000.S4E	S	5-16-07	0814	1X60mL G/P	Chromium Hex - 7196;	21g Cool 4C
B1NHK1		S			1X60mL aG	PCBs - 8082;	22g Cool 4C
B1NHK1		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy {Co-60, Cs-137, Eu-152, Eu-154, Eu-155}	54g None
B1NHK1		S			1X60mL G/P	Americium-241;	751g None
B1NHK1		S			1X60mL G/P	Isotopic Plutonium;	25g None
B1NHK1		S			1X60mL G/P	Isotopic Uranium;	22g None
B1NHK1		S			1X60mL G/P	Isotopic Uranium;	22g None

ICED
Initial Date

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM
J.G. HOGAN

DATE/TIME
MAY 17 2007

RECEIVED BY/STORED IN
KLAGES

DATE/TIME
MAY 17 2007

** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
** WSCF is to report the complete list of analytes for Metals and GEAs.
** Reporting format the same as GPP, including QC.
** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox.
** Final reports are to be uploaded into HEIS.

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

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SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK1		S	5-16-07	0814	1X60mL G/P	Strontium-89,90 - Total Sr;	None
B1NHK1		S			1X60mL G/P	Technetium-99;	23g None
B1NHK1		S			1X60mL G/P	Percent Solids;	22g None
B1NHK2		S			1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	20g None
B1NHK2	49	S		0850	1X60mL G/P	Chromium Hex - 7196;	22g Cool 4C
B1NHK2		S			1X60mL aG	PCBs - 8082;	23g Cool 4C
B1NHK2		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	59g 721g None

ICED

VF Initial

Date

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN <i>[Signature]</i>	DATE/TIME MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

92 of 104

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
 Initial Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK2		S	5-16-07	0850	1X60mL G/P	Ameridium-241;	None
B1NHK2		S			1X60mL G/P	Isotopic Plutonium;	24g None
B1NHK2		S			1X60mL G/P	Isotopic Uranium;	26g None
B1NHK2		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	21g None
B1NHK2		S			1X60mL G/P	Technetium-99;	25g None
B1NHK2		S			1X60mL G/P	Percent Solids;	22g None
B1NHK3	550	S		0925	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	20g 22g None

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN <i>[Signature]</i>	DATE/TIME MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

93 of 104

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED
[Signature] Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

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SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK3		S	5-16-07	0925	1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHK3		S			1X60mL aG	PCBs - 8082;	Cool 4C
B1NHK3		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	None
B1NHK3		S			1X60mL G/P	Americium-241;	None
B1NHK3		S			1X60mL G/P	Isotopic Plutonium;	None
B1NHK3		S			1X60mL G/P	Isotopic Uranium;	None
B1NHK3		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	None

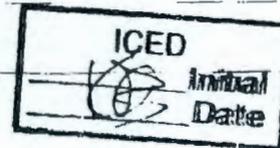
25g
 62g
 726g
 23g
 23g
 23g
 26g

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	RECEIVED BY/STORED IN <i>[Signature]</i>	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
DATE/TIME MAY 17 2007	DATE/TIME MAY 17 2007	** WSCF is to report the complete list of analytes for Metals and GEAs.
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	** Reporting format the same as GPP, including QC.
DATE/TIME	DATE/TIME	** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox.
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	** Final reports are to be uploaded into HEIS.
DATE/TIME	DATE/TIME	

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE BC	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			



MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

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SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK3		S	5-16-07	0925	1X60mL G/P	Technetium-99;	None
B1NHK3		S		0925	1X60mL G/P	Percent Solids;	None
B1NHK7	560	S		0739	1X120mL G	Tritium - Ion Ex;	None
B1NHK8	561	S		0742	1X120mL G	Tritium - Ion Ex;	None
B1NHL1	551	S		0840	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	None
B1NHL1		S			1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHL1		S			1X60mL aG	PCBs - 8082;	Cool 4C

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	RECEIVED BY/STORED IN [Signature]	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEAs. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.
DATE/TIME MAY 17 2007	DATE/TIME MAY 17 2007	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	

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

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED

 Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL1		S	5-17-07	0840	1X500mL Square Bottle - Poly	Gamma Spectroscopy {Co-60, Cs-137, Eu-152, Eu-154, Eu-155}	None
B1NHL1		S	↓	↓	1X60mL G/P	Americium-241;	524g None
B1NHL1		S			1X60mL G/P	Isotopic Plutonium;	22g None
B1NHL1		S			1X60mL G/P	Isotopic Uranium;	21g None
B1NHL1		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	24g None
B1NHL1		S			1X60mL G/P	Technetium-99;	21g None
B1NHL1		S			1X60mL G/P	Percent Solids;	20g None
B1NHL1		S					23g None

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN

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

Page 78 of 230

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
[Signature] Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL2		S	5-16-07	0748	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	None
B1NHL2	552	S			1X60mL G/P	Chromium Hex - 7196;	23g Cool 4C
B1NHL2		S			1X60mL aG	PCBs - 8082;	21g Cool 4C
B1NHL2		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	56g None
B1NHL2		S			1X60mL G/P	Americium-241;	610g None
B1NHL2		S			1X60mL G/P	Isotopic Plutonium;	21g None
B1NHL2		S			1X60mL G/P	Isotopic Uranium;	20g None
B1NHL2		S			1X60mL G/P	Isotopic Uranium;	20g None

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM G. HOGAN <i>[Signature]</i>	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN <i>[Signature]</i> DATE/TIME MAY 17 2007
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN

SPECIAL INSTRUCTIONS
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 ** Reporting format the same as GPP, including QC.
 ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox.
 ** Final reports are to be uploaded into HEIS.

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

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COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE 8C

DATA
TURNAROUND

SAMPLING LOCATION
216-N-5/Bottom

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

15 Days /
15 Days

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.
HNF-N-507-3

COA
122333E520

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

ICED
Initial
Date

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL2		S	5-16-07	0748	1X60mL G/P	Strontium-89,90 -- Total Sr;	None
B1NHL2		S			1X60mL G/P	Technetium-99;	None
B1NHL2		S			1X60mL G/P	Percent Solids;	None
B1NHL3	W070000556	S		0610	1X120mL G	Tritium - Ion Ex;	None

21g
22g
20g
109g

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

G. HOGAN

MAY 17 2007

[Signature]

MAY 17 2007

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

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** Final reports are to be uploaded into HEIS.

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED

 Initial Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK4	553	S	5-16-07	0930	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG-ICPMS;	None
B1NHK4		S			1X60mL G/P	Chromium Hex - 7196;	22g Cool 4C
B1NHK4		S			1X60mL aG	PCBs - 8082;	28g Cool 4C
B1NHK4		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	53g None
B1NHK4		S			1X60mL G/P	Americium-241;	719g None
B1NHK4		S			1X60mL G/P	Isotopic Plutonium;	24g None
B1NHK4		S			1X60mL G/P	Isotopic Uranium;	24g None
B1NHK4		S					25g None

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN 	DATE/TIME MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
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RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
[Signature]
 Initial
 Date

MATRIX*
 OL = OTHER LIQUID
 OS = OTHER SOLID
 S = SOIL
 W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK4		S	5-16-07	0930	1X60mL G/P	Strontium-89,90 -- Total Sr;	None
B1NHK4		S			1X60mL G/P	Technetium-99;	None
B1NHK4		S			1X60mL G/P	Percent Solids;	None
B1NHK5	554	S		1058	1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG - ICPMS;	None
B1NHK5		S			1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHK5		S			1X60mL aG	PCBs - 8082;	Cool 4C
B1NHK5		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy {Co-60, Cs-137, Eu-152, Eu-154, Eu-155}	None

26g
 25g
 23g
 20g
 24g
 63g
 703g

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
J. Hogan	MAY 17 2007	[Signature]	MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
AS Initial
 Date

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION	SPECIAL HANDLING AND/OR STORAGE		POSSIBLE SAMPLE HAZARDS/ REMARKS	
B1NHKS		S	5-16-07	1058	1X60mL G/P	Ameridium-241;	None				
B1NHKS		S			1X60mL G/P	Isotopic Plutonium;	None				21g
B1NHKS		S			1X60mL G/P	Isotopic Uranium;	None				22g
B1NHKS		S			1X60mL G/P	Strontium-89,90 - Total Sr;	None				23g
B1NHKS		S			1X60mL G/P	Technetium-99;	None				21g
B1NHKS		S			1X60mL G/P	Percent Solids;	None				22g
B1NHK6	555	S		1112	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	None				21g
											20g

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
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J.G. HOGAN	MAY 17 2007	<i>[Signature]</i>	MAY 17 2007		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE BC	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED

 Initial Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

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SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK6		S	5-16-07	1112	1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHK6		S			1X60mL aG	PCBs - 8082;	24g Cool 4C
B1NHK6		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	56g None
B1NHK6		S			1X60mL G/P	Americium-241;	694g None
B1NHK6		S			1X60mL G/P	Isotopic Plutonium;	25g None
B1NHK6		S			1X60mL G/P	Isotopic Uranium;	22g None
B1NHK6		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	24g None
							22g

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEAs. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
J.G. HOGAN	MAY 17 2007		MAY 17 2007		

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

102 of 108

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED
VB Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK6		S	5-16-07	1112	1X60mL G/P	Technetium-99;	None
B1NHK6		S		1112	1X60mL G/P	Percent Solids;	21g None
B1NHK9		S		1125	1X120mL G	Tritium - Ion Ex;	21g None
B1NHLD	W0700557	S		1129	1X120mL G	Tritium - Ion Ex;	134g None
B1NJL6	SSS SSG	S		1120	1X250mL G	Tritium - Ion Ex;	108g None

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
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J.G. HOGAN	MAY 17 2007	<i>[Signature]</i>	MAY 17 2007		

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

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Appendix 5

Data Validation Supporting Documentation

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

ALIDATION LEVEL:	A	B	C	D	E
PROJECT: 200-CW-3 OU			DATA PACKAGE: VSR07-008		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 06-07-2007	
			SDG: WSCF20070837		
ANALYSES PERFORMED					
SW-846/ICP X	SW-846/GFAA	SW-846/Hg	SW-846 Cyanide		
SAMPLES/MATRIX All soil samples, B1NHK1 - B1NHK6, B1NHL1 & B1NHL2					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? Yes **No** N/A

Comments: Page 6 of COC R07-010-001 lists a collection date of 5-17-07 0840 for sample B1NHL1. The actual collection date is 5-16-07 0840.

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations performed on all instruments? Yes No **N/A**

Initial calibrations acceptable? Yes No **N/A**

ICP interference checks acceptable?..... Yes No **N/A**

ICV and CCV checks performed on all instruments?..... Yes No **N/A**

ICV and CCV checks acceptable?..... Yes No **N/A**

Standards traceable? Yes No **N/A**

Standards expired?..... Yes No **N/A**

Calculation check acceptable?..... Yes No **N/A**

Comments: _____

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

3. BLANKS (Levels B, C, D, and E)

- ICB and CCB checks performed for all applicable analyses? (Levels D, E)..... Yes No N/A
- ICB and CCB results acceptable? (Levels D, E) Yes No N/A
- Laboratory blanks analyzed? Yes No N/A
- Laboratory blank results acceptable?..... Yes No N/A
- Field blanks analyzed? (Levels C, D, E) Yes No N/A
- Field blank results acceptable? (Levels C, D, E) Yes No N/A
- Transcription/calculation errors? (Levels D, E)..... Yes No N/A

Comments: MB detections: Cu 0.30 mg/kg, Sn 0.41 mg/kg
Equipment blank B1NHL1 detections: Al, Ba, Cr, Cu, Mn, Mo, Se, Sr & Th
Field blank B1NHL2 detections: Al, Cu, Mn & Se

4. ACCURACY (Levels C, D, and E)

- MS/MSD samples analyzed? Yes No N/A
- MS/MSD results acceptable?..... Yes No N/A
- MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A
- MS/MSD standards expired? (Levels D, E) Yes No N/A
- LCS/BSS samples analyzed? Yes No N/A
- LCS/BSS results acceptable?..... Yes No N/A
- Standards traceable? (Levels D, E)..... Yes No N/A
- Standards expired? (Levels D, E) Yes No N/A
- Transcription/calculation errors? (Levels D, E)..... Yes No N/A
- Performance audit sample(s) analyzed? Yes No N/A
- Performance audit sample results acceptable?..... Yes No N/A

Comments: None

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

5. PRECISION (Levels C, D, and E)

- Duplicate RPD values acceptable? Yes No N/A
- Duplicate results acceptable? Yes No N/A
- MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A
- MS/MSD standards expired? (Levels D, E) Yes No N/A
- Field duplicate RPD values acceptable? Yes No N/A
- Field split RPD values acceptable? Yes No N/A
- Transcription/calculation errors? (Levels D, E) Yes No N/A

Comments: Cu MS/MSD RPD = 32.4%
Field duplicates: B1NHK1 & B1NHK2 U RPD = 97%
B1NHK4 & B1NHK5 Mn RPD = 89%

6. ICP QUALITY CONTROL (Levels D and E)

- ICP serial dilution samples analyzed? Yes No N/A
- ICP serial dilution %D values acceptable? Yes No N/A
- ICP post digestion spike required? Yes No N/A
- ICP post digestion spike values acceptable? Yes No N/A
- Standards traceable? Yes No N/A
- Standards expired? Yes No N/A
- Transcription/calculation errors? Yes No N/A

Comments: _____

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

7. FURNACE AA QUALITY CONTROL (Levels D and E)

- Duplicate injections performed as required? Yes No **N/A**
- Duplicate injection %RSD values acceptable? Yes No **N/A**
- Analytical spikes performed as required? Yes No **N/A**
- Analytical spike recoveries acceptable? Yes No **N/A**
- Standards traceable? Yes No **N/A**
- Standards expired? Yes No **N/A**
- MSA performed as required? Yes No **N/A**
- MSA results acceptable? Yes No **N/A**
- Transcription/calculation errors? Yes No **N/A**

Comments: _____

8. HOLDING TIMES (all levels)

- Samples properly preserved? **Yes** No N/A
- Sample holding times acceptable? **Yes** No N/A

Comments: None _____

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

9. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

- Results reported for all requested analyses? Yes No N/A
- Results supported in the raw data? (Levels D, E)..... Yes No N/A
- Samples properly prepared? (Levels D, E)..... Yes No N/A
- Detection limits meet RDL? Yes No N/A
- Transcription/calculation errors? (Levels D, E)..... Yes No N/A

Comments: All Ba MDLs (approx. 0.2 mg/kg) > CRDL (0.1 mg/kg). All Ba sample
results > associated MDLs except B1NHL2.
Ten target analytes specified on COC, 23 analytes reported in data package.

Appendix 6

Additional Documentation Requested By Client

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: ICP-200.8 MS All possible meta

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W070000548											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Silver	7440-22-4	178.2	89.100	% Recov	70.000	130.000				05/25/07
MS	Aluminum	7429-90-5	1994	99.700	% Recov	70.000	130.000				05/25/07
MS	Arsenic	7440-38-2	179.635	89.817	% Recov	70.000	130.000				05/25/07
MS	Barium	7440-39-3	179.42	89.710	% Recov	70.000	130.000				05/25/07
MS	Beryllium	7440-41-7	182.5418	91.271	% Recov	70.000	130.000				05/25/07
MS	Cadmium	7440-43-9	178.80068	89.400	% Recov	70.000	130.000				05/25/07
MS	Cobalt	7440-48-4	169.122	84.561	% Recov	70.000	130.000				05/25/07
MS	Chromium	7440-47-3	169.24	84.620	% Recov	70.000	130.000				05/25/07
MS	Copper	7440-50-8	168.79	84.395	% Recov	70.000	130.000				05/25/07
MS	Mercury	7439-97-6	2.058	102.900	% Recov	70.000	130.000				05/25/07
MS	Manganese	7439-96-5	155.7	77.850	% Recov	70.000	130.000				05/25/07
MS	Molybdenum	7439-98-7	192.07	96.035	% Recov	70.000	130.000				05/25/07
MS	Nickel	7440-02-0	168.616	84.308	% Recov	70.000	130.000				05/25/07
MS	Lead	7439-92-1	188.243	94.121	% Recov	70.000	130.000				05/25/07
MS	Antimony	7440-38-0	208	104.000	% Recov	70.000	130.000				05/25/07
MS	Selenium	7782-49-2	178.6474	88.324	% Recov	70.000	130.000				05/25/07
MS	Tin	7440-31-5	185.86	92.930	% Recov	70.000	130.000				05/25/07
MS	Strontium	7440-24-6	183.45	91.725	% Recov	70.000	130.000				05/25/07
MS	Thorium	7440-29-1	181.748	90.874	% Recov	70.000	130.000				05/25/07
MS	Thallium	7440-28-0	172.0798	86.040	% Recov	70.000	130.000				05/25/07
MS	Uranium	7440-61-1	184.7199	92.360	% Recov	70.000	130.000				05/25/07
MS	Vanadium	7440-62-2	167.82	83.910	% Recov	70.000	130.000				05/25/07
MS	Zinc	7440-66-6	173.01	86.505	% Recov	70.000	130.000				05/25/07
MSD	Silver	7440-22-4	187.5	93.750	% Recov	70.000	130.000				05/25/07
MSD	Aluminum	7429-90-5	1954	97.700	% Recov	70.000	130.000				05/25/07
MSD	Arsenic	7440-38-2	189.035	94.517	% Recov	70.000	130.000				05/25/07

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: ICP-200.8 MS All possible meta

Sample Date: 05/16/07
 Receive Date: 05/17/07

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QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Barium	7440-39-3	188.92	94.460	% Recov	70.000	130.000				05/25/07
MSD	Beryllium	7440-41-7	194.8418	97.421	% Recov	70.000	130.000				05/25/07
MSD	Cadmium	7440-43-9	188.60088	94.300	% Recov	70.000	130.000				05/25/07
MSD	Cobalt	7440-48-4	179.322	89.661	% Recov	70.000	130.000				05/25/07
MSD	Chromium	7440-47-3	180.64	90.320	% Recov	70.000	130.000				05/25/07
MSD	Copper	7440-50-8	234.09	117.045	% Recov	70.000	130.000				05/25/07
MSD	Mercury	7439-97-6	2.179	108.950	% Recov	70.000	130.000				05/25/07
MSD	Manganese	7439-96-5	166.5	83.250	% Recov	70.000	130.000				05/25/07
MSD	Molybdenum	7439-98-7	200.17	100.085	% Recov	70.000	130.000				05/25/07
MSD	Nickel	7440-02-0	181.316	90.658	% Recov	70.000	130.000				05/25/07
MSD	Lead	7439-92-1	197.743	98.871	% Recov	70.000	130.000				05/25/07
MSD	Antimony	7440-36-0	212.8	106.400	% Recov	70.000	130.000				05/25/07
MSD	Selenium	7782-49-2	185.7474	92.874	% Recov	70.000	130.000				05/25/07
MSD	Tin	7440-31-5	198.76	99.380	% Recov	70.000	130.000				05/25/07
MSD	Strontium	7440-24-6	193.25	96.625	% Recov	70.000	130.000				05/25/07
MSD	Thorium	7440-29-1	188.948	94.474	% Recov	70.000	130.000				05/25/07
MSD	Thallium	7440-28-0	180.6798	90.340	% Recov	70.000	130.000				05/25/07
MSD	Uranium	7440-61-1	192.8199	96.410	% Recov	70.000	130.000				05/25/07
MSD	Vanadium	7440-62-2	178.02	89.010	% Recov	70.000	130.000				05/25/07
MSD	Zinc	7440-66-6	179.01	89.505	% Recov	70.000	130.000				05/25/07
SPK-RPD	Silver	7440-22-4	93.750		RPD			5.086	20.000		05/25/07
SPK-RPD	Aluminum	7429-90-5	97.700		RPD			2.026	20.000		05/25/07
SPK-RPD	Arsenic	7440-38-2	94.517		RPD			5.099	20.000		05/25/07
SPK-RPD	Barium	7440-39-3	94.460		RPD			5.158	20.000		05/25/07
SPK-RPD	Beryllium	7440-41-7	97.421		RPD			6.519	20.000		05/25/07
SPK-RPD	Cadmium	7440-43-9	94.300		RPD			5.335	20.000		05/25/07
SPK-RPD	Cobalt	7440-48-4	89.661		RPD			5.855	20.000		05/25/07
SPK-RPD	Chromium	7440-47-3	90.320		RPD			6.517	20.000		05/25/07
SPK-RPD	Copper	7440-50-8	117.045		RPD			32.417	20.000		05/25/07
SPK-RPD	Mercury	7439-97-6	108.950		RPD			5.712	20.000		05/25/07

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: ICP-200.8 MS All possible meta

Sample Date: 05/16/07
 Receive Date: 05/17/07

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QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Manganese	7439-96-5	83.250		RPD			6.704	20.000		05/25/07
SPK-RPD	Molybdenum	7439-98-7	100.085		RPD			4.130	20.000		05/25/07
SPK-RPD	Nickel	7440-02-0	90.658		RPD			7.259	20.000		05/25/07
SPK-RPD	Lead	7439-92-1	98.871		RPD			4.922	20.000		05/25/07
SPK-RPD	Antimony	7440-36-0	106.400		RPD			2.281	20.000		05/25/07
SPK-RPD	Selenium	7782-49-2	92.874		RPD			5.022	20.000		05/25/07
SPK-RPD	Tin	7440-31-5	99.380		RPD			6.708	20.000		05/25/07
SPK-RPD	Strontium	7440-24-6	96.625		RPD			5.203	20.000		05/25/07
SPK-RPD	Thorium	7440-29-1	94.474		RPD			3.885	20.000		05/25/07
SPK-RPD	Thallium	7440-28-0	90.340		RPD			4.876	20.000		05/25/07
SPK-RPD	Uranium	7440-61-1	96.410		RPD			4.291	20.000		05/25/07
SPK-RPD	Vanadium	7440-62-2	89.010		RPD			5.899	20.000		05/25/07
SPK-RPD	Zinc	7440-66-6	89.505		RPD			3.409	20.000		05/25/07

BATCH QC

BLANK	Silver	7440-22-4	<0.1	n/a	ug/L					U	05/25/07
BLANK	Aluminum	7429-90-5	<5	n/a	ug/L					U	05/25/07
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	05/25/07
BLANK	Barium	7440-39-3	<0.2	n/a	ug/L					U	05/25/07
BLANK	Beryllium	7440-41-7	<5e-2	n/a	ug/L					U	05/25/07
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L					U	05/25/07
BLANK	Cobalt	7440-48-4	<5e-2	n/a	ug/L					U	05/25/07
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L					U	05/25/07
BLANK	Copper	7440-50-8	0.3038	0.304	ug/L						05/25/07
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	05/25/07
BLANK	Manganese	7439-96-5	<0.1	n/a	ug/L					U	05/25/07
BLANK	Molybdenum	7439-98-7	<5e-2	n/a	ug/L					U	05/25/07
BLANK	Nickel	7440-02-0	<0.2	n/a	ug/L					U	05/25/07
BLANK	Lead	7439-92-1	<0.1	n/a	ug/L					U	05/25/07
BLANK	Antimony	7440-36-0	<0.3	n/a	ug/L					U	05/25/07

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: ICP-200.8 MS All possible meta

Sample Date:
 Receive Date:

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QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Selenium	7782-49-2	<0.3	n/a	ug/L					U	05/25/07
BLANK	Tin	7440-31-5	0.41	0.410	ug/L						05/25/07
BLANK	Strontium	7440-24-6	<0.1	n/a	ug/L					U	05/25/07
BLANK	Thorium	7440-29-1	<0.1	n/a	ug/L					U	05/25/07
BLANK	Thallium	7440-28-0	<0.1	n/a	ug/L					U	05/25/07
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	05/25/07
BLANK	Vanadium	7440-62-2	<0.2	n/a	ug/L					U	05/25/07
BLANK	Zinc	7440-66-6	<0.8	n/a	ug/L					U	05/25/07
LCS	Silver	7440-22-4	153.7	118.231	% Recov	98.000	134.000				05/25/07
LCS	Aluminum	7429-90-5	5277	83.497	% Recov	49.000	125.000				05/25/07
LCS	Arsenic	7440-38-2	178.4	110.807	% Recov	75.000	134.000				05/25/07
LCS	Barium	7440-39-3	264.5	104.960	% Recov	87.000	121.000				05/25/07
LCS	Beryllium	7440-41-7	107.2	113.559	% Recov	70.000	153.000				05/25/07
LCS	Cadmium	7440-43-9	147.3	115.078	% Recov	95.000	124.000				05/25/07
LCS	Cobalt	7440-48-4	37.7	107.102	% Recov	88.000	119.000				05/25/07
LCS	Chromium	7440-47-3	71.38	102.705	% Recov	77.000	125.000				05/25/07
LCS	Copper	7440-50-8	163	110.135	% Recov	84.000	122.000				05/25/07
LCS	Mercury	7439-97-6	19.83	117.337	% Recov	71.000	132.000				05/25/07
LCS	Manganese	7439-96-5	437.7	107.279	% Recov	83.000	118.000				05/25/07
LCS	Molybdenum	7439-98-7	90.96	108.157	% Recov	71.000	130.000				05/25/07
LCS	Nickel	7440-02-0	166.2	113.061	% Recov	90.000	121.000				05/25/07
LCS	Lead	7439-92-1	157.7	111.056	% Recov	92.000	123.000				05/25/07
LCS	Antimony	7440-36-0	108.3	177.833	% Recov	114.000	260.000				05/25/07
LCS	Selenium	7782-49-2	75.42	117.477	% Recov	52.000	157.000				05/25/07
LCS	Tin	7440-31-5	63.87	104.705	% Recov	86.000	123.000				05/25/07
LCS	Strontium	7440-24-6	84.22	100.262	% Recov	68.000	123.000				05/25/07
LCS	Thorium	7440-29-1	397.6	99.400	% Recov	77.000	121.000				05/25/07
LCS	Thallium	7440-28-0	83.06	98.881	% Recov	92.000	123.000				05/25/07
LCS	Uranium	7440-61-1	420.2	105.050	% Recov	81.000	125.000				05/25/07
LCS	Vanadium	7440-62-2	98.92	101.665	% Recov	81.000	122.000				05/25/07

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20070837
Matrix: SOLID
Test: ICP-200.8 MS All possible meta

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	Zinc	7440-66-6	187.8	113.818	% Recov	85.000	130.000				05/25/07

Date: 07 June 2007
 To: Fluor Hanford Inc. (technical representative)
 From: Analytical Quality Associates, Inc.
 Project: 200-CW-3 Operable Unit
 Subject: General Chemistry - Sample Data Group (SDG) WSCF20070837

INTRODUCTION

This memorandum presents the results of data validation for SDG WSCF200700837 prepared by WSCF Analytical Laboratories. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B1NHK1	05/16/07	Soil	C	Cr (VI) by 7196A
B1NHK2	05/16/07	Soil	C	Cr (VI) by 7196A
B1NHK3	05/16/07	Soil	C	Cr (VI) by 7196A
B1NHK4	05/16/07	Soil	C	Cr (VI) by 7196A
B1NHK5	05/16/07	Soil	C	Cr (VI) by 7196A
B1NHK6	05/16/07	Soil	C	Cr (VI) by 7196A
B1NHL1	05/16/07	Soil	C	Cr (VI) by 7196A
B1NHL2	05/16/07	Soil	C	Cr (VI) by 7196A

Data validation was conducted in accordance with the FHI validation statement of work and the Sampling and Analysis Plan for Remediation of Select 200 North Area Waste Sites in the 200-CW-3 Operable Unit, DOE/RL-2006-65, Rev. 1 (SAP). Appendices 1 through 6 provide the following information as indicated below:

- Appendix 1. Glossary of Data Reporting Qualifiers
- Appendix 2. Summary of Data Qualification
- Appendix 3. Annotated Laboratory Reports
- Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
- Appendix 5. Data Validation Supporting Documentation
- Appendix 6. Additional Documentation Requested By Client

DATA QUALITY OBJECTIVES

• **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The holding time requirements for chromium (VI) are extraction within 30 days of sample collection and analysis within 4 days of sample extraction. Sample preservation requires chilling to 4 degrees Celsius.

The samples were extracted and analyzed within the prescribed holding times and properly preserved.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

The laboratory blank result was acceptable.

Field Blanks

The field blank result was acceptable.

Equipment Blanks

The equipment blank result was acceptable.

- **Accuracy**

Accuracy is evaluated by reviewing matrix spike sample results and laboratory control sample results.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Samples

The MS and MSD recoveries for Cr (VI) were $<75\%$ but $\geq 30\%$. The Cr (VI) results for all samples were non-detects and should be qualified as estimates and flagged "UJ." It should be noted that an additional MS was performed on equipment blank B1NHL1 and also had a recovery $<75\%$ but $\geq 30\%$.

Laboratory Control Samples (LCSs)

The LCS recovery was acceptable.

- **Precision**

Precision is evaluated by reviewing MS/MSD results, laboratory duplicate sample results, and field duplicate sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, precision criteria are only applicable when sample/replicate results are $>5X$ to $10X$ the method detection limit (MDL).

MS/MSD Samples

All MS/MSD relative percent difference values were acceptable.

Laboratory Duplicate Samples

All laboratory duplicate results were acceptable

Field Duplicate Samples

The field duplicate results were acceptable.

- **Detection Limits**

Reported MDLs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDLs were below the CRDLs.

- **Completeness**

SDG WSCF20070837 was submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

Minor deficiencies leading to qualification of Cr (IV) sample results as estimates were due to low MS and MSD recoveries. See the table in Appendix 2 for a listing of all affected sample results.

It should be noted that page six of COC R07-010-001 lists a collection date of 5-17-07, 0840 for sample B1NHL1. The actual collection date was 5-16-07, 0840.

REFERENCES

FHI, Contract #29774, *Validation of Radiological and Chemical Analytical Data*, Fluor Hanford Incorporated, August 24, 2006.

DOE/RL-2006-65, Rev.1, *Sampling and Analysis Plan for Remediation of Select 200 North Area Waste Sites in the 200-CW-3 Operable Unit*, January 2007.

Appendix 1
Glossary of Data Reporting Qualifiers

Qualifiers that may be applied by data validators in compliance with the FHI statement of work are as follows:

- **U** — The constituent was analyzed for and was not detected. The data should be considered usable for decision-making purposes.
- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the MDL. The data should be considered usable for decision-making purposes.
- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.
- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.
- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2
Summary of Data Qualification

General Chemistry Data Qualification Summary			
SDG WSCF20070837	Reviewer: AQA	Project: 200-CW-3 OU	Page 1 of 1
Analyte(s)	Qualifier	Samples Affected	Reason
Cr (VI)	UJ	B1NHK1 - B1NHK6, B1NHL1 & B1NHL2	Low MS & MSD recoveries

Comments: None

Appendix 3

Annotated Laboratory Reports

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000548
Client ID: BINHK1

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											05/31/07
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg	UJ	06-07-07	1.00	0.10		05/31/07
ICP-200.8 MS All possible meta											05/24/07
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		4.98e +03	mg/kg			0.98	4.89		05/25/07
Manganese	7439-96-5	LA-505-412		262	mg/kg			0.98	0.0979		05/25/07
Nickel	7440-02-0	LA-505-412		7.78	mg/kg			0.98	0.196		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0979	mg/kg			0.98	0.0979		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.294	mg/kg			0.98	0.294		05/25/07
Barium	7440-39-3	LA-505-412		58.3	mg/kg			0.98	0.196		05/25/07
Beryllium	7440-41-7	LA-505-412		0.258	mg/kg			0.98	0.0489		05/25/07
Cadmium	7440-43-9	LA-505-412		0.0993	mg/kg			0.98	0.0979		05/25/07
Chromium	7440-47-3	LA-505-412		5.96	mg/kg			0.98	0.489		05/25/07
Cobalt	7440-48-4	LA-505-412		6.88	mg/kg			0.98	0.0489		05/25/07
Copper	7440-50-8	LA-505-412	X	15.4	mg/kg			0.98	0.0979		05/25/07
Vanadium	7440-62-2	LA-505-412		28.1	mg/kg			0.98	0.196		05/25/07
Zinc	7440-68-6	LA-505-412		32.4	mg/kg			0.98	0.783		05/25/07
Lead	7439-92-1	LA-505-412		4.86	mg/kg			0.98	0.0979		05/25/07
Mercury	7439-97-8	LA-505-412	U	< 0.0489	mg/kg			0.98	0.0489		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.230	mg/kg			0.98	0.0489		05/25/07
Thorium	7440-29-1	LA-505-412		2.45	mg/kg			0.98	0.0979		05/25/07
Uranium	7440-61-1	LA-505-412		0.380	mg/kg			0.98	0.0489		05/25/07
Arsenic	7440-38-2	LA-505-412		2.46	mg/kg			0.98	0.391		05/25/07
Selenium	7702-48-2	LA-505-412		0.055	mg/kg			0.98	0.234		05/25/07

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

C - The Analyte was found in the Associated Blank.(inorg)

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

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

E - Analyte is an estimate, has potentially larger errors.(org)

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

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000548
Client ID: BINHK1

**KLAGES
WSCF**

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Tinmium	7440-28-0	LA-505-412		0.120	mg/kg			0.98	0.0979		05/25/07
Strontium	7440-24-6	LA-505-412		24.0	mg/kg			0.98	0.0979		05/25/07
Tin	7440-31-5	LA-505-412	C	0.248	mg/kg			0.98	0.0489		05/25/07
Total solids											
Total solids	TS	LA-519-412		98.1	Percent			1.00	0.0		05/22/07

LS
 06-07-07

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MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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

C - The Analyte was found in the Associated Blank.(inorg)

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

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

E - Analyte is an estimate, has potentially larger errors.(org)

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000549
Client ID: B1NHK2

**KLAGES
WSCF**

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											05/31/07
Hexavalent Chromium						LS					
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg	UJ	06-07-07	1.00	0.10		05/31/07
ICP-200.8 MS All possible meta Prep											05/24/07
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		5.17e+03	mg/kg			0.98	4.92		05/25/07
Manganese	7439-96-5	LA-505-412		260	mg/kg			0.98	0.0984		05/25/07
Nickel	7440-02-0	LA-505-412		8.82	mg/kg			0.98	0.197		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0984	mg/kg			0.98	0.0984		05/25/07
Antimony	7440-38-0	LA-505-412	U	< 0.295	mg/kg			0.98	0.295		05/25/07
Barium	7440-39-3	LA-505-412		58.1	mg/kg			0.98	0.197		05/25/07
Beryllium	7440-41-7	LA-505-412		0.329	mg/kg			0.98	0.0492		05/25/07
Cadmium	7440-43-9	LA-505-412		0.161	mg/kg			0.98	0.0984		05/25/07
Chromium	7440-47-3	LA-505-412		6.48	mg/kg			0.98	0.492		05/25/07
Cobalt	7440-48-4	LA-505-412		6.41	mg/kg			0.98	0.0492		05/25/07
Copper	7440-50-8	LA-505-412	X	12.6	mg/kg			0.98	0.0984		05/25/07
Vanadium	7440-62-2	LA-505-412		29.0	mg/kg			0.98	0.197		05/25/07
Zinc	7440-66-6	LA-505-412		32.0	mg/kg			0.98	0.788		05/25/07
Lead	7439-92-1	LA-505-412		4.55	mg/kg			0.98	0.0984		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0492	mg/kg			0.98	0.0492		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.566	mg/kg			0.98	0.0492		05/25/07
Thorium	7440-29-1	LA-505-412		2.72	mg/kg			0.98	0.0984		05/25/07
Uranium	7440-61-1	LA-505-412		1.09	mg/kg			0.98	0.0492		05/25/07
Arsenic	7440-38-2	LA-505-412		2.67	mg/kg			0.98	0.394		05/25/07
Selenium	7782-49-2	LA-505-412		0.642	mg/kg			0.98	0.295		05/25/07

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000549
Client ID: B1NHK2

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-38-0	LA-505-412		0.662	mg/kg			0.98	0.0984		05/25/07
Strontium	7440-24-6	LA-505-412		24.0	mg/kg			0.98	0.0084		05/25/07
Tin	7440-31-5	LA-505-412	C	0.350	mg/kg			0.98	0.0492		05/25/07
Total solids											
Total solids	79	LA-518-412		99.7	Percent			1.00	0.0		05/22/07

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 06-07-07

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MDL=Minimum Detection Limit

RQ=Result Qualifier

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000550
Client ID: B1NHK3

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	0.100	mg/kg	UJ	06-07-07	1.00	0.10		05/31/07
ICP-200.8 MS All possible meta Prep											
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		5.26e+03	mg/kg			1.00	4.99		05/25/07
Manganese	7439-98-5	LA-505-412		260	mg/kg			1.00	0.0998		05/25/07
Nickel	7440-02-0	LA-505-412		7.93	mg/kg			1.00	0.200		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0998	mg/kg			1.00	0.0998		05/25/07
Antimony	7440-38-0	LA-505-412	U	< 0.299	mg/kg			1.00	0.299		05/25/07
Barium	7440-39-3	LA-505-412		59.7	mg/kg			1.00	0.200		05/25/07
Beryllium	7440-41-7	LA-505-412		0.273	mg/kg			1.00	0.0499		05/25/07
Cadmium	7440-43-9	LA-505-412		0.120	mg/kg			1.00	0.0998		05/25/07
Chromium	7440-47-3	LA-505-412		6.81	mg/kg			1.00	0.499		05/25/07
Cobalt	7440-48-4	LA-505-412		6.74	mg/kg			1.00	0.0499		05/25/07
Copper	7440-50-8	LA-505-412	X	14.3	mg/kg			1.00	0.0998		05/25/07
Vanadium	7440-62-2	LA-505-412		30.6	mg/kg			1.00	0.200		05/25/07
Zinc	7440-66-6	LA-505-412		34.5	mg/kg			1.00	0.799		05/25/07
Lead	7439-92-1	LA-505-412		4.54	mg/kg			1.00	0.0998		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0499	mg/kg			1.00	0.0499		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.330	mg/kg			1.00	0.0499		05/25/07
Thorium	7440-29-1	LA-505-412		3.02	mg/kg			1.00	0.0998		05/25/07
Uranium	7440-61-1	LA-505-412		0.459	mg/kg			1.00	0.0499		05/25/07
Arsenic	7440-38-2	LA-505-412		3.02	mg/kg			1.00	0.399		05/25/07
Selenium	7782-49-2	LA-505-412		0.000	mg/kg			1.00	0.200		05/25/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000550
Client ID: B1NHK3

**KLAGES
WSCF**

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-28-0	LA-505-412		0.243	mg/kg			1.00	0.0008		05/25/07
Strontium	7440-24-6	LA-505-412		25.4	mg/kg			1.00	0.0998		05/25/07
Tin	7440-31-5	LA-505-412	C	0.400	mg/kg			1.00	0.0499		05/25/07
Total solids											
Total solids	TS	LA-519-412		96.5	Percent			1.00	0.0		05/22/07

LS
 06-07-07

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MDL=Minimum Detection Limit
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Report WGPP/ver. 5.2
 PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample #: W070000551
Client ID: B1NHL1

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											05/31/07
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg	UJ	06-07-07	1.00	0.10		05/31/07
ICP-200.8 MS All possible meta Prep											
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		18.8	mg/kg			0.99	4.93		05/25/07
Manganese	7439-96-5	LA-505-412		1.33	mg/kg			0.99	0.0987		05/25/07
Nickel	7440-02-0	LA-505-412	U	< 0.197	mg/kg			0.99	0.197		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0987	mg/kg			0.99	0.0987		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.296	mg/kg			0.99	0.296		05/25/07
Barium	7440-39-3	LA-505-412		0.214	mg/kg			0.99	0.197		05/25/07
Beryllium	7440-41-7	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Cadmium	7440-43-9	LA-505-412	U	< 0.0987	mg/kg			0.99	0.0987		05/25/07
Chromium	7440-47-3	LA-505-412		0.882	mg/kg			0.99	0.493		05/25/07
Cobalt	7440-48-4	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Copper	7440-50-8	LA-505-412	CX	0.471	mg/kg			0.99	0.0987		05/25/07
Vanadium	7440-62-2	LA-505-412	U	< 0.197	mg/kg			0.99	0.197		05/25/07
Zinc	7440-66-6	LA-505-412	U	< 0.789	mg/kg			0.99	0.789		05/25/07
Lead	7439-92-1	LA-505-412	U	< 0.0987	mg/kg			0.99	0.0987		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.0754	mg/kg			0.99	0.0493		05/25/07
Thorium	7440-29-1	LA-505-412		0.144	mg/kg			0.99	0.0987		05/25/07
Uranium	7440-61-1	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Arsenic	7440-38-2	LA-505-412	U	< 0.395	mg/kg			0.99	0.395		05/25/07
Selenium	7782-49-2	LA-505-412		0.487	mg/kg			0.99	0.296		05/25/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000551
Client ID: B1NHL1

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Titanium	7440-28-0	LA-505-412	U	< 0.0387	mg/kg	0.00		0.00	0.0087		05/25/07
Strontium	7440-24-6	LA-505-412		0.156	mg/kg	0.00		0.00	0.0987		05/25/07
Tin	7440-31-5	LA-505-412	U	< 0.0493	mg/kg	0.99		0.99	0.0493		05/25/07
Total solids											
Total solids	TS	LA-519-412		100	Percent			1.00	0.0		05/23/07

LS
 06-07-07

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MDL=Minimum Detection Limit

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample #: W070000552
Client ID: B1NHL2

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											05/31/07
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg	UJ	06-07-07	1.00	0.10		05/31/07
ICP-200.8 MS All possible meta Prep											
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		23.8	mg/kg			0.99	4.93		05/25/07
Manganese	7439-96-5	LA-505-412		0.315	mg/kg			0.99	0.0986		05/25/07
Nickel	7440-02-0	LA-505-412	U	< 0.197	mg/kg			0.99	0.197		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.296	mg/kg			0.99	0.296		05/25/07
Barium	7440-39-3	LA-505-412	U	< 0.197	mg/kg			0.99	0.197		05/25/07
Beryllium	7440-41-7	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Cadmium	7440-43-9	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Chromium	7440-47-3	LA-505-412	U	< 0.493	mg/kg			0.99	0.493		05/25/07
Cobalt	7440-48-4	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Copper	7440-50-8	LA-505-412	CX	0.282	mg/kg			0.99	0.0986		05/25/07
Vanadium	7440-62-2	LA-505-412	U	< 0.197	mg/kg			0.99	0.197		05/25/07
Zinc	7440-66-6	LA-505-412	U	< 0.788	mg/kg			0.99	0.788		05/25/07
Lead	7439-92-1	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Molybdenum	7439-98-7	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Thorium	7440-29-1	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Uranium	7440-61-1	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Arsenic	7440-38-2	LA-505-412	U	< 0.394	mg/kg			0.99	0.394		05/25/07
Selenium	7782-49-2	LA-505-412		0.212	mg/kg			0.99	0.296		05/25/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000552
Client ID: B1NHL2

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-28-0	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Strontium	7440-24-8	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Tin	7440-31-5	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Total solids											
Total solids	TS	LA-519-412		100	Percent			1.00	0.0		05/22/07

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 06-07-07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000553
Client ID: B1NHK4

**KLAGES
WSCF**

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											05/31/07
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-285-403	U	< 0.100	mg/kg	UJ	06-07-07	1.00	0.10		05/31/07
ICP-200.8 MS All possible meta Prep											
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		4.56e +03	mg/kg			0.98	4.89		05/25/07
Manganese	7439-96-5	LA-505-412		238	mg/kg			0.98	0.0978		05/25/07
Nickel	7440-02-0	LA-505-412		6.38	mg/kg			0.98	0.196		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0978	mg/kg			0.98	0.0978		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.293	mg/kg			0.98	0.293		05/25/07
Barium	7440-39-3	LA-505-412		50.2	mg/kg			0.98	0.196		05/25/07
Beryllium	7440-41-7	LA-505-412		0.246	mg/kg			0.98	0.0489		05/25/07
Cadmium	7440-43-9	LA-505-412	U	< 0.0978	mg/kg			0.98	0.0978		05/25/07
Chromium	7440-47-3	LA-505-412		3.76	mg/kg			0.98	0.489		05/25/07
Cobalt	7440-48-4	LA-505-412		6.70	mg/kg			0.98	0.0489		05/25/07
Copper	7440-50-8	LA-505-412	X	18.3	mg/kg			0.98	0.0978		05/25/07
Vanadium	7440-62-2	LA-505-412		29.0	mg/kg			0.98	0.196		05/25/07
Zinc	7440-66-6	LA-505-412		31.0	mg/kg			0.98	0.782		05/25/07
Lead	7439-92-1	LA-505-412		3.84	mg/kg			0.98	0.0978		05/25/07
Mercury	7439-97-9	LA-505-412	U	< 0.0489	mg/kg			0.98	0.0489		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.194	mg/kg			0.98	0.0489		05/25/07
Thorium	7440-29-1	LA-505-412		1.92	mg/kg			0.98	0.0978		05/25/07
Uranium	7440-61-1	LA-505-412		0.378	mg/kg			0.98	0.0489		05/25/07
Arsenic	7440-38-2	LA-505-412		2.74	mg/kg			0.98	0.391		05/25/07
Selenium	7782-49-2	LA-505-412		0.708	mg/kg			0.98	0.293		05/25/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000553
Client ID: BINHK4

**KLAGES
WSCF**

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-20-0	LA-505-412	U	0.0078	mg/kg			0.98	0.0078		05/25/07
Strontium	7440-24-6	LA-505-412		26.2	mg/kg			0.98	0.0378		05/25/07
Tin	7440-31-5	LA-505-412	X	0.300	mg/kg			0.98	0.0489		05/25/07
Total solids											
Total solids	TS	LA-513-412		94.2	Percent			1.00	0.0		05/22/07

LS
 06-07-07

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

C - The Analyte was found in the Associated Blank.(inorg)
 U - Analyzed for but not detected above limiting criteria.(inorg)
 X - Other flags/notes described in the comments/narrative.(inorg)

E - Analyte is an estimate, has potentially larger errors.(org)
 U - Analyzed for but not detected above limiting criteria.(org)

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

Report WGPP/ver. 5.2
 PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample #: W070000554
Client ID: B1NHK5

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											05/31/07
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg	UJ	06-07-07	1.00	0.10		05/31/07
ICP-200.8 MS All possible meta Prep											05/24/07
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		4.46e+03	mg/kg			0.99	4.93		05/25/07
Manganese	7439-96-5	LA-505-412		619	mg/kg			0.99	0.0986		05/25/07
Nickel	7440-02-0	LA-505-412		8.18	mg/kg			0.99	0.197		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0986	mg/kg			0.99	0.0986		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.296	mg/kg			0.99	0.296		05/25/07
Barium	7440-39-3	LA-505-412		60.2	mg/kg			0.99	0.197		05/25/07
Beryllium	7440-41-7	LA-505-412		0.248	mg/kg			0.99	0.0493		05/25/07
Cadmium	7440-43-9	LA-505-412		0.107	mg/kg			0.99	0.0986		05/25/07
Chromium	7440-47-3	LA-505-412		3.62	mg/kg			0.99	0.493		05/25/07
Cobalt	7440-48-4	LA-505-412		7.49	mg/kg			0.99	0.0493		05/25/07
Copper	7440-50-8	LA-505-412	X	14.7	mg/kg			0.99	0.0986		05/25/07
Vanadium	7440-62-2	LA-505-412		31.6	mg/kg			0.99	0.197		05/25/07
Zinc	7440-66-6	LA-505-412		33.4	mg/kg			0.99	0.789		05/25/07
Lead	7439-92-1	LA-505-412		3.77	mg/kg			0.99	0.0986		05/25/07
Mercury	7439-97-6	LA-505-412	U	< 0.0493	mg/kg			0.99	0.0493		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.578	mg/kg			0.99	0.0493		05/25/07
Thorium	7440-29-1	LA-505-412		1.91	mg/kg			0.99	0.0986		05/25/07
Uranium	7440-61-1	LA-505-412		0.384	mg/kg			0.99	0.0493		05/25/07
Arsenic	7440-38-2	LA-505-412		2.85	mg/kg			0.99	0.394		05/25/07
Selenium	7782-49-2	LA-505-412		0.820	mg/kg			0.99	0.296		05/25/07

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000554
Client ID: B1NHK5

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Thallium	7440-28-0	LA-505-412		0.204	mg/kg			0.99	0.0986		05/25/07
Strontium	7440-24-6	LA-505-412		28.4	mg/kg			0.99	0.0560		05/25/07
Tin	7440-31-5	LA-505-412	C	0.310	mg/kg			0.99	0.0493		05/25/07
Total solids											
Total solids	79	LA-518-412		84.8	Percent			1.00	0.0		05/22/07

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 06-07-07

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MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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

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WSCF

ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000555
Client ID: B1NHK6

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Hexavalent Chromium Prep											
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 0.100	mg/kg	UJ	06-07-07	1.00	0.10		05/31/07
ICP-200.8 MS All possible meta Prep											
ICP-200.8 MS All possible meta											
Aluminum	7429-90-5	LA-505-412		4.53e+03	mg/kg			0.98	4.92		05/25/07
Manganese	7439-96-5	LA-505-412		281	mg/kg			0.98	0.0985		05/25/07
Nickel	7440-02-0	LA-505-412		8.19	mg/kg			0.98	0.197		05/25/07
Silver	7440-22-4	LA-505-412	U	< 0.0985	mg/kg			0.98	0.0985		05/25/07
Antimony	7440-36-0	LA-505-412	U	< 0.295	mg/kg			0.98	0.295		05/25/07
Barium	7440-39-3	LA-505-412		53.6	mg/kg			0.98	0.197		05/25/07
Beryllium	7440-41-7	LA-505-412		0.251	mg/kg			0.98	0.0492		05/25/07
Cadmium	7440-43-9	LA-505-412	U	< 0.0985	mg/kg			0.98	0.0985		05/25/07
Chromium	7440-47-3	LA-505-412		4.25	mg/kg			0.98	0.492		05/25/07
Cobalt	7440-48-4	LA-505-412		7.10	mg/kg			0.98	0.0492		05/25/07
Copper	7440-50-8	LA-505-412	X	14.0	mg/kg			0.98	0.0985		05/25/07
Vanadium	7440-62-2	LA-505-412		30.6	mg/kg			0.98	0.197		05/25/07
Zinc	7440-66-6	LA-505-412		32.4	mg/kg			0.98	0.788		05/25/07
Lead	7439-92-1	LA-505-412		3.98	mg/kg			0.98	0.0985		05/25/07
Mercury	7439-97-8	LA-505-412	U	< 0.0492	mg/kg			0.98	0.0492		05/25/07
Molybdenum	7439-98-7	LA-505-412		0.190	mg/kg			0.98	0.0492		05/25/07
Thorium	7440-29-1	LA-505-412		1.92	mg/kg			0.98	0.0985		05/25/07
Uranium	7440-61-1	LA-505-412		0.366	mg/kg			0.98	0.0492		05/25/07
Arsenic	7440-38-2	LA-505-412		2.44	mg/kg			0.98	0.394		05/25/07
Selenium	7782-49-2	LA-505-412		0.754	mg/kg			0.98	0.295		05/25/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000555
Client ID: BINHK6

**KLAGES
WSCF**

Matrix: SOIL

Group #: WSCF20070837
Department: Inorganic
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Mellon	7440-20-0	LA-505-412	U	0.0005	mg/kg			0.98	0.0085		05/25/07
Strontium	7440-24-6	LA-505-412		25.0	mg/kg			0.98	0.0585		05/25/07
Tin	7440-31-5	LA-505-412	C	0.290	mg/kg			0.98	0.0492		05/25/07
Total solids											
Total Solids	TS	LA-513-412		34.0	Percent			1.00	0.0		05/22/07

LS
 06-07-07

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MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	WSCF20070837
Sample Matrix	SOLID
Sample Visual	N/A
SAF Number	R07-010
Data Deliverable	Summary Report

Introduction

Thirteen (13) soil samples from the 200-CW-3 Operable Unit Trench Bottoms and Side Walls were received at the WSCF Laboratory on May 17, 2007. The samples were received in a cool condition with ice present in the coolers. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *200-CW-3 Operable Unit Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 4.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report*, pages 15 through 17, for a complete listing of approved analytical methods used.

General Comments

With the exception of tritium, all samples were taken using the Multi-Increment Sampling (MIS) method. The entire sample aliquot in a given sample bottle was analyzed or extracted for analysis. QC Matrix Spikes, Matrix Spike Duplicates or Sample Duplicates were also either analyzed or extracted from the entire contents of each sample bottle used.

Tritium samples were taken as discreet samples. The QC associated with the tritium was performed on aliquots taken from the same bottle as the sample that was analyzed.

Organic Comments

Sample results are moisture corrected and reported on dry weight basis.

PCBs – The holding time for this analysis was met. A Blank, Laboratory Control Sample and Laboratory Control Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 26 for QC details.

- Due to a misunderstanding at WSCF, a Matrix Spike and Matrix Spike Duplicate were not analyzed. Instead a soil matrix Laboratory Control Samples was extracted and analyzed in duplicate in order to establish Analytical Precision. In addition surrogates (compounds spiked into all samples and QC analyzed) showed good recovery.

All QC controls are within the established limits.

Inorganic Comments

ICP-MS Metals (Total Acid Soluble) – The holding time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 44 through 48 for QC details. Analytical Notes:

- Thorium results listed in the report represent Th-232 exclusively.
- Copper and Tin present above the MDL in the Laboratory Blanks. Affected samples are “C” flagged where appropriate.
- Copper Matrix Spike and Matrix Spike Duplicate values were acceptable; however the RPD reported at 32.4% is above the acceptable limit of 30.0%.

All other QC controls are within the established limits.

Hexavalent Chromium - The holding time for this analysis was met. A Blank, Laboratory Control Sample, Sample Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with this analytical batch of less than 20 samples. See page 49 for QC details.

- The Matrix Spike and Matrix Spike recoveries were below the WSCF established limit indicating probable matrix interferences, however the Relative Percent Difference (RPD) between the two recoveries was within limits.

All other QC controls are within the established limits.

Percent Solids – analyzed for organic moisture correction.

Radiochemistry Comments

There are no holding times associated with WSCF radiochemical methods.

Plutonium Isotopic - A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 74 through 75 for QC details. Analytical Notes:

- The duplicate RPD reported at 31.77% is above the client’s acceptable limit of 30%.

All other QC controls are within the established limits.

Americium-241 – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 76 through 77 for QC details. All QC controls are within the established limits.

Uranium Isotopic – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 78 through 79 for QC details.

Analytical notes:

- Uranium - 238 duplicate RPD is above normal WSCF acceptable range, however it is within the client's acceptance limits for precision.
- Uranium – 235 duplicate RPD is above normal WSCF acceptable range, however it is within the client's acceptance limits for precision.
- Uranium – 234 duplicate RPD reported at 42.1% is above the client's acceptable limit of 30%.

All other QC controls are within the established limits.

Technetium-99 - A Blank, Laboratory Control Sample, Matrix Spike and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 80 for QC details.

All QC controls are within the established limits.

Gamma Energy Analysis (GEA) – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 81 through 83 for QC details.

- Eu-152 duplicate RPD is above normal WSCF acceptable range; however it is within the client's acceptance limits for precision.

All QC controls are within the established limits.

Strontium – 89/90 – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 84 through 85 for QC details.

- Sample duplicate RPD is above normal WSCF acceptable range; however it is within the client's acceptance limits for precision.

All QC controls are within the established limits.

Tritium – A Blank, Laboratory Control Sample, Matrix Spike and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 86 for QC details. All QC controls are within the established limits.

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.



John E. Trechter
WSCF Client Services

5/31

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

20070831

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK1		S	5-16-07	0814	1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG-ICPMS;	None
B1NHK1	W0700054E	S			1X60mL G/P	Chromium Hex - 7196;	21g Cool 4C
B1NHK1		S			1X60mL aG	PCBs - 8082;	22g Cool 4C
B1NHK1		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy {Co-60, Cs-137, Eu-152, Eu-154, Eu-155}	54g None
B1NHK1		S			1X60mL G/P	Ameridium-241;	751g None
B1NHK1		S			1X60mL G/P	Isotopic Plutonium;	25g None
B1NHK1		S			1X60mL G/P	Isotopic Uranium;	22g None
							22g

ICED
Initial Date

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN KLAGES
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN

** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
 ** WSCF is to report the complete list of analytes for Metals and GEAs.
 ** Reporting format the same as GPP, including QC.
 ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox.
 ** Final reports are to be uploaded into HEIS.

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

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

MATRIX*
 OL = OTHER LIQUID
 OS = OTHER SOLID
 S = SOIL
 W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK1		S	5-16-07	0814	1X60mL G/P	Strontium-89,90 - Total Sr;	None
B1NHK1		S			1X60mL G/P	Technetium-99;	23g None
B1NHK1		S			1X60mL G/P	Percent Solids;	22g None
B1NHK2		S		0850	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	20g None
B1NHK2	E49	S			1X60mL G/P	Chromium Hex - 7196;	22g Cool 4C
B1NHK2		S			1X60mL #G	PCBs - 8082;	23g Cool 4C
B1NHK2		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	59g 721g None

ICED
 Initial Date

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
G. HOGAN	MAY 17 2007	[Signature]	MAY 17 2007		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
[Signature] Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK2		S	5-16-07	0850	1X60mL G/P	Americium-241;	None
B1NHK2		S			1X60mL G/P	Isotopic Plutonium;	24g None
B1NHK2		S			1X60mL G/P	Isotopic Uranium;	26g None
B1NHK2		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	21g None
B1NHK2		S			1X60mL G/P	Technetium-99;	25g None
B1NHK2		S			1X60mL G/P	Percent Solids;	22g None
B1NHK3		S		0925	1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG - ICPMS;	20g 22g None

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN <i>[Signature]</i>	DATE/TIME MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED
 Initial Date
[Signature]

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/REMARKS
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SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK3		S	5-16-07	0925	1X60mL G/P	Chromium Hex - 7196;	Cool 4C 25g
B1NHK3		S			1X60mL aG	PCBs - 8082;	Cool 4C 62g
B1NHK3		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	None 726g
B1NHK3		S			1X60mL G/P	Americium-241;	None 23g
B1NHK3		S			1X60mL G/P	Isotopic Plutonium;	None 23g
B1NHK3		S			1X60mL G/P	Isotopic Uranium;	None 23g
B1NHK3		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	None 26g

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	RECEIVED BY/STORED IN <i>[Signature]</i>	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
DATE/TIME MAY 17 2007	DATE/TIME MAY 17 2007	** WSCF is to report the complete list of analytes for Metals and GEA.
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	** Reporting format the same as GPP, including QC.
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox.
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	** Final reports are to be uploaded into HEIS.

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE BC	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED
[Signature]
 Initial Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK3		S	5-16-07	0925	1X60mL G/P	Technetium-99;	None
B1NHK3		S		0925	1X60mL G/P	Percent Solids;	None
B1NHK7	560	S		0739	1X120mL G	Tritium - Ion Ex;	None
B1NHK8	561	S		0742	1X120mL G	Tritium - Ion Ex;	None
B1NHL1	551	S		0840	1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG - ICPMS;	None
B1NHL1		S			1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHL1		S			1X60mL aG	PCBs - 8082;	Cool 4C

28g
 21g
 190g
 181g
 20g
 20g
 56g

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	RECEIVED BY/STORED IN <i>[Signature]</i>	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	

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

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COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE 8C

DATA
TURNAROUND

SAMPLING LOCATION
216-N-5/Bottom

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

15 Days /
15 Days

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.
HNF-N-507-3

COA
122333E520

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

ICED
Initial
Date

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL1		S	5-17-07	0840	1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	None
B1NHL1		S	↓	↓	1X60mL G/P	Americium-241;	524g None
B1NHL1		S			1X60mL G/P	Isotopic Plutonium;	22g None
B1NHL1		S			1X60mL G/P	Isotopic Uranium;	21g None
B1NHL1		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	24g None
B1NHL1		S			1X60mL G/P	Technetium-99;	21g None
B1NHL1		S			1X60mL G/P	Percent Solids;	20g None
B1NHL1		S					23g None

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

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** Final reports are to be uploaded into HEIS.

J.G. HOGAN

MAY 17 2007

MAY 17 2007

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
[Signature] Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL2		S	5-16-07	0748	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	None
B1NHL2	552	S			1X60mL G/P	Chromium Hex - 7196;	23g Cool 4C
B1NHL2		S			1X60mL aG	PCBs - 8082;	21g Cool 4C
B1NHL2		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	56g None
B1NHL2		S			1X60mL G/P	Americium-241;	610g None
B1NHL2		S			1X60mL G/P	Isotopic Plutonium;	21g None
B1NHL2		S			1X60mL G/P	Isotopic Uranium;	20g None
							20g

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CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM G. HOGAN <i>[Signature]</i>	RECEIVED BY/STORED IN <i>[Signature]</i>	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.
DATE/TIME MAY 17 2007	DATE/TIME MAY 17 2007	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	

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

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COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE 8C

DATA
TURNAROUND

SAMPLING LOCATION
216-N-5/Bottom

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

15 Days /
15 Days

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.
HNF-N-507-3

COA
122333E520

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO
Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

ICED
Initial
Date

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL2		S	5-16-07	0748	1X60mL G/P	Strontium-89,90 -- Total Sr;	None
B1NHL2		S			1X60mL G/P	Technetium-99;	21g None
B1NHL2		S			1X60mL G/P	Percent Solids;	22g None
B1NHL3	W070000556	S		0610	1X120mL G	Tritium - Ion Ex;	20g 109g None

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CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM
G. HOGAN *JG Hogan* ^{CF10} DATE/TIME
MAY 17 2007

RECEIVED BY/STORED IN
DL Klages ^{CF10} DATE/TIME
MAY 17 2007

** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
** WSCF is to report the complete list of analytes for Metals and GEA.
** Reporting format the same as GPP, including QC.
** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox.
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RELINQUISHED BY/REMOVED FROM
DATE/TIME

RECEIVED BY/STORED IN
DATE/TIME

RELINQUISHED BY/REMOVED FROM
DATE/TIME

RECEIVED BY/STORED IN
DATE/TIME

RELINQUISHED BY/REMOVED FROM
DATE/TIME

RECEIVED BY/STORED IN
DATE/TIME

LABORATORY SECTION
RECEIVED BY

TITLE
DATE/TIME

FINAL SAMPLE DISPOSITION
DISPOSAL METHOD

DISPOSED BY
DATE/TIME

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE BC	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED
 Initial Date

MATRIX*
 OL = OTHER LIQUID
 OS = OTHER SOLID
 S = SOIL
 W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK4	553	S	5-16-07	0930	1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG - ICPMS;	None
B1NHK4		S			1X60mL G/P	Chromium Hex - 7196;	22g Cool 4C
B1NHK4		S			1X60mL aG	PCBs - 8082;	28g Cool 4C
B1NHK4		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy {Co-60, Cs-137, Eu-152, Eu-154, Eu-155}	53g None
B1NHK4		S			1X60mL G/P	Americium-241;	719g None
B1NHK4		S			1X60mL G/P	Isotopic Plutonium;	24g None
B1NHK4		S			1X60mL G/P	Isotopic Uranium;	24g None
							25g

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN <i>[Signature]</i>	DATE/TIME MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE BC	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
[Signature] Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK4		S	5-16-07	0930	1X60mL G/P	Strontium-89,90 -- Total Sr;	None
B1NHK4		S			1X60mL G/P	Technetium-99;	None
B1NHK4		S			1X60mL G/P	Percent Solids;	None
B1NHK5	554	S		1058	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8 HG - ICPMS;	None
B1NHK5		S			1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHK5		S			1X60mL aG	PCBs - 8082;	Cool 4C
B1NHK5		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	None

26g
 25g
 23g
 20g
 24g
 63g
 703g

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
J. Hogan	MAY 17 2007	[Signature]	MAY 17 2007		

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses	SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
[Signature]
 Initial Date

MATRIX*
 OL = OTHER LIQUID
 OS = OTHER SOLID
 S = SOIL
 W = WATER

SPECIAL HANDLING AND/OR STORAGE **POSSIBLE SAMPLE HAZARDS/ REMARKS**

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SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK5		S	5-16-07	1058	1X60mL G/P	Americium-241;	None
B1NHK5		S			1X60mL G/P	Isotopic Plutonium;	21g None
B1NHK5		S			1X60mL G/P	Isotopic Uranium;	22g None
B1NHK5		S			1X60mL G/P	Strontium-89,90 - Total Sr;	23g None
B1NHK5		S			1X60mL G/P	Technetium-99;	21g None
B1NHK5		S			1X60mL G/P	Percent Solids;	22g None
B1NHK6	555	S		1112	1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG - ICPMS;	21g 20g None

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
J.G. HOGAN <i>[Signature]</i>	MAY 17 2007	<i>[Signature]</i>	MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	

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

01 of 104

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED

 Initial Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
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SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHNK6		S	5-16-07	1112	1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHNK6		S			1X60mL aG	PCBs - 8082;	24g Cool 4C
B1NHNK6		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	56g None
B1NHNK6		S			1X60mL G/P	Americium-241;	694g None
B1NHNK6		S			1X60mL G/P	Isotopic Plutonium;	25g None
B1NHNK6		S			1X60mL G/P	Isotopic Uranium;	22g None
B1NHNK6		S			1X60mL G/P	Strontium-89,90 - Total Sr;	24g None
							22g

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN 	DATE/TIME MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME		

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
VB Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK6		S	5-16-07	1112	1X60mL G/P	Technetium-99;	None
B1NHK6		S		1112	1X60mL G/P	Percent Solids;	21g None
B1NHK9		S		1125	1X120mL G	Tritium - Ion Ex;	21g None
B1NHL0	Wetness?	S		1129	1X120mL G	Tritium - Ion Ex;	134g None
B1NJL6	SSS SS9	S W	5-16-07	1120	1X250mL G	Tritium - Ion Ex;	108g None

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN <i>K. K. K.</i>	DATE/TIME MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.
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	

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

Appendix 5

Data Validation Supporting Documentation

GENERAL CHEMISTRY DATA VALIDATION CHECKLISTS

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 200-CW-3 OU			DATA PACKAGE: VSR07-008		
VALIDATOR: Carl Schloesslin		LAB: WSCF		DATE: 06-07-2007	
			SDG: WSCF20070837		
ANALYSES PERFORMED					
Anions/IC	TOC	TOX	TPH-418.1	Oil and Grease	Alkalinity
Ammonia	BOD/COD	Chloride	Chromium-VI X	pH	NO ₃ /NO ₂
Sulfate	TDS	TKN	Phosphate		
SAMPLES/MATRIX All soil samples, B1NHK1 - B1NHK6, B1NHL1 & B1NHL2					

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? Yes **No** N/A

Comments: Page 6 of COC R07-010-001 lists a collection date of 5-17-07 0840
for sample B1NHL1. The actual collection date is 5-16-07 0840.

2. INSTRUMENT PERFORMANCE AND CALIBRATIONS (Levels D and E)

Initial calibrations performed on all instruments? Yes No **N/A**

Initial calibrations acceptable? Yes No **N/A**

ICV and CCV checks performed on all instruments? Yes No **N/A**

ICV and CCV checks acceptable? Yes No **N/A**

Standards traceable? Yes No **N/A**

Standards expired? Yes No **N/A**

Calculation check acceptable? Yes No **N/A**

Comments: _____

GENERAL CHEMISTRY DATA VALIDATION CHECKLISTS

3. BLANKS (Levels B, C, D, and E)

ICB and CCB checks performed for all applicable analyses? (Levels D, E)..... Yes No N/A

ICB and CCB results acceptable? (Levels D, E) Yes No N/A

Laboratory blanks analyzed? Yes No N/A

Laboratory blank results acceptable?..... Yes No N/A

Field blanks analyzed? (Levels C, D, E) Yes No N/A

Field blank results acceptable? (Levels C, D, E) Yes No N/A

Transcription/calculation errors? (Levels D, E)..... Yes No N/A

Comments: None

4. ACCURACY (Levels C, D, and E)

Spike samples analyzed? Yes No N/A

Spike recoveries acceptable? Yes No N/A

Spike standards NIST traceable? (Levels D, E)..... Yes No N/A

Spike standards expired? (Levels D, E)..... Yes No N/A

LCS/BSS samples analyzed? Yes No N/A

LCS/BSS results acceptable?..... Yes No N/A

Standards traceable? (Levels D, E)..... Yes No N/A

Standards expired? (Levels D, E) Yes No N/A

Transcription/calculation errors? (Levels D, E)..... Yes No N/A

Performance audit sample(s) analyzed? Yes No N/A

Performance audit sample results acceptable?..... Yes No N/A

Comments: MS %R = 50%, MSD %R = 56%. An additional MS was performed
using equipment blank B1NHL1 and has %R = 73%.

GENERAL CHEMISTRY DATA VALIDATION CHECKLISTS

5. PRECISION (Levels C, D, and E)

- Duplicate RPD values acceptable? Yes No N/A
- Duplicate results acceptable? Yes No N/A
- MS/MSD standards NIST traceable? (Levels D, E) Yes No N/A
- MS/MSD standards expired? (Levels D, E) Yes No N/A
- Field duplicate RPD values acceptable? Yes No N/A
- Field split RPD values acceptable? Yes No N/A
- Transcription/calculation errors? (Levels D, E) Yes No N/A

Comments: None.

6. HOLDING TIMES (all levels)

- Samples properly preserved? Yes No N/A
- Sample holding times acceptable? Yes No N/A

Comments: None

GENERAL CHEMISTRY DATA VALIDATION CHECKLISTS

7. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

Results reported for all requested analyses? Yes No N/A
Results supported in the raw data? (Levels D, E)..... Yes No N/A
Samples properly prepared? (Levels D, E)..... Yes No N/A
Detection limits meet RDL? Yes No N/A
Transcription/calculation errors? (Levels D, E)..... Yes No N/A

Comments: None

Appendix 6

Additional Documentation Requested By Client

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: Hexavalent chromium

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
---------	---------	-------	----------	----------	-------	-------------	-------------	--------	-----------	----	---------------

Lab ID: W070000549
 BATCH QC ASSOCIATED WITH SAMPLE

MS	Hexavalent chromium	18540-29-9	25.13	50.110	% Recov	75.000	125.000			•	05/31/07
MSD	Hexavalent chromium	18540-29-9	28.19	56.211	% Recov	75.000	125.000			•	05/31/07
SPK-RPD	Hexavalent chromium	18540-29-9	56.211		RPD			11.477	20.000		05/31/07

Lab ID: W070000550
 BATCH QC ASSOCIATED WITH SAMPLE

DUP	Hexavalent chromium	18540-29-9	< 0.10		RPD			n/a	15.000	U	05/31/07
SPK-POST	Hexavalent chromium	18540-29-9	0.0507	98.066	% Recov	75.000	125.000				05/31/07

Lab ID: W070000551
 BATCH QC ASSOCIATED WITH SAMPLE

MS	Hexavalent chromium	18540-29-9	1432	72.950	% Recov	75.000	125.000			•	05/31/07
----	---------------------	------------	------	--------	---------	--------	---------	--	--	---	----------

BATCH QC

BLNK-PREP	Hexavalent chromium	18540-29-9	< 0.10	n/a	ug/g	0.000	2.000			U	05/31/07
LCS	Hexavalent chromium	18540-29-9	1.0375	103.440	% Recov	80.000	120.000				05/31/07

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Date: 07 June 2007
 To: Fluor Hanford Inc. (technical representative)
 From: Analytical Quality Associates, Inc.
 Project: 200-CW-3 Operable Unit
 Subject: Radiochemical - Sample Data Groups (SDGs) W05178 and WSCF20070837

INTRODUCTION

This memorandum presents the results of data validation for SDG W05178 prepared by STL Richland, and SDG WSCF20070837 prepared by WSCF for radiochemical analysis. A list of samples validated along with the analytical methods is provided in the following table.

Sample ID	Sample Date	Media	Validation Level	Analytical Methods
B1NHK1	05/16/07	Soil	C	See note 1
B1NHK2	05/16/07	Soil	C	See note 1
B1NHK3	05/16/07	Soil	C	See note 1
B1NHK4	05/16/07	Soil	C	See note 1
B1NHK5	05/16/07	Soil	C	See note 1
B1NHK6	05/16/07	Soil	C	See note 1
B1NHK7	05/16/07	Soil	C	Tritium
B1NHK8	05/16/07	Soil	C	Tritium
B1NHK9	05/16/07	Soil	C	Tritium
B1NHL0	05/16/07	Soil	C	Tritium
B1NHL1	05/16/07	Soil	C	See note 1
B1NHL2	05/16/07	Soil	C	See note 1
B1NHL3	05/16/07	Soil	C	Tritium
B1NJL6	05/16/07	Water	C	Tritium

1 - Alpha spectrometry, gamma spectrometry, nickel-63, strontium-89/90 and technetium-99

Data validation was conducted in accordance with the FHI validation statement of work and the Sampling and Analysis Plan for Remediation of Select 200 North Area Waste Sites in the 200-CW-3 Operable Unit, DOE/RL-2006-65, Rev. 1 (SAP). Appendices 1 through 6 provide the following information as indicated below:

- Appendix 1. Glossary of Data Reporting Qualifiers
- Appendix 2. Summary of Data Qualification
- Appendix 3. Annotated Laboratory Reports
- Appendix 4. Laboratory Narrative and Chain-of-Custody Documentation
- Appendix 5. Data Validation Supporting Documentation
- Appendix 6. Additional Documentation Requested By Client

DATA QUALITY OBJECTIVES

- **Holding Times and Sample Preservation**

Holding times are calculated from Chain-of-Custody (COC) forms to determine the validity of the results. There are no specific holding time and preservation requirements for radiochemical soil/solid analysis.

Based on professional judgment, the samples were analyzed within reasonable holding times.

- **Blanks**

The blank data results are reviewed to assess the extent of contamination introduced through sampling, sample preparation, and analysis.

Laboratory Blanks

All laboratory blank results were acceptable with the following exceptions. The Am-241 (alpha), Pu-238, U-235 (alpha), Sr-89/90, Ra-226, Pb-214, Bi-214, Ra-228, Ac-228, Pb-212, Tl-208 and K-40 laboratory blank results were > the minimum detectable concentrations (MDCs). The following samples had associated results > the MDCs but <5X the blank results and should be qualified as estimates and flagged "J":

Am-241 (alpha): B1NHK1 to B1NHK6, and B1NHL1
U-235 (alpha): B1NHK1 to B1NHK3, and B1NHK5
Sr-89/90: B1NHK1, B1NHK2, B1NHK5 and B1NHL1
Ra-226: B1NHL1 and B1NHL2
Pb-214: B1NHL1 and B1NHL2
Bi-214: B1NHL1 and B1NHL2
Ra-228: B1NHL1 and B1NHL2
Ac-228: B1NHL1 and B1NHL2
Pb-212: B1NHL1 and B1NHL2

The remaining sample results with associated blank contamination were either non-detects or detects >5X the laboratory blank results and should not be qualified. It should be noted that the presence of naturally occurring radioactive materials in the laboratory blank may signify that a solid matrix material (versus purified water) was used for the blank and that some of the listed detections are not due to contamination. This information could not be determined from documentation supplied in the data package.

Field Blanks

All field blank results were acceptable with the following exceptions. U-233/234, U-238, Ra-226, Pb-214, Bi-214, Ra-228, Ac-228, Pb-212, Bi-212, Tl-208 and K-40 were detected in field blank B1NHL2. The Ra-226, Pb-214, Bi-214, Ra-228, Ac-228 and Pb-212 results have been flagged "J" due to laboratory blank contamination. The possibility of indigenous naturally occurring radioactive materials present in the field blank could not be determined from documentation supplied in the data package.

Equipment Blanks

All equipment blank results were acceptable with the following exceptions. Am-241 (alpha), U-233/234, U-238, Sr-89/90, Ra-226, Pb-214, Bi-214, Ra-228, Ac-228, Pb-212, Bi-212, Tl-208 and K-40 were detected in equipment blank B1NHL1. The Am-241 (alpha), Sr-89/90, Ra-226, Pb-214, Bi-214, Ra-228, Ac-228 and Pb-212 results have been flagged "J" due to laboratory blank contamination. The possibility of indigenous naturally occurring radioactive materials present in the equipment blank could not be determined from documentation supplied in the data package.

Trip Blanks

All trip blank results were acceptable.

- **Accuracy**

Accuracy is evaluated by reviewing laboratory control sample results, matrix spike sample results, and chemical recovery factors. Chemical recovery factors are determined through use of a carrier or tracer and provide assessment of the chemical separation process that is affected by the laboratory procedure, sample matrix, and/or interference. Chemical recovery factors are used to correct the sample concentration, uncertainty, and MDC results.

Laboratory Control Samples (LCSs)

All LCS recoveries were acceptable.

Matrix Spike (MS) Samples

All MS recoveries were acceptable.

Carrier/Tracer Recovery Factors

All carrier/tracer recovery factors were acceptable.

- **Precision**

Precision is evaluated by reviewing laboratory and field duplicate sample results. These QC results provide information on the laboratory reproducibility and whether sampling activities are adequate to acquire consistent sample results. According to the SAP, precision criteria are only applicable when sample/replicate results are >5X to 10X the MDC.

Laboratory Duplicate Samples

All laboratory duplicate results were acceptable with the following exceptions. The Pu-239/240 and U-233/234 relative percent differences (RPDs) were >30%. The Pu-239/240 and U-233/234 results for the sample and duplicate were >10X their MDCs. According to the SAP, the RPD limit is 30% for results >5X to 10X the MDC. The uncertainties of the sample and duplicate results show that they are statistically equal with replicate error ratios < 1.0. Based on professional judgment, the associated Pu-239/240 and U-233/234 sample results should not be qualified.

Field Duplicate Samples

All field duplicate results were acceptable with the following exceptions. Samples B1N HK1 and B1N HK3 had a Pu-239/240 RPD = 72% and a replicate error ratio = 1.3. No sample data were qualified as a result per data validation procedure guidance.

- **Detection Limits**

Reported MDCs are compared against the contractually required detection limits (CRDLs) to ensure that laboratory detection limits meet the required criteria.

All reported sample MDCs were below the CRDLs.

- **Completeness**

SDGs W05178 and WSCF20070837 were submitted for validation and verified for completeness. Completeness is based on the percentage of data determined to be valid (i.e., not rejected). The completion percentage was 100%.

MAJOR DEFICIENCIES

None found.

MINOR DEFICIENCIES

Minor deficiencies leading to qualification of sample results as estimates were due to laboratory blank infractions for several analyses. See the table in Appendix 2 for a listing of all affected sample results.

It should be noted that page six of COC R07-010-001 lists a collection date of 5-17-07, 0840 for sample B1NHL1. The actual collection date was 5-16-07, 0840.

REFERENCES

FHI, Contract #29774, *Validation of Radiological and Chemical Analytical Data*, Fluor Hanford Incorporated, August 24, 2006.

DOE/RL-2006-65, Rev.1, *Sampling and Analysis Plan for Remediation of Select 200 North Area Waste Sites in the 200-CW-3 Operable Unit*, January 2007.

Appendix 1
Glossary of Data Reporting Qualifiers

Qualifiers that may be applied by data validators in compliance with the FHI statement of work are as follows:

- **U** — The constituent was analyzed for and was not detected. The data should be considered usable for decision-making purposes.
- **UJ** — The constituent was analyzed for and was not detected. Due to a quality control deficiency identified during data validation the value reported may not accurately reflect the MDC. The data should be considered usable for decision-making purposes.
- **J** — Indicates the constituent was analyzed for and detected. The associated value is estimated due to a quality control deficiency identified during data validation. The data should be considered usable for decision-making purposes.
- **UR** — Indicates the constituent was analyzed for and not detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.
- **R** — Indicates the constituent was analyzed for and detected; however, due to an identified quality control deficiency the data should be considered unusable for decision-making purposes.

Appendix 2
Summary of Data Qualification

Radiochemical Data Qualification Summary			
SDGs W05178 and WSCF20070837	Reviewer: AQA	Project: 200-CW-3 OU	Page 1 of 1
Analyte(s)	Qualifier	Samples Affected	Reason
Am-241 (alpha)	J	B1NHK1 to B1NHK6, & B1NHL1	Laboratory blank contamination
U-235 (alpha)	J	B1NHK1 to B1NHK3, & B1NHK5	Laboratory blank contamination
Sr-89/90	J	B1NHK1, B1NHK2, B1NHK5 & B1NHL1	Laboratory blank contamination
Ra-226, Pb-214, Bi-214, Ra-228, Ac-228 & Pb-212	J	B1NHL1 & B1NHL2	Laboratory blank contamination

Comments: None

Appendix 3

Annotated Laboratory Reports

FORM I
SAMPLE RESULTS

Date: 01-Jun-07

Lab Name: STL Richland

SDG: W05178

Collection Date: 5/18/2007 8:14:00 AM

Lot-Sample No.: J7E180260-1

Report No.: 35493

Received Date: 5/18/2007 11:45:00 AM

Client Sample ID: B1NHK1

COC No.: R07-010-003

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 7138458	Work Order: JW9RA1AA			Report DB ID: 9JW9RA10								
Ni-63	-3.47E-01	U	1.6E+00	2.6E+00	3.60E+00	pCi/g	84%	-0.1	5/31/07 02:07 p	22.15	0.44194	Ni63_LSC
						1.75E+00	3.00E+01	-0.27		G	G	LSC4

Number of Results: 1

Comments:

STL Richland MDC|MDA,Lc - Detection, Decision Level based on Instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRchSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.
 V5.1.2 A2002

FORM I
SAMPLE RESULTS

Date: 01-Jun-07

Lab Name: STL Richland

SDG: W05178

Collection Date: 5/16/2007 8:50:00 AM

Lot-Sample No.: J7E180260-2

Report No.: 35493

Received Date: 5/18/2007 11:45:00 AM

Client Sample ID: B1NHK2

COC No.: R07-010-003

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC/MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 7138458	Work Order: JW9RT1AA			Report DB ID: 9JW9RT10								
Ni-63	-9.51E-01	U	1.2E+00	2.1E+00	2.95E+00	pCi/g	97%	-0.32	5/31/07 05:31 p	23.04	0.46581	Ni63_LSC
						1.43E+00	3.00E+01	-0.91		G	G	LSC4

Number of Results: 1

Comments:

STL Richland MDC/MDA, Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRchSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.
 V5.1.2 A2002

FORM I

Date: 01-Jun-07

SAMPLE RESULTS

Lab Name: STL Richland

SDG: W05178

Collection Date: 5/16/2007 9:25:00 AM

Lot-Sample No.: J7E180260-3

Report No.: 35493

Received Date: 5/18/2007 11:45:00 AM

Client Sample ID: B1NHK3

COC No.: R07-010-003

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 7138456	Work Order: JW9RW1AA		Report DB ID: 9JW9RW10									
Ni-63	2.51E+00	U	1.4E+00	2.5E+00	3.44E+00	pCi/g	91%	0.73	5/31/07 07:14 p	22.64	0.45847	Ni63_LSC
						1.67E+00	3.00E+01	(2.)		G	G	LSC4

Number of Results: 1

Comments:

STL Richland MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLrchSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.
 V5.1.2 A2002

FORM I

Date: 01-Jun-07

SAMPLE RESULTS

Lab Name: STL Richland

SDG: W05178

Collection Date: 5/18/2007 8:30:00 AM

Lot-Sample No.: J7E180260-4

Report No.: 35493

Received Date: 5/18/2007 11:45:00 AM

Client Sample ID: B1NHK4

COC No.: R07-010-003

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC(MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 7138486	Work Order: JW9RX1AA			Report DB ID: 9JW9RX10								
NI-63	5.14E-01	U	1.4E+00	2.5E+00	3.40E+00	pCi/g	94%	0.15	5/31/07 08:56 p	20.86	0.41778	NI63_LSC
						1.65E+00	3.00E+01	0.41		G	G	LSC4

Number of Results: 1

Comments:

STL Richland MDC(MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRchSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.
 V5.1.2 A2002

FORM I

Date: 01-Jun-07

SAMPLE RESULTS

Lab Name: STL Richland

SDG: W05178

Collection Date: 5/16/2007 10:58:00 AM

Lot-Sample No.: J7E180260-5

Report No.: 35493

Received Date: 5/18/2007 11:45:00 AM

Client Sample ID: B1NHK5

COC No.: R07-010-003

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC/MDA, Action Lev	Rpt Unit, Lo	Yield CRDL(RL)	Ret/MDC, Ret/TotUcert	Analysis, Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
Batch: 7138458	Work Order: JW9R21AA			Report DB ID: 9JW9R210								
NI-63	1.63E-01	U	1.5E+00	2.5E+00	3.48E+00	pCi/g	95%	0.05	5/31/07 10:39 p	20.2	0.40344	NI63_LSC
						1.69E+00	3.00E+01	0.13		G	G	LSC4

Number of Results: 1

Comments:

STL Richland MDC/MDA, Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRchSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.
 V5.1.2 A2002

FORM I

Date: 01-Jun-07

SAMPLE RESULTS

Lab Name: STL Richland

SDG: W05178

Collection Date: 5/16/2007 11:12:00 AM

Lot-Sample No.: J7E180260-6

Report No.: 35493

Received Date: 5/18/2007 11:45:00 AM

Client Sample ID: B1NHK6

COC No.: R07-010-003

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Ret/MDC, Ret/TotUcert	Analysis, Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
Batch: 7138466	Work Order: JW9R61AA		Report DB ID: 9JW9R610									
Ni-63	7.00E-01	U	1.4E+00	2.5E+00	3.39E+00	pCi/g	96%	0.21	6/1/07 12:21 a	20.19	0.40986	Ni63_LSC
						1.65E+00	3.00E+01	0.56		G	G	LSC4

Number of Results: 1

Comments:

STL Richland MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRctSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.
 V5.1.2 A2002

FORM I

Date: 01-Jun-07

SAMPLE RESULTS

Lab Name: STL Richland

SDG: W05178

Collection Date: 5/18/2007 8:40:00 AM

Lot-Sample No.: J7E180260-7

Report No.: 35493

Received Date: 5/18/2007 11:45:00 AM

Client Sample ID: B1NHL1

COC No.: R07-010-003

Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, Lo	Yield CRDL(RL)	Rst MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
Batch: 7138468	Work Order: JW9R71AA			Report DB ID: 9JW9R710								
NI-63	1.61E+00	U	1.4E+00	2.5E+00	3.27E+00	pCi/g	97%	0.49	6/1/07 02:03 a	21.12	0.422	NI63_LSC
						1.59E+00	3.00E+01	(1.3)		G	G	LSC4

Number of Results: 1

Comments:

STL Richland MDC|MDA,Lo - Detection, Decision Level based on Instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 rptSTLRichSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.
 V5.1.2 A2002

FORM I
SAMPLE RESULTS

Date: 01-Jun-07

Lab Name: STL Richland
Lot-Sample No.: J7E180260-8
Client Sample ID: B1NHL2

SDG: W05178
Report No.: 35493
COC No.: R07-010-003

Collection Date: 5/18/2007 7:48:00 AM
Received Date: 5/18/2007 11:45:00 AM
Matrix: SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC/MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(FL)	Rel/MDC, Rat/TotUcert	Analysis, Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
Batch: 7138458			Work Order: JW9R91AA			Report DB ID: 9JW9R910						
NI-63	1.01E+00	U	1.4E+00	2.5E+00	3.37E+00	pCVg	95%	0.3	6/1/07 03:46 a	20.66	0.41508	NI63_LSC
						1.84E+00	3.00E+01	0.81		G	G	LSC4

Number of Results: 1

Comments:

STL Richland MDC/MDA, Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
rptSTLRchSample U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.
V6.1.2 A2002

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000548
Client ID: B1NHK1

KLAGES
 WSCF

Matrix: SOIL LS
 06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Americium by AEA											
Americium-241	14596-10-2	LA-508-471		0.100	pCi/g	+0.0400	pCi/g	J	1.00	0.040	05/24/07
Am-243 tracer by AEA	AM243	LA-508-471		4.50	pCi/g				1.00	0.023	05/24/07
Gamma Energy Analysis-grd H2O											
Americium-241	14596-10-2	LA-508-481	U	0.0500	pCi/g	+0.0523	pCi/g		1.00	0.085	05/21/07
Antimony-125	14234-35-6	LA-508-481	U	-0.0114	pCi/g	+0.0159	pCi/g		1.00	0.028	05/21/07
Ba-133 by GEA	13981-41-4	LA-508-481	U	1.73e-03	pCi/g	+8.06e-03	pCi/g		1.00	0.012	05/21/07
Cerium-144	14762-78-8	LA-508-481	U	3.20e-03	pCi/g	+0.0320	pCi/g		1.00	0.081	05/21/07
Cerium/Praseodymium-144	CE/PR-144	LA-508-481	U	6.39e-03	pCi/g	+0.0639	pCi/g		1.00	0.16	05/21/07
Cobalt-60	10198-40-0	LA-508-481	U	4.46e-03	pCi/g	+5.44e-03	pCi/g		1.00	9.7e-03	05/21/07
Cesium-134	13967-70-9	LA-508-481	U	0.0259	pCi/g	+8.45e-03	pCi/g		1.00	0.030	05/21/07
Cesium-137	10045-97-3	LA-508-481		0.259	pCi/g	+0.0429	pCi/g		1.00	9.1e-03	05/21/07
Europium-152	14683-23-9	LA-508-481		0.105	pCi/g	+0.0187	pCi/g		1.00	0.029	05/21/07
Europium-154	15585-10-1	LA-508-481	U	0.0112	pCi/g	+0.0192	pCi/g		1.00	0.029	05/21/07
Europium-155	14391-16-3	LA-508-481	U	0.0446	pCi/g	+0.0315	pCi/g		1.00	0.042	05/21/07
Potassium-40	13966-00-2	LA-508-481		13.5	pCi/g	+1.82	pCi/g		1.00	0.064	05/21/07
Niobium-94	14681-63-1	LA-508-481	U	6.88e-03	pCi/g	+6.24e-03	pCi/g		1.00	8.2e-03	05/21/07
Radium-226	13982-63-3	LA-508-481		0.500	pCi/g	+0.0802	pCi/g		1.00	0.018	05/21/07
Radium-228	15262-20-1	LA-508-481		0.622	pCi/g	+0.105	pCi/g		1.00	0.029	05/21/07
Ruthenium-106	13967-48-1	LA-508-481	U	-6.09e-03	pCi/g	+0.0454	pCi/g		1.00	0.078	05/21/07
Tin-126	15832-50-5	LA-508-481	U	0.127	pCi/g	+0.0297	pCi/g		1.00	0.20	05/21/07
Thorium-234	15065-10-8	LA-508-481	U	0.414	pCi/g	+0.360	pCi/g		1.00	0.54	05/21/07
Uranium-235	15117-96-1	LA-508-481	U	0.0148	pCi/g	+0.0504	pCi/g		1.00	0.082	05/21/07
Zinc-65	13982-39-3	LA-508-481	U	0.0120	pCi/g	+0.0200	pCi/g		1.00	0.020	05/21/07
Actinium-228	14331-83-0	LA-508-481		0.602	pCi/g	+0.107	pCi/g		1.00	0.029	05/21/07

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

* - Indicates results that have NOT been validated;

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C - The Analyte was found in the Associated Blank.(inorg)

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

Page 10

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000548
Client ID: B1NHK1

**KLAGES
WSCF**

Matrix: SOIL LS
06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Bismuth-212	14913-49-6	LA-508-481		0.420	pCi/g	+0.0889	pCi/g	1.00	0.069		05/21/07
Bismuth-214	14733-03-0	LA-508-481		0.569	pCi/g	+0.0687	pCi/g	1.00	0.018		05/21/07
Lead-212	15092-94-1	LA-508-481		0.680	pCi/g	+0.0624	pCi/g	1.00	0.020		05/21/07
Lead-214	15067-28-4	LA-508-481		0.853	pCi/g	+0.158	pCi/g	1.00	0.020		05/21/07
Ruthenium-103	13968-53-1	LA-508-481	U	1.20e-03	pCi/g	+5.70e-03	pCi/g	1.00	9.5e-03		05/21/07
Tin-113	13966-06-8	LA-508-481	U	3.37e-03	pCi/g	+7.31e-03	pCi/g	1.00	0.012		05/21/07
Thallium-208	14913-50-9	LA-508-481		0.194	pCi/g	+0.0275	pCi/g	1.00	9.0e-03		05/21/07
Plutonium Isotopes by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	-1.90e-03	pCi/g	+0.0190	pCi/g	1.00	0.051		05/24/07
Pu-239/240 by AEA	PU-239/240	LA-508-471		0.450	pCi/g	+0.130	pCi/g	1.00	0.018		05/24/07
Pu-242 tracer by AEA	PU242	LA-508-471		7.00	pCi/g			1.00	0.014		05/24/07
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		0.290	pCi/g	+0.136	pCi/g	J 1.00	0.080		05/22/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		101	Percent			1.00	0.0		05/22/07
TC99 by Liquid Scin.											
Technetium-99	14133-76-7	LA-508-421	U	-0.200	pCi/g	+0.200	pCi/g	1.00	0.30		05/23/07
Uranium Isotopes by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.230	pCi/g	+0.0736	pCi/g	1.00	0.016		05/24/07
Uranium-235	15117-96-1	LA-508-471		0.0210	pCi/g	+0.0164	pCi/g	J 1.00	0.017		05/24/07
Uranium-238	U-238	LA-508-471		0.230	pCi/g	+0.0736	pCi/g	1.00	5.8e-03		05/24/07
U-232 tracer by AEA	U232	LA-508-471		4.70	pCi/g			1.00	0.049		05/24/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000549
Client ID: B1NHK2

**KLAGES
WSCF**

Matrix: SOIL LS
06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Americium by AEA											
Americium-241	14596-10-2	LA-508-471		0.0970	pCi/g	+ -0.0340	pCi/g	J	1.00	0.016	05/24/07
Am-243 tracer by AEA	AM243	LA-508-471		4.70	pCi/g				1.00	0.013	05/24/07
Gamma Energy Analysis-grd H2O											
Americium-241	14596-10-2	LA-508-481	U	-0.0447	pCi/g	+ -0.0520	pCi/g		1.00	0.087	05/18/07
Antimony-125	14234-35-6	LA-508-481	U	6.20e-03	pCi/g	+ -0.0178	pCi/g		1.00	0.030	05/18/07
Ba-133 by GEA	13981-41-4	LA-508-481	U	7.31e-03	pCi/g	+ -9.32e-03	pCi/g		1.00	0.014	05/18/07
Cerium-144	14762-78-8	LA-508-481	U	-5.45e-03	pCi/g	+ -0.0545	pCi/g		1.00	0.093	05/18/07
Cerium/Praseodymium-144	CE/PR-144	LA-508-481	U	-0.0109	pCi/g	+ -0.109	pCi/g		1.00	0.19	05/18/07
Cobalt-60	10198-40-0	LA-508-481	U	2.71e-04	pCi/g	+ -2.71e-03	pCi/g		1.00	0.012	05/18/07
Cesium-134	13967-70-9	LA-508-481	U	0.0346	pCi/g	+ -0.0132	pCi/g		1.00	0.040	05/18/07
Cesium-137	10045-97-3	LA-508-481		0.188	pCi/g	+ -0.0362	pCi/g		1.00	0.011	05/18/07
Europium-152	14683-23-9	LA-508-481		0.0883	pCi/g	+ -0.0208	pCi/g		1.00	0.034	05/18/07
Europium-154	15585-10-1	LA-508-481	U	0.0108	pCi/g	+ -0.0211	pCi/g		1.00	0.036	05/18/07
Europium-155	14391-16-3	LA-508-481	U	0.0256	pCi/g	+ -0.0315	pCi/g		1.00	0.051	05/18/07
Potassium-40	13966-00-2	LA-508-481		13.7	pCi/g	+ -1.81	pCi/g		1.00	0.082	05/18/07
Niobium-94	14681-63-1	LA-508-481	U	3.96e-03	pCi/g	+ -6.25e-03	pCi/g		1.00	0.010	05/18/07
Radium-226	13982-63-3	LA-508-481		0.500	pCi/g	+ -0.0906	pCi/g		1.00	0.021	05/18/07
Radium-228	15262-20-1	LA-508-481		0.617	pCi/g	+ -0.108	pCi/g		1.00	0.037	05/18/07
Ruthenium-106	13967-48-1	LA-508-481	U	0.0168	pCi/g	+ -0.0566	pCi/g		1.00	0.095	05/18/07
Tin-126	15832-50-5	LA-508-481	U	0.151	pCi/g	+ -0.0403	pCi/g		1.00	0.16	05/18/07
Thorium-234	15065-10-8	LA-508-481		0.766	pCi/g	+ -0.255	pCi/g		1.00	0.71	05/18/07
Uranium-235	15117-96-1	LA-508-481	U	0.0840	pCi/g	+ -0.0683	pCi/g		1.00	0.094	05/18/07
Zinc-65	13982-39-3	LA-508-481	U	5.62e-03	pCi/g	+ -0.0290	pCi/g		1.00	0.026	05/18/07
Actinium-228	14331-83-0	LA-508-481		0.599	pCi/g	+ -0.109	pCi/g		1.00	0.037	05/18/07

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Report WGPP/ver. 5.2
 PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000549
Client ID: B1NHK2

**KLAGES
WSCF**

Matrix: SOIL *LS*
 06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

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Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Bismuth-212	14913-49-6	LA-508-481		0.464	pCi/g	+ -0.111	pCi/g	1.00	0.084		05/18/07
Bismuth-214	14733-03-0	LA-508-481		0.560	pCi/g	+ -0.0723	pCi/g	1.00	0.021		05/18/07
Lead-212	15092-94-1	LA-508-481		0.735	pCi/g	+ -0.0694	pCi/g	1.00	0.024		05/18/07
Lead-214	15067-28-4	LA-508-481		0.679	pCi/g	+ -0.167	pCi/g	1.00	0.024		05/18/07
Ruthenium-103	13968-53-1	LA-508-481	U	-2.60e-03	pCi/g	+ -6.43e-03	pCi/g	1.00	0.011		05/18/07
Tin-113	13966-06-8	LA-508-481	U	-0.0120	pCi/g	+ -0.0120	pCi/g	1.00	0.014		05/18/07
Thallium-208	14913-50-9	LA-508-481		0.201	pCi/g	+ -0.0322	pCi/g	1.00	0.011		05/18/07
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	0.0130	pCi/g	+ -0.0332	pCi/g	1.00	0.056		05/24/07
Pu-239/240 by AEA	PU-239/240	LA-508-471		0.450	pCi/g	+ -0.130	pCi/g	1.00	0.023		05/24/07
Pu-242 tracer by AEA	PU242	LA-508-471		7.40	pCi/g			1.00	0.016		05/24/07
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		0.0940	pCi/g	+ -0.110	pCi/g	J 1.00	0.070		05/22/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		99.0	Percent			1.00	0.0		05/22/07
TC99 by Liquid Scin.											
Technetium-99	14133-76-7	LA-508-421	U	-0.200	pCi/g	+ -0.200	pCi/g	1.00	0.30		05/23/07
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.170	pCi/g	+ -0.0578	pCi/g	1.00	0.016		05/24/07
Uranium-235	15117-96-1	LA-508-471		9.50e-03	pCi/g	+ -9.78e-03	pCi/g	J 1.00	6.4e-03		05/24/07
Uranium-238	U-238	LA-508-471		0.160	pCi/g	+ -0.0560	pCi/g	1.00	0.016		05/24/07
U-232 tracer by AEA	U232	LA-508-471		5.00	pCi/g			1.00	0.051		05/24/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample #: W070000550
Client ID: B1NHK3

KLAGES
WSCF

Matrix: SOIL ^{LS}
06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Americium by AEA											
Americium-241	14598-10-2	LA-508-471		0.180	pCi/g	+0.0522	pCi/g	J	1.00	0.012	05/24/07
Am-243 tracer by AEA	AM243	LA-508-471		4.30	pCi/g				1.00	4.4e-03	05/24/07
Gamma Energy Analysis-grd H2O											
Americium-241	14598-10-2	LA-508-481	U	0.0911	pCi/g	+0.0713	pCi/g		1.00	0.098	05/18/07
Antimony-125	14234-35-8	LA-508-481	U	-0.0128	pCi/g	+0.0172	pCi/g		1.00	0.028	05/18/07
Ba-133 by GEA	13981-41-4	LA-508-481	U	7.41e-03	pCi/g	+9.20e-03	pCi/g		1.00	0.014	05/18/07
Cerium-144	14762-78-8	LA-508-481	U	-0.0533	pCi/g	+0.0641	pCi/g		1.00	0.090	05/18/07
Cerium/Praseodymium-144	CE/PR-144	LA-508-481	U	-0.107	pCi/g	+0.128	pCi/g		1.00	0.18	05/18/07
Cobalt-60	10198-40-0	LA-508-481	U	8.18e-03	pCi/g	+6.03e-03	pCi/g		1.00	0.011	05/18/07
Cesium-134	13967-70-9	LA-508-481	U	0.0247	pCi/g	+0.0108	pCi/g		1.00	0.025	05/18/07
Cesium-137	10045-97-3	LA-508-481		0.293	pCi/g	+0.0521	pCi/g		1.00	0.011	05/18/07
Europium-152	14683-23-9	LA-508-481		0.154	pCi/g	+0.0223	pCi/g		1.00	0.034	05/18/07
Europium-154	15585-10-1	LA-508-481	U	-3.25e-03	pCi/g	+0.0189	pCi/g		1.00	0.032	05/18/07
Europium-155	14391-16-3	LA-508-481	U	0.0376	pCi/g	+0.0378	pCi/g		1.00	0.050	05/18/07
Potassium-40	13966-00-2	LA-508-481		13.1	pCi/g	+1.77	pCi/g		1.00	0.080	05/18/07
Niobium-94	14681-63-1	LA-508-481	U	2.75e-03	pCi/g	+5.74e-03	pCi/g		1.00	9.7e-03	05/18/07
Radium-226	13982-63-3	LA-508-481		0.445	pCi/g	+0.0771	pCi/g		1.00	0.021	05/18/07
Radium-228	15262-20-1	LA-508-481		0.615	pCi/g	+0.108	pCi/g		1.00	0.033	05/18/07
Ruthenium-106	13967-48-1	LA-508-481	U	0.0177	pCi/g	+0.0566	pCi/g		1.00	0.096	05/18/07
Tin-126	15832-50-5	LA-508-481	U	0.144	pCi/g	+0.0383	pCi/g		1.00	0.037	05/18/07
Thorium-234	15085-10-8	LA-508-481	U	0.533	pCi/g	+0.233	pCi/g		1.00	0.77	05/18/07
Uranium-235	15117-96-1	LA-508-481	U	-0.0242	pCi/g	+0.0609	pCi/g		1.00	0.095	05/18/07
Zinc-65	13982-39-3	LA-508-481	U	4.38e-03	pCi/g	+0.0249	pCi/g		1.00	0.023	05/18/07
Actinium-228	14331-83-0	LA-508-481		0.535	pCi/g	+0.104	pCi/g		1.00	0.033	05/18/07

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000550
Client ID: B1NHK3

KLAGES
WSCF

Matrix: SOIL ^{LS}
06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Bismuth-212	14913-49-6	LA-508-481		0.432	pCi/g	+0.111	pCi/g	1.00	0.075		05/18/07
Bismuth-214	14733-03-0	LA-508-481		0.571	pCi/g	+0.0682	pCi/g	1.00	0.021		05/18/07
Lead-212	15092-94-1	LA-508-481		0.664	pCi/g	+0.0649	pCi/g	1.00	0.023		05/18/07
Lead-214	15067-28-4	LA-508-481		0.679	pCi/g	+0.161	pCi/g	1.00	0.024		05/18/07
Ruthenium-103	13968-53-1	LA-508-481	U	-2.34e-03	pCi/g	+6.00e-03	pCi/g	1.00	0.010		05/18/07
Tin-113	13966-06-8	LA-508-481	U	-5.44e-03	pCi/g	+8.02e-03	pCi/g	1.00	0.013		05/18/07
Thallium-208	14913-50-9	LA-508-481		0.183	pCi/g	+0.0278	pCi/g	1.00	0.010		05/18/07
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	0.0220	pCi/g	+0.0255	pCi/g	1.00	0.041		05/24/07
Pu-239/240 by AEA	PU-239/240	LA-508-471		0.960	pCi/g	+0.259	pCi/g	1.00	0.017		05/24/07
Pu-242 tracer by AEA	PU242	LA-508-471		6.70	pCi/g			1.00	0.017		05/24/07
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	0.0460	pCi/g	+0.116	pCi/g	1.00	0.073		05/22/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		103	Percent			1.00	0.0		05/22/07
TC99 by Liquid Scin.											
Technetium-99	14133-76-7	LA-508-421	U	-0.100	pCi/g	+0.120	pCi/g	1.00	0.20		05/23/07
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.160	pCi/g	+0.0544	pCi/g	1.00	5.1e-03		05/24/07
Uranium-235	15117-96-1	LA-508-471		0.0170	pCi/g	+0.0128	pCi/g J	1.00	5.6e-03		05/24/07
Uranium-238	U-238	LA-508-471		0.140	pCi/g	+0.0490	pCi/g	1.00	0.014		05/24/07
U-232 tracer by AEA	U232	LA-508-471		4.50	pCi/g			1.00	0.040		05/24/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000551
Client ID: B1NHL1

KLAGES
WSCF

Matrix: SOIL ^{LS}
06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Americium by AEA											
Americium-241	14596-10-2	LA-508-471		0.0370	pCi/g	+0.0196	pCi/g	J 1.00	0.014		05/24/07
Am-243 tracer by AEA	AM243	LA-508-471		4.60	pCi/g			1.00	0.014		05/24/07
Gamma Energy Analysis-grd H2O											
Americium-241	14596-10-2	LA-508-481	U	-0.0677	pCi/g	+0.0677	pCi/g	1.00	0.086		05/18/07
Antimony-125	14234-35-6	LA-508-481	U	-0.0125	pCi/g	+0.0158	pCi/g	1.00	0.026		05/18/07
Ba-133 by GEA	13981-41-4	LA-508-481	U	1.60e-03	pCi/g	+8.53e-03	pCi/g	1.00	0.012		05/18/07
Cerium-144	14762-78-8	LA-508-481	U	9.49e-03	pCi/g	+0.0416	pCi/g	1.00	0.069		05/18/07
Cerium/Praseodymium-144	CE/PR-144	LA-508-481	U	0.0190	pCi/g	+0.0833	pCi/g	1.00	0.14		05/18/07
Cobalt-60	10198-40-0	LA-508-481	U	-5.25e-03	pCi/g	+5.88e-03	pCi/g	1.00	9.4e-03		05/18/07
Cesium-134	13967-70-9	LA-508-481	U	0.0127	pCi/g	+0.0101	pCi/g	1.00	0.020		05/18/07
Cesium-137	10045-97-3	LA-508-481	U	-2.35e-03	pCi/g	+6.07e-03	pCi/g	1.00	0.010		05/18/07
Europium-152	14683-23-9	LA-508-481	U	-1.86e-03	pCi/g	+0.0186	pCi/g	1.00	0.028		05/18/07
Europium-154	15585-10-1	LA-508-481	U	-4.80e-03	pCi/g	+0.0168	pCi/g	1.00	0.028		05/18/07
Europium-155	14391-16-3	LA-508-481	U	-0.0151	pCi/g	+0.0224	pCi/g	1.00	0.036		05/18/07
Potassium-40	13966-00-2	LA-508-481		0.941	pCi/g	+0.220	pCi/g	1.00	0.083		05/18/07
Niobium-94	14681-63-1	LA-508-481	U	6.13e-04	pCi/g	+6.13e-03	pCi/g	1.00	9.4e-03		05/18/07
Radium-226	13982-63-3	LA-508-481		0.148	pCi/g	+0.0368	pCi/g	J 1.00	0.021		05/18/07
Radium-228	15262-20-1	LA-508-481		0.184	pCi/g	+0.0487	pCi/g	J 1.00	0.034		05/18/07
Ruthenium-106	13967-48-1	LA-508-481	U	0.0378	pCi/g	+0.0544	pCi/g	1.00	0.093		05/18/07
Tin-126	15832-50-5	LA-508-481	U	0.0354	pCi/g	+0.0239	pCi/g	1.00	0.040		05/18/07
Thorium-234	15065-10-8	LA-508-481	U	0.335	pCi/g	+0.244	pCi/g	1.00	0.72		05/18/07
Uranium-235	15117-96-1	LA-508-481	U	0.0133	pCi/g	+0.0523	pCi/g	1.00	0.075		05/18/07
Zinc-65	13982-39-3	LA-508-481	U	-6.65e-03	pCi/g	+0.0144	pCi/g	1.00	0.021		05/18/07
Actinium-228	14331-83-0	LA-508-481		0.198	pCi/g	+0.0775	pCi/g	J 1.00	0.034		05/18/07

MDL=Minimum Detection Limit

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000551
Client ID: B1NHL1

**KLAGES
WSCF**

Matrix: SOIL LS
06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Bismuth-212	14913-49-6	LA-508-481		0.158	pCi/g	+0.0789	pCi/g	1.00	0.071		05/18/07
Bismuth-214	14733-03-0	LA-508-481		0.213	pCi/g	+0.0607	pCi/g J	1.00	0.021		05/18/07
Lead-212	15092-94-1	LA-508-481		0.205	pCi/g	+0.0321	pCi/g J	1.00	0.018		05/18/07
Lead-214	15067-28-4	LA-508-481		0.282	pCi/g	+0.109	pCi/g J	1.00	0.021		05/18/07
Ruthenium-103	13968-53-1	LA-508-481	U	3.86e-03	pCi/g	+5.73e-03	pCi/g	1.00	0.010		05/18/07
Tin-113	13966-06-8	LA-508-481	U	1.94e-03	pCi/g	+6.78e-03	pCi/g	1.00	0.012		05/18/07
Thallium-208	14913-50-9	LA-508-481		0.0851	pCi/g	+0.0142	pCi/g	1.00	9.9e-03		05/18/07
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	0.0150	pCi/g	+0.0284	pCi/g	1.00	0.049		05/24/07
Pu-239/240 by AEA	PU-239/240	LA-508-471	U	-2.20e-03	pCi/g	+7.63e-03	pCi/g	1.00	0.020		05/24/07
Pu-242 tracer by AEA	PU242	LA-508-471		7.20	pCi/g			1.00	0.020		05/24/07
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		0.0960	pCi/g	+0.136	pCi/g J	1.00	0.091		05/22/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		93.2	Percent			1.00	0.0		05/22/07
TC99 by Liquid Scin.											
Techneium-99	14133-76-7	LA-508-421	U	-0.200	pCi/g	+0.200	pCi/g	1.00	0.30		05/23/07
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.0330	pCi/g	+0.0185	pCi/g	1.00	5.7e-03		05/24/07
Uranium-235	15117-96-1	LA-508-471	U	0.0140	pCi/g	+0.0137	pCi/g	1.00	0.017		05/24/07
Uranium-238	U-238	LA-508-471		0.0380	pCi/g	+0.0205	pCi/g	1.00	5.7e-03		05/24/07
U-232 tracer by AEA	U232	LA-508-471		4.80	pCi/g			1.00	0.039		05/24/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

Page 17

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000552
Client ID: B1NHL2

KLAGES
WSCF

Matrix: SOIL ^{LS}
06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Americium by AEA											
Americium-241	14596-10-2	LA-508-471	U	0.0150	pCi/g	+0.0132	pCi/g	1.00	0.016		05/24/07
Am-243 tracer by AEA	AM243	LA-508-471		5.20	pCi/g			1.00	0.030		05/24/07
Gamma Energy Analysis-grd H2O											
Americium-241	14596-10-2	LA-508-481	U	-8.34e-03	pCi/g	+0.0359	pCi/g	1.00	0.058		05/18/07
Antimony-125	14234-35-6	LA-508-481	U	2.48e-04	pCi/g	+2.48e-03	pCi/g	1.00	0.020		05/18/07
Ba-133 by GEA	13981-41-4	LA-508-481	U	-6.00e-03	pCi/g	+6.13e-03	pCi/g	1.00	8.6e-03		05/18/07
Cerium-144	14762-78-8	LA-508-481	U	-8.43e-03	pCi/g	+0.0321	pCi/g	1.00	0.052		05/18/07
Cerium/Praseodymium-144	CE/PR-144	LA-508-481	U	-0.0169	pCi/g	+0.0641	pCi/g	1.00	0.10		05/18/07
Cobalt-60	10198-40-0	LA-508-481	U	9.37e-04	pCi/g	+4.49e-03	pCi/g	1.00	7.8e-03		05/18/07
Cesium-134	13967-70-9	LA-508-481	U	7.77e-03	pCi/g	+8.74e-03	pCi/g	1.00	9.7e-03		05/18/07
Cesium-137	10045-97-3	LA-508-481	U	-3.32e-03	pCi/g	+6.13e-03	pCi/g	1.00	7.7e-03		05/18/07
Europium-152	14683-23-9	LA-508-481	U	-4.97e-03	pCi/g	+0.0131	pCi/g	1.00	0.021		05/18/07
Europium-154	15585-10-1	LA-508-481	U	-2.22e-03	pCi/g	+0.0128	pCi/g	1.00	0.022		05/18/07
Europium-155	14391-16-3	LA-508-481	U	0.0105	pCi/g	+0.0165	pCi/g	1.00	0.029		05/18/07
Potassium-40	13966-00-2	LA-508-481		0.884	pCi/g	+0.167	pCi/g	1.00	0.071		05/18/07
Niobium-94	14681-63-1	LA-508-481	U	-4.69e-03	pCi/g	+5.44e-03	pCi/g	1.00	7.4e-03		05/18/07
Radium-226	13982-63-3	LA-508-481		0.157	pCi/g	+0.0333	pCi/g	J 1.00	0.016		05/18/07
Radium-228	15262-20-1	LA-508-481		0.191	pCi/g	+0.0425	pCi/g	J 1.00	0.024		05/18/07
Ruthenium-106	13967-48-1	LA-508-481	U	0.0206	pCi/g	+0.0408	pCi/g	1.00	0.072		05/18/07
Tin-126	15832-50-5	LA-508-481	U	0.0537	pCi/g	+0.0196	pCi/g	1.00	0.060		05/18/07
Thorium-234	15065-10-8	LA-508-481	U	0.321	pCi/g	+0.199	pCi/g	1.00	0.50		05/18/07
Uranium-235	15117-96-1	LA-508-481	U	2.82e-03	pCi/g	+0.0282	pCi/g	1.00	0.055		05/18/07
Zinc-65	13982-39-3	LA-508-481	U	-5.36e-04	pCi/g	+5.36e-03	pCi/g	1.00	0.016		05/18/07
Actinium-228	14331-83-0	LA-508-481		0.199	pCi/g	+0.0641	pCi/g	J 1.00	0.024		05/18/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

Page 18

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000552
Client ID: B1NHL2

KLAGES
 WSCF

Matrix: SOIL LS
06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Bismuth-212	14913-49-6	LA-508-481		0.0982	pCi/g	+0.0518	pCi/g	1.00	0.061		05/18/07
Bismuth-214	14733-03-0	LA-508-481		0.173	pCi/g	+0.0456	pCi/g J	1.00	0.016		05/18/07
Lead-212	15092-94-1	LA-508-481		0.182	pCi/g	+0.0244	pCi/g J	1.00	0.016		05/18/07
Lead-214	15067-28-4	LA-508-481		0.219	pCi/g	+0.0764	pCi/g J	1.00	0.016		05/18/07
Ruthenium-103	13968-53-1	LA-508-481	U	-1.06e-03	pCi/g	+4.56e-03	pCi/g	1.00	7.5e-03		05/18/07
Tin-113	13966-06-8	LA-508-481	U	-2.05e-04	pCi/g	+2.05e-03	pCi/g	1.00	9.5e-03		05/18/07
Thallium-208	14913-50-9	LA-508-481		0.0557	pCi/g	+0.0119	pCi/g	1.00	7.6e-03		05/18/07
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	2.20e-03	pCi/g	+0.0220	pCi/g	1.00	0.057		05/24/07
Pu-239/240 by AEA	PU-239/240	LA-508-471	U	0.0110	pCi/g	+0.0135	pCi/g	1.00	0.021		05/24/07
Pu-242 tracer by AEA	PU242	LA-508-471		8.10	pCi/g			1.00	0.016		05/24/07
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.0200	pCi/g	+0.120	pCi/g	1.00	0.085		05/22/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		104	Percent			1.00	0.0		05/22/07
TC99 by Liquid Scin.											
Technetium-99	14133-76-7	LA-508-421	U	-0.200	pCi/g	+0.202	pCi/g	1.00	0.30		05/23/07
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.0560	pCi/g	+0.0286	pCi/g	1.00	7.2e-03		05/24/07
Uranium-235	15117-96-1	LA-508-471	U	0.0120	pCi/g	+0.0150	pCi/g	1.00	0.021		05/24/07
Uranium-238	U-238	LA-508-471		0.0480	pCi/g	+0.0259	pCi/g	1.00	7.2e-03		05/24/07
U-232 tracer by AEA	U232	LA-508-471		5.40	pCi/g			1.00	0.050		05/24/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000553
Client ID: BINHK4

**KLAGES
WSCF**

Matrix: SOIL *LS*
 06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Americium by AEA											
Americium-241	14596-10-2	LA-508-471		0.0480	pCi/g	+ -0.0226	pCi/g	J	1.00	0.022	05/24/07
Am-243 tracer by AEA	AM243	LA-508-471		4.20	pCi/g				1.00	0.011	05/24/07
Gamma Energy Analysis-grd H2O											
Americium-241	14596-10-2	LA-508-481	U	-0.0511	pCi/g	+ -0.0553	pCi/g		1.00	0.092	05/21/07
Antimony-125	14234-35-6	LA-508-481	U	3.47e-03	pCi/g	+ -0.0165	pCi/g		1.00	0.028	05/21/07
Ba-133 by GEA	13981-41-4	LA-508-481	U	-7.54e-03	pCi/g	+ -9.27e-03	pCi/g		1.00	0.013	05/21/07
Cerium-144	14762-78-8	LA-508-481	U	0.0424	pCi/g	+ -0.0566	pCi/g		1.00	0.083	05/21/07
Cerium/Praseodymium-144	CE/PR-144	LA-508-481	U	0.0847	pCi/g	+ -0.113	pCi/g		1.00	0.17	05/21/07
Cobalt-60	10198-40-0	LA-508-481	U	2.49e-03	pCi/g	+ -6.34e-03	pCi/g		1.00	0.011	05/21/07
Cesium-134	13967-70-9	LA-508-481	U	0.0219	pCi/g	+ -9.30e-03	pCi/g		1.00	0.030	05/21/07
Cesium-137	10045-97-3	LA-508-481		0.0543	pCi/g	+ -0.0130	pCi/g		1.00	0.011	05/21/07
Europium-152	14683-23-9	LA-508-481	U	0.0193	pCi/g	+ -0.0217	pCi/g		1.00	0.032	05/21/07
Europium-154	15585-10-1	LA-508-481	U	-0.0213	pCi/g	+ -0.0236	pCi/g		1.00	0.032	05/21/07
Europium-155	14391-16-3	LA-508-481	U	0.0286	pCi/g	+ -0.0323	pCi/g		1.00	0.043	05/21/07
Potassium-40	13966-00-2	LA-508-481		11.4	pCi/g	+ -1.49	pCi/g		1.00	0.084	05/21/07
Niobium-94	14681-63-1	LA-508-481	U	3.67e-04	pCi/g	+ -3.67e-03	pCi/g		1.00	9.7e-03	05/21/07
Radium-226	13982-63-3	LA-508-481		0.374	pCi/g	+ -0.0657	pCi/g		1.00	0.021	05/21/07
Radium-228	15262-20-1	LA-508-481		0.499	pCi/g	+ -0.0971	pCi/g		1.00	0.036	05/21/07
Ruthenium-106	13967-48-1	LA-508-481	U	-9.66e-03	pCi/g	+ -0.0650	pCi/g		1.00	0.092	05/21/07
Tin-126	15832-50-5	LA-508-481	U	0.120	pCi/g	+ -0.0269	pCi/g		1.00	0.20	05/21/07
Thorium-234	15085-10-8	LA-508-481	U	0.640	pCi/g	+ -0.217	pCi/g		1.00	0.75	05/21/07
Uranium-235	15117-96-1	LA-508-481	U	-0.0189	pCi/g	+ -0.0553	pCi/g		1.00	0.083	05/21/07
Zinc-65	13982-39-3	LA-508-481	U	0.0145	pCi/g	+ -0.0171	pCi/g		1.00	0.026	05/21/07
Actinium-228	14331-83-0	LA-508-481		0.473	pCi/g	+ -0.0997	pCi/g		1.00	0.036	05/21/07

MDL=Minimum Detection Limit

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RQ=Result Qualifier

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TP Err=Total Propagated Error

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DF=Dilution Factor

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000553
Client ID: B1NHK4

**KLAGES
WSCF**

Matrix: SOIL

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

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Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Bismuth-212	14913-49-6	LA-508-481		0.348	pCi/g	+0.0876	pCi/g	1.00	0.081		05/21/07
Bismuth-214	14733-03-0	LA-508-481		0.475	pCi/g	+0.0664	pCi/g	1.00	0.021		05/21/07
Lead-212	15092-94-1	LA-508-481		0.585	pCi/g	+0.0587	pCi/g	1.00	0.021		05/21/07
Lead-214	15067-28-4	LA-508-481		0.602	pCi/g	+0.148	pCi/g	1.00	0.022		05/21/07
Ruthenium-103	13968-53-1	LA-508-481	U	3.48e-03	pCi/g	+6.68e-03	pCi/g	1.00	0.010		05/21/07
Tin-113	13966-08-8	LA-508-481	U	3.15e-03	pCi/g	+7.77e-03	pCi/g	1.00	0.013		05/21/07
Thallium-208	14913-50-9	LA-508-481		0.167	pCi/g	+0.0262	pCi/g	1.00	0.011		05/21/07
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	-5.50e-03	pCi/g	+0.0161	pCi/g	1.00	0.033		05/24/07
Pu-239/240 by AEA	PU-239/240	LA-508-471		0.110	pCi/g	+0.0407	pCi/g	1.00	0.013		05/24/07
Pu-242 tracer by AEA	PU242	LA-508-471		6.60	pCi/g			1.00	4.9e-03		05/24/07
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	0.0620	pCi/g	+0.104	pCi/g	1.00	0.071		05/22/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		102	Percent			1.00	0.0		05/22/07
TC99 by Liquid Scin.											
Technetium-99	14133-76-7	LA-508-421	U	-0.100	pCi/g	+0.110	pCi/g	1.00	0.20		05/23/07
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.200	pCi/g	+0.0640	pCi/g	1.00	5.3e-03		05/24/07
Uranium-235	15117-96-1	LA-508-471	U	0.0110	pCi/g	+0.0120	pCi/g	1.00	0.016		05/24/07
Uranium-238	U-238	LA-508-471		0.170	pCi/g	+0.0561	pCi/g	1.00	0.014		05/24/07
U-232 tracer by AEA	U232	LA-508-471		4.40	pCi/g			1.00	0.035		05/24/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF

ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000554
Client ID: B1NHK5

KLAGES
WSCF

Matrix: SOIL LS
06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Americium by AEA											
Americium-241	14596-10-2	LA-508-471		0.0360	pCi/g	+0.0191	pCi/g	J	1.00	0.017	05/24/07
Am-243 tracer by AEA	AM243	LA-508-471		4.80	pCi/g				1.00	0.013	05/24/07
Gamma Energy Analysis-grd H2O											
Americium-241	14596-10-2	LA-508-481	U	-0.105	pCi/g	+0.105	pCi/g		1.00	0.087	05/21/07
Antimony-125	14234-35-6	LA-508-481	U	5.28e-03	pCi/g	+0.0159	pCi/g		1.00	0.027	05/21/07
Ba-133 by GEA	13981-41-4	LA-508-481	U	7.66e-03	pCi/g	+8.22e-03	pCi/g		1.00	0.012	05/21/07
Cerium-144	14782-78-8	LA-508-481	U	0.0106	pCi/g	+0.0607	pCi/g		1.00	0.088	05/21/07
Cerium/Praseodymium-144	CE/PR-144	LA-508-481	U	0.0211	pCi/g	+0.121	pCi/g		1.00	0.18	05/21/07
Cobalt-60	10198-40-0	LA-508-481	U	-4.04e-04	pCi/g	+4.04e-03	pCi/g		1.00	9.3e-03	05/21/07
Cesium-134	13967-70-9	LA-508-481	U	0.0238	pCi/g	+8.74e-03	pCi/g		1.00	0.030	05/21/07
Cesium-137	10045-97-3	LA-508-481		0.0452	pCi/g	+0.0159	pCi/g		1.00	0.010	05/21/07
Europium-152	14683-23-9	LA-508-481		0.0416	pCi/g	+0.0140	pCi/g		1.00	0.030	05/21/07
Europium-154	15585-10-1	LA-508-481	U	6.48e-03	pCi/g	+0.0201	pCi/g		1.00	0.030	05/21/07
Europium-155	14391-16-3	LA-508-481	U	0.0427	pCi/g	+0.0341	pCi/g		1.00	0.048	05/21/07
Potassium-40	13966-00-2	LA-508-481		11.3	pCi/g	+1.54	pCi/g		1.00	0.071	05/21/07
Niobium-94	14681-63-1	LA-508-481	U	7.20e-03	pCi/g	+5.45e-03	pCi/g		1.00	9.3e-03	05/21/07
Radium-226	13982-63-3	LA-508-481		0.371	pCi/g	+0.0654	pCi/g		1.00	0.019	05/21/07
Radium-228	15262-20-1	LA-508-481		0.488	pCi/g	+0.0888	pCi/g		1.00	0.031	05/21/07
Ruthenium-106	13967-48-1	LA-508-481	U	0.0330	pCi/g	+0.0518	pCi/g		1.00	0.088	05/21/07
Tin-126	15832-50-5	LA-508-481	U	0.134	pCi/g	+0.0372	pCi/g		1.00	0.20	05/21/07
Thorium-234	15065-10-8	LA-508-481	U	0.600	pCi/g	+0.233	pCi/g		1.00	0.74	05/21/07
Uranium-235	15117-96-1	LA-508-481	U	-8.10e-03	pCi/g	+0.0578	pCi/g		1.00	0.090	05/21/07
Zinc-65	13982-39-3	LA-508-481	U	-0.0104	pCi/g	+0.0154	pCi/g		1.00	0.022	05/21/07
Actinium-228	14331-83-0	LA-508-481		0.496	pCi/g	+0.0930	pCi/g		1.00	0.031	05/21/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000554
Client ID: BINHK5

KLAGES
WSCF

Matrix: SOIL *LS*
06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Bismuth-212	14913-49-6	LA-508-481		0.364	pCi/g	+0.0894	pCi/g	1.00	0.071		05/21/07
Bismuth-214	14733-03-0	LA-508-481		0.478	pCi/g	+0.0628	pCi/g	1.00	0.019		05/21/07
Lead-212	15092-94-1	LA-508-481		0.566	pCi/g	+0.0621	pCi/g	1.00	0.020		05/21/07
Lead-214	15067-28-4	LA-508-481		0.646	pCi/g	+0.151	pCi/g	1.00	0.021		05/21/07
Ruthenium-103	13968-53-1	LA-508-481	U	-3.93e-04	pCi/g	+3.93e-03	pCi/g	1.00	9.8e-03		05/21/07
Tin-113	13966-06-8	LA-508-481	U	-7.09e-07	pCi/g	+7.09e-06	pCi/g	1.00	0.013		05/21/07
Thallium-208	14913-50-9	LA-508-481		0.160	pCi/g	+0.0257	pCi/g	1.00	9.5e-03		05/21/07
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	2.00e-03	pCi/g	+0.0200	pCi/g	1.00	0.041		05/24/07
Pu-239/240 by AEA	PU-239/240	LA-508-471		0.0510	pCi/g	+0.0240	pCi/g	1.00	5.6e-03		05/24/07
Pu-242 tracer by AEA	PU242	LA-508-471		7.40	pCi/g			1.00	0.015		05/24/07
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		0.130	pCi/g	+0.133	pCi/g	J 1.00	0.092		05/22/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		93.6	Percent			1.00	0.0		05/22/07
TC99 by Liquid Scin.											
Technetium-99	14133-76-7	LA-508-421	U	-0.100	pCi/g	+0.212	pCi/g	1.00	0.30		05/23/07
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.160	pCi/g	+0.0576	pCi/g	1.00	0.030		05/24/07
Uranium-235	15117-96-1	LA-508-471		0.0260	pCi/g	+0.0182	pCi/g	J 1.00	0.017		05/24/07
Uranium-238	U-238	LA-508-471		0.170	pCi/g	+0.0578	pCi/g	1.00	5.8e-03		05/24/07
U-232 tracer by AEA	U232	LA-508-471		5.00	pCi/g			1.00	0.042		05/24/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000555
Client ID: B1NHK6

KLAGES
WSCF

Matrix: SOIL ^{LS}
06-07-07

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Americium by AEA											
Americium-241	14596-10-2	LA-508-471		0.0330	pCi/g	+0.0162	pCi/g	J	1.00	4.3e-03	05/24/07
Am-243 tracer by AEA	AM243	LA-508-471		4.10	pCi/g				1.00	4.3e-03	05/24/07
Gamma Energy Analysis-grd H2O											
Americium-241	14596-10-2	LA-508-481	U	-0.0412	pCi/g	+0.0482	pCi/g		1.00	0.080	05/21/07
Antimony-125	14234-35-6	LA-508-481	U	2.93e-03	pCi/g	+0.0199	pCi/g		1.00	0.029	05/21/07
Ba-133 by GEA	13981-41-4	LA-508-481	U	-3.98e-03	pCi/g	+8.86e-03	pCi/g		1.00	0.013	05/21/07
Cerium-144	14762-78-8	LA-508-481	U	0.0108	pCi/g	+0.0619	pCi/g		1.00	0.091	05/21/07
Cerium/Praseodymium-144	CE/PR-144	LA-508-481	U	0.0216	pCi/g	+0.124	pCi/g		1.00	0.18	05/21/07
Cobalt-60	10198-40-0	LA-508-481	U	-3.46e-03	pCi/g	+7.40e-03	pCi/g		1.00	0.011	05/21/07
Cesium-134	13967-70-9	LA-508-481	U	0.0301	pCi/g	+0.0105	pCi/g		1.00	0.040	05/21/07
Cesium-137	10045-97-3	LA-508-481		0.0253	pCi/g	+0.0104	pCi/g		1.00	0.012	05/21/07
Europium-152	14683-23-9	LA-508-481	U	0.0266	pCi/g	+0.0246	pCi/g		1.00	0.033	05/21/07
Europium-154	15585-10-1	LA-508-481	U	4.72e-03	pCi/g	+0.0234	pCi/g		1.00	0.034	05/21/07
Europium-155	14391-16-3	LA-508-481	U	0.0494	pCi/g	+0.0385	pCi/g		1.00	0.046	05/21/07
Potassium-40	13966-00-2	LA-508-481		12.3	pCi/g	+1.62	pCi/g		1.00	0.083	05/21/07
Niobium-94	14681-63-1	LA-508-481	U	2.07e-03	pCi/g	+5.93e-03	pCi/g		1.00	9.9e-03	05/21/07
Radium-226	13982-63-3	LA-508-481		0.423	pCi/g	+0.0774	pCi/g		1.00	0.021	05/21/07
Radium-228	15262-20-1	LA-508-481		0.526	pCi/g	+0.0940	pCi/g		1.00	0.036	05/21/07
Ruthenium-106	13967-48-1	LA-508-481	U	0.0189	pCi/g	+0.0556	pCi/g		1.00	0.093	05/21/07
Tin-126	15832-50-5	LA-508-481	U	0.111	pCi/g	+0.0334	pCi/g		1.00	0.20	05/21/07
Thorium-234	15065-10-8	LA-508-481	U	0.644	pCi/g	+0.224	pCi/g		1.00	0.67	05/21/07
Uranium-235	15117-96-1	LA-508-481	U	0.0248	pCi/g	+0.0592	pCi/g		1.00	0.095	05/21/07
Zinc-65	13982-39-3	LA-508-481	U	0.0156	pCi/g	+0.0267	pCi/g		1.00	0.025	05/21/07
Actinium-228	14331-83-0	LA-508-481		0.618	pCi/g	+0.121	pCi/g		1.00	0.036	05/21/07

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000555
Client ID: BINHK6

KLAGES
WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Bismuth-212	14913-49-8	LA-508-481		0.408	pCi/g	+0.107	pCi/g	1.00	0.080		05/21/07
Bismuth-214	14733-03-0	LA-508-481		0.458	pCi/g	+0.0873	pCi/g	1.00	0.021		05/21/07
Lead-212	15092-94-1	LA-508-481		0.628	pCi/g	+0.0869	pCi/g	1.00	0.022		05/21/07
Lead-214	15067-28-4	LA-508-481		0.836	pCi/g	+0.195	pCi/g	1.00	0.023		05/21/07
Ruthenium-103	13968-53-1	LA-508-481	U	-1.73e-03	pCi/g	+6.42e-03	pCi/g	1.00	0.011		05/21/07
Tin-113	13966-08-8	LA-508-481	U	1.66e-03	pCi/g	+8.12e-03	pCi/g	1.00	0.014		05/21/07
Thallium-208	14913-50-9	LA-508-481		0.180	pCi/g	+0.0299	pCi/g	1.00	9.8e-03		05/21/07
Plutonium Isotopes by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	-3.70e-03	pCi/g	+0.0189	pCi/g	1.00	0.037		05/24/07
Pu-239/240 by AEA	PU-239/240	LA-508-471		0.0630	pCi/g	+0.0271	pCi/g	1.00	5.0e-03		05/24/07
Pu-242 tracer by AEA	PU242	LA-508-471		6.40	pCi/g			1.00	5.0e-03		05/24/07
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	0.0150	pCi/g	+0.106	pCi/g	1.00	0.060		05/22/07
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		99.0	Percent			1.00	0.0		05/22/07
TC99 by Liquid Scin.											
Technetium-99	14133-78-7	LA-508-421	U	-0.100	pCi/g	+0.130	pCi/g	1.00	0.30		05/23/07
Uranium Isotopes by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.190	pCi/g	+0.0608	pCi/g	1.00	0.016		05/24/07
Uranium-235	15117-96-1	LA-508-471	U	0.0150	pCi/g	+0.0135	pCi/g	1.00	0.017		05/24/07
Uranium-238	U-238	LA-508-471		0.180	pCi/g	+0.0576	pCi/g	1.00	0.013		05/24/07
U-232 tracer by AEA	U232	LA-508-471		4.30	pCi/g			1.00	0.037		05/24/07

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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

C - The Analyte was found in the Associated Blank.(inorg)

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

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

E - Analyte is an estimate, has potentially larger errors.(org)

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

Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000556
Client ID: B1NHL3

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	-0.0890	pCi/g	+0.552	pCi/g	1.00	1.1		05/22/07

Page 180 of 230

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

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 U - Analyzed for but not detected above limiting criteria.(inorg)
 X - Other flags/notes described in the comments/narrative.(inorg)

E - Analyte is an estimate, has potentially larger errors.(org)
 U - Analyzed for but not detected above limiting criteria.(org)

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

68 of 104

WSCF

ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000557
Client ID: BINHK9

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Tritium by Liq Set column prep											
Tritium	10028-17-8	LA-508-421	U	-0.130	pCi/g	+0.424	pCi/g	1.00	1.1		05/22/07

Page 181 of 230

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF

ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000558
Client ID: B1NHL0

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	0.450	pCi/g	+0.724	pCi/g	1.00	1.0		05/22/07

Page 182 of 230

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

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 U - Analyzed for but not detected above limiting criteria(inorg)
 X - Other flags/notes described in the comments/narrative(inorg)

E - Analyte is an estimate, has potentially larger errors.(org)
 U - Analyzed for but not detected above limiting criteria.(org)

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000559
Client ID: B1NJL6

KLAGES
 WSCF

Matrix: WATER

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	76.0	pCi/L	+41.8	pCi/L	1.00	1.8e+02		05/17/07

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MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000560
Client ID: B1NHK7

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	-0.0440	pCi/g	+ -0.440	pCi/g	1.00	1.0		05/22/07

Page 184 of 230

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

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

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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WSCF ANALYTICAL RESULTS REPORT

Attention: D KLAGES
SAF Number: R07-010
Sample # W070000561
Client ID: B1NHK8

KLAGES
 WSCF

Matrix: SOIL

Group #: WSCF20070837
Department: Radiochemistry
Sampled: 05/16/07
Received: 05/17/07

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	0.310	pCi/g	+0.542	pCi/g	1.00	0.55		05/22/07

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

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Report WGPP/ver. 5.2

PROJECT HANFORD MANAGEMENT COMPANY

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	WSCF20070837
Sample Matrix	SOLID
Sample Visual	N/A
SAF Number	R07-010
Data Deliverable	Summary Report

Introduction

Thirteen (13) soil samples from the 200-CW-3 Operable Unit Trench Bottoms and Side Walls were received at the WSCF Laboratory on May 17, 2007. The samples were received in a cool condition with ice present in the coolers. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *200-CW-3 Operable Unit Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and sample receipt are included as Attachment 4.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report*, pages 15 through 17, for a complete listing of approved analytical methods used.

General Comments

With the exception of tritium, all samples were taken using the Multi-Increment Sampling (MIS) method. The entire sample aliquot in a given sample bottle was analyzed or extracted for analysis. QC Matrix Spikes, Matrix Spike Duplicates or Sample Duplicates were also either analyzed or extracted from the entire contents of each sample bottle used.

Tritium samples were taken as discreet samples. The QC associated with the tritium was performed on aliquots taken from the same bottle as the sample that was analyzed.

Organic Comments

Sample results are moisture corrected and reported on dry weight basis.

PCBs – The holding time for this analysis was met. A Blank, Laboratory Control Sample and Laboratory Control Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 26 for QC details.

- Due to a misunderstanding at WSCF, a Matrix Spike and Matrix Spike Duplicate were not analyzed. Instead a soil matrix Laboratory Control Samples was extracted and analyzed in duplicate in order to establish Analytical Precision. In addition surrogates (compounds spiked into all samples and QC analyzed) showed good recovery.

All QC controls are within the established limits.

Inorganic Comments

ICP-MS Metals (Total Acid Soluble) – The holding time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 44 through 48 for QC details. Analytical Notes:

- Thorium results listed in the report represent Th-232 exclusively.
- Copper and Tin present above the MDL in the Laboratory Blanks. Affected samples are “C” flagged where appropriate.
- Copper Matrix Spike and Matrix Spike Duplicate values were acceptable; however the RPD reported at 32.4% is above the acceptable limit of 30.0%.

All other QC controls are within the established limits.

Hexavalent Chromium - The holding time for this analysis was met. A Blank, Laboratory Control Sample, Sample Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with this analytical batch of less than 20 samples. See page 49 for QC details.

- The Matrix Spike and Matrix Spike recoveries were below the WSCF established limit indicating probable matrix interferences, however the Relative Percent Difference (RPD) between the two recoveries was within limits.

All other QC controls are within the established limits.

Percent Solids – analyzed for organic moisture correction.

Radiochemistry Comments

There are no holding times associated with WSCF radiochemical methods.

Plutonium Isotopic - A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 74 through 75 for QC details. Analytical Notes:

- The duplicate RPD reported at 31.77% is above the client's acceptable limit of 30%.

All other QC controls are within the established limits.

Americium-241 – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 76 through 77 for QC details. All QC controls are within the established limits.

Uranium Isotopic – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 78 through 79 for QC details.

Analytical notes:

- Uranium - 238 duplicate RPD is above normal WSCF acceptable range, however it is within the client's acceptance limits for precision.
- Uranium – 235 duplicate RPD is above normal WSCF acceptable range, however it is within the client's acceptance limits for precision.
- Uranium – 234 duplicate RPD reported at 42.1% is above the client's acceptable limit of 30%.

All other QC controls are within the established limits.

Technetium-99 - A Blank, Laboratory Control Sample, Matrix Spike and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 80 for QC details.

All QC controls are within the established limits.

Gamma Energy Analysis (GEA) – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 81 through 83 for QC details.

- Eu-152 duplicate RPD is above normal WSCF acceptable range; however it is within the client's acceptance limits for precision.

All QC controls are within the established limits.

Strontium – 89/90 – A Blank, Laboratory Control Sample and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See pages 84 through 85 for QC details.

- Sample duplicate RPD is above normal WSCF acceptable range; however it is within the client's acceptance limits for precision.

All QC controls are within the established limits.

Tritium – A Blank, Laboratory Control Sample, Matrix Spike and Sample Duplicate were analyzed with this analytical batch of less than 20 samples. See page 86 for QC details. All QC controls are within the established limits.

This Summary Report is in compliance with the SOW, both technically and for completeness. Release of the data contained in this hard copy report has been authorized by the WSCF Laboratory Analytical Manager and Client Services, as verified by the following signature.



John E. Trechter
WSCF Client Services



STL

STL Richland
2800 George Washington Way
Richland, WA 99354

Tel: 509 375 3131 Fax: 509 375 5590
www.stl-inc.com

Certificate of Analysis

Fluor Hanford
P.O. Box 1000, T6-03
Richland, WA 99352

June 1, 2007

Attention: John Trechter

SAF Number	:	R07-010
Date SDG Closed	:	May 18, 2007
Number of Samples	:	Eight (8)
Sample Type	:	Soil
SDG Number	:	W05178
Data Deliverable	:	15/15 Day

CASE NARRATIVE

I. Introduction

On May 18, 2007 eight samples were received at STL Richland (STLR) for radiochemical analysis. Upon receipt, the samples were assigned to lot J7E180260 and assigned the following laboratory ID number to correspond with the Fluor Hanford (FH) specific ID:

<u>FH ID#</u>	<u>STLR ID#</u>	<u>MATRIX</u>	<u>DATE OF RECEIPT</u>
B1NHK1	JW9RA	SOIL	5/18/07
B1NHK2	JW9RT	SOIL	5/18/07
B1NHK3	JW9RW	SOIL	5/18/07
B1NHK4	JW9RX	SOIL	5/18/07
B1NHK5	JW9R2	SOIL	5/18/07
B1NHK6	JW9R6	SOIL	5/18/07
B1NHL1	JW9R7	SOIL	5/18/07
B1NHL2	JW9R9	SOIL	5/18/07

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

June 1, 2007

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Liquid Scintillation Counting
Nickle 63 by LCS

IV. Quality Control

The analytical results for each analysis performed includes a minimum of one laboratory control sample (LCS), one method (reagent) blank, and one duplicate sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

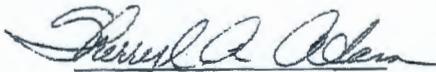
Liquid Scintillation Counting

Nickle 63 by LCS:

The LCS, batch blank, samples and sample duplicate were all within acceptance limits.

I certify that this Certificate of Analysis 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 hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:



Sherry A. Adam
Project Manager

5/31

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

R07-010-001

PAGE 1 OF 8

COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE 8C

DATA
TURNAROUND

SAMPLING LOCATION
216-N-5/Bottom

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

15 Days /
15 Days

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.
HNF-N-507-3

COA
122333E520

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO
Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

20070831

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK1		S	5-16-07	0814	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG-ICPMS;	None
B1NHK1	W07000054E	S			1X60mL G/P	Chromium Hex - 7196;	21g Cool 4C
B1NHK1		S			1X60mL aG	PCBs - 8082;	22g Cool 4C
B1NHK1		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	54g None
B1NHK1		S			1X60mL G/P	Ameridium-241;	757g None
B1NHK1		S			1X60mL G/P	Isotopic Plutonium;	25g None
B1NHK1		S			1X60mL G/P	Isotopic Uranium;	22g None
							22g None

ICED
Initial Date

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM
J.G. HOGAN

0910

DATE/TIME

MAY 17 2007

RECEIVED BY/STORED IN

0910

DATE/TIME

MAY 17 2007

** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
** WSCF is to report the complete list of analytes for Metals and GEA.
** Reporting format the same as GPP, including QC.
** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox.
** Final reports are to be uploaded into HEIS.

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses	SAF NO. R07-010	AIR QUALITY		
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

MATRIX*
 OL = OTHER LIQUID
 OS = OTHER SOLID
 S = SOIL
 W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK1		S	5-16-07	0814	1X60mL G/P	Strontium-89,90 -- Total Sr;	None
B1NHK1		S			1X60mL G/P	Technetium-99;	23g None
B1NHK1		S			1X60mL G/P	Percent Solids;	22g None
B1NHK2		S		0850	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	20g None
B1NHK2	E-49	S			1X60mL G/P	Chromium Hex - 7196;	22g Cool 4C
B1NHK2		S			1X60mL aG	PCBs - 8082;	23g Cool 4C
B1NHK2		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	59g 721g None

ICED
 Initial Date

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
G. HOGAN	MAY 17 2007	[Signature]	MAY 17 2007		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

Page 193 of 230

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COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE 8C

DATA
TURNAROUND

SAMPLING LOCATION
216-N-5/Bottom

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

15 Days /
15 Days

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.
HNF-N-507-3

COA
122333ES20

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

ICED
Initial
Date

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

Page 194 of 230

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK2		S	5-16-07	0850	1X60mL G/P	Ameridium-241;	None
B1NHK2		S			1X60mL G/P	Isotopic Plutonium;	24g None
B1NHK2		S			1X60mL G/P	Isotopic Uranium;	26g None
B1NHK2		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	21g None
B1NHK2		S			1X60mL G/P	Technetium-99;	25g None
B1NHK2		S			1X60mL G/P	Percent Solids;	22g None
B1NHK3		S		0925	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	20g 22g None

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM

G. HOGAN

DATE/TIME

MAY 17 2007

RECEIVED BY/STORED IN

[Signature]

DATE/TIME

MAY 17 2007

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

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** Reporting format the same as GPP, including QC.
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** Final reports are to be uploaded into HEIS.

93 of 104

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED
[Signature] Initial
 Date

MATRIX* DL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
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SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK3		S	5-16-07	0925	1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHK3		S			1X60mL aG	PCBs - 8082;	25g Cool 4C
B1NHK3		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	62g None
B1NHK3		S			1X60mL G/P	Ameridium-241;	726g None
B1NHK3		S			1X60mL G/P	Isotopic Plutonium;	23g None
B1NHK3		S			1X60mL G/P	Isotopic Uranium;	23g None
B1NHK3		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	23g None
							26g

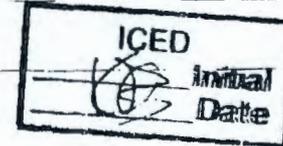
CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	DATE/TIME 0910 MAY 17 2007	RECEIVED BY/STORED IN <i>[Signature]</i>	DATE/TIME -0710 MAY 17 2007	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE BC	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		



MATRIX*
 OL = OTHER LIQUID
 OS = OTHER SOLID
 S = SOIL
 W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK3		S	5-16-07	0925	1X60mL G/P	Technetium-99;	None
B1NHK3		S		0925	1X60mL G/P	Percent Solids;	None
B1NHK7	560	S		0739	1X120mL G	Tritium - Ion Ex;	None
B1NHK8	561	S		0742	1X120mL G	Tritium - Ion Ex;	None
B1NHL1	551	S		0840	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	None
B1NHL1		S			1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHL1		S			1X60mL aG	PCBs - 8082;	Cool 4C

28g
21g
190g
181g
20g
20g
56g

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J.G. HOGAN	MAY 17 2007	[Signature]	MAY 17 2007

SPECIAL INSTRUCTIONS

** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
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LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses	SAF NO. R07-010	AIR QUALITY		
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED

 Initial Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL1		S	5-17-07	0840	1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	None
B1NHL1		S	↓	↓	1X60mL G/P	Americium-241;	524g None
B1NHL1		S			1X60mL G/P	Isotopic Plutonium;	23g None
B1NHL1		S			1X60mL G/P	Isotopic Uranium;	21g None
B1NHL1		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	24g None
B1NHL1		S			1X60mL G/P	Technetium-99;	21g None
B1NHL1		S			1X60mL G/P	Percent Solids;	20g None
B1NHL1		S					23g None

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Bottom	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED

 Initial Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL2		S	5-16-07	0748	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	None
B1NHL2	552	S			1X60mL G/P	Chromium Hex - 7196;	23g Cool 4C
B1NHL2		S			1X60mL aG	PCBs - 8082;	21g Cool 4C
B1NHL2		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	56g None
B1NHL2		S			1X60mL G/P	Americium-241;	610g None
B1NHL2		S			1X60mL G/P	Isotopic Plutonium;	21g None
B1NHL2		S			1X60mL G/P	Isotopic Uranium;	20g None
							20g

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM J.G. HOGAN	DATE/TIME MAY 17 2007	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN

SPECIAL INSTRUCTIONS

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

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COLLECTOR
HOGAN, JG

COMPANY CONTACT
KLAGES, DL

TELEPHONE NO.
373-6312

PROJECT COORDINATOR
TRECHTER, JE

PRICE CODE BC

DATA
TURNAROUND

SAMPLING LOCATION
216-N-5/Bottom

PROJECT DESIGNATION
200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses

SAF NO.
R07-010

AIR QUALITY

15 Days /
15 Days

ICE CHEST NO.

GRP-03-028

FIELD LOGBOOK NO.
HNF-N-507-3

COA
122333ES20

METHOD OF SHIPMENT
GOVERNMENT VEHICLE

SHIPPED TO

Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

ICED
Initial
Date

MATRIX*
OL = OTHER LIQUID
OS = OTHER SOLID
S = SOIL
W = WATER

SPECIAL HANDLING AND/OR STORAGE

POSSIBLE SAMPLE HAZARDS/ REMARKS

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL2		S	5-16-07	0748	1X60mL G/P	Strontium-89,90 -- Total Sr;	None
B1NHL2		S			1X60mL G/P	Technetium-99;	21g None
B1NHL2		S			1X60mL G/P	Percent Solids;	22g None
B1NHL3		S		0610	1X120mL G	Tritium - Ion Ex;	20g 109g None

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CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM
G. HOGAN
DATE/TIME
MAY 17 2007

RECEIVED BY/STORED IN
[Signature]
DATE/TIME
MAY 17 2007

** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF.
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RELINQUISHED BY/REMOVED FROM

RECEIVED BY/STORED IN

RELINQUISHED BY/REMOVED FROM

RECEIVED BY/STORED IN

RELINQUISHED BY/REMOVED FROM

RECEIVED BY/STORED IN

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED

 Initial Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
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SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1N HK4	553	S	5-16-07	0930	1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG-ICPMS;	None
B1N HK4		S			1X60mL G/P	Chromium Hex - 7196;	22g Cool 4C
B1N HK4		S			1X60mL aG	PCBs - 8082;	28g Cool 4C
B1N HK4		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy {Co-60, Cs-137, Eu-152, Eu-154, Eu-155}	53g None
B1N HK4		S			1X60mL G/P	Americium-241;	719g None
B1N HK4		S			1X60mL G/P	Isotopic Plutonium;	24g None
B1N HK4		S			1X60mL G/P	Isotopic Uranium;	24g None
							25g

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM G. HOGAN	RECEIVED BY/STORED IN 	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.
DATE/TIME MAY 17 2007	DATE/TIME MAY 17 2007	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN	
DATE/TIME	DATE/TIME	

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

COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

ICED
[Signature] Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK4		S	5-16-07	0930	1X60mL G/P	Strontium-89,90 -- Total Sr;	None
B1NHK4		S			1X60mL G/P	Technetium-99;	None
B1NHK4		S			1X60mL G/P	Percent Solids;	None
B1NHKS	554	S		1058	1X60mL G/P	ICP/MS - 200.8 (TAL) {Ba, Cd, Cr, Mn, Sb, Zn} ICP/MS - 200.8 (Add-on) {As, Pb, Th} 200.8_HG - ICPMS;	None
B1NHKS		S			1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHKS		S			1X60mL aG	PCBs - 8082;	Cool 4C
B1NHKS		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy {Co-60, Cs-137, Eu-152, Eu-154, Eu-155}	None

26g
25g
23g
20g
24g
63g
703g

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
J. HOGAN	MAY 17 2007	[Signature]	MAY 17 2007		

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE BC	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
[Signature]
 Initial Date

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHKS		S	5-16-07	1058	1X60mL G/P	Americium-241;	None
B1NHKS		S			1X60mL G/P	Isotopic Plutonium;	21g None
B1NHKS		S			1X60mL G/P	Isotopic Uranium;	22g None
B1NHKS		S			1X60mL G/P	Strontium-89,90 - Total Sr;	23g None
B1NHKS		S			1X60mL G/P	Technetium-99;	21g None
B1NHKS		S			1X60mL G/P	Percent Solids;	22g None
B1NHK6	555	S		1112	1X60mL G/P	ICP/MS - 200.8 (TAL) (Ba, Cd, Cr, Mn, Sb, Zn) ICP/MS - 200.8 (Add-on) (As, Pb, Th) 200.8_HG - ICPMS;	21g 20g None

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
J.G. HOGAN <i>[Signature]</i>	MAY 17 2007	<i>[Signature]</i>	MAY 17 2007		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE BC	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333E520	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
JB
 Initial
 Date

MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE	POSSIBLE SAMPLE HAZARDS/ REMARKS
--	--	---

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHK6		S	5-16-07	1112	1X60mL G/P	Chromium Hex - 7196;	Cool 4C
B1NHK6		S			1X60mL aG	PCBs - 8082;	24g Cool 4C
B1NHK6		S			1X500mL Square Bottle - Poly	Gamma Spectroscopy (Co-60, Cs-137, Eu-152, Eu-154, Eu-155)	56g None
B1NHK6		S			1X60mL G/P	Americium-241;	694g None
B1NHK6		S			1X60mL G/P	Isotopic Plutonium;	25g None
B1NHK6		S			1X60mL G/P	Isotopic Uranium;	22g None
B1NHK6		S			1X60mL G/P	Strontium-89,90 -- Total Sr;	24g None
							22g

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
J.G. HOGAN	MAY 17 2007	<i>[Signature]</i>	MAY 17 2007		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

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COLLECTOR HOGAN, JG	COMPANY CONTACT KLAGES, DL	TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 216-N-5/Sidewall	PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses		SAF NO. R07-010	AIR QUALITY	
ICE CHEST NO. GRP-03-028	FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A			

ICED
VB Initial
 Date

SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION	SPECIAL HANDLING AND/OR STORAGE		POSSIBLE SAMPLE HAZARDS/ REMARKS	
B1NHK6		S	5-16-07	1112	1X60mL G/P	Technetium-99;	None				
B1NHK6		S	↓	1112	1X60mL G/P	Percent Solids;	None			21g	
B1NHK9		S		1125	1X120mL G	Tritium - Ion Ex;	None			21g	
B1NHLO		S		1129	1X120mL G	Tritium - Ion Ex;	None			134g	
B1NJL6		S		1120	1X250mL G	Tritium - Ion Ex;	None			108g	

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** WSCF is the primary laboratory for all analyses assigned to WSCF on the Field Sampling Requirements section of this SAF. ** WSCF is to report the complete list of analytes for Metals and GEA. ** Reporting format the same as GPP, including QC. ** WSCF will send copies of COC to John Trechter and copy ^CPP Sample Management mailbox. ** Final reports are to be uploaded into HEIS.	
J.G. HOGAN	MAY 17 2007	<i>[Signature]</i>	MAY 17 2007		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		

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

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				R07-010-003	PAGE 1	DF 2
COLLECTOR HOGAN, JG		COMPANY CONTACT KLAGES, DL		TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE		PRICE CODE 8C	DATA TURNAROUND
SAMPLING LOCATION 216-N-5		PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses			SAF NO. R07-010	AIR QUALITY <input type="checkbox"/>		15 Days / 15 Days
ICE CHEST NO. 121405		FIELD LOGBOOK NO. MNF-N-507-3		COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE			
SHIPPED TO Severn Trent Incorporated, Richland.		OFFSITE PROPERTY NO. J7E180260			BILL OF LADING/AIR BILL NO. W05178			due 06-28-07 W5/13/07
MATRIX* OL = OTHER LIQUID OS = OTHER SOLID S = SOIL W = WATER	SPECIAL HANDLING AND/OR STORAGE			POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)				
SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION	
B1NHK1		S	5-16-07	0814	1X60mL G/P	Nickel-63; JW9RA	None 22g	
B1NHK2		S	↓	0850	1X60mL G/P	Nickel-63; JW9RT	None 25g	
B1NHK3		S		0925	1X60mL G/P	Nickel-63; JW9RW	None 26g	
B1NHK4		S		0930	1X60mL G/P	Nickel-63; JW9RX	None 23g	
B1NHK5		S		1058	1X60mL G/P	Nickel-63; JW9R2	None 23g	
B1NHK6		S		1112	1X60mL G/P	Nickel-63; JW9R6	None 23g	
B1NHL1		S		0840	1X60mL G/P	Nickel-63; JW9R7	None 21g	
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM JG HOGAN	DATE/TIME 5-18-07	RECEIVED BY/STORED IN R.T. SKELLE	DATE/TIME 5-18-07	DATE/TIME 0930	** Reporting format the same as GPP, including QC. ** STL is to send a copy of chain of custody (COC) to John Trechter within 24 hours of sample receipt and copy ^CPP Sample Management mailbox. ** STL will E-Mail results to John Trechter within 15 days of sample receipt, followed by a mailed hard copy.			
RELINQUISHED BY/REMOVED FROM R.T. SKELLE	DATE/TIME 5-18-07	RECEIVED BY/STORED IN D. Smith	DATE/TIME 1145	DATE/TIME 5-18-07				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	DATE/TIME				
LABORATORY SECTION	RECEIVED BY	TITLE			DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY			DATE/TIME			

STL

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				R07-010-003	PAGE 2 OF 2
COLLECTOR HOGAN, JG		COMPANY CONTACT KLAGES, DL		TELEPHONE NO. 373-6312	PROJECT COORDINATOR TRECHTER, JE		PRICE CODE 8C
SAMPLING LOCATION 216-N-5		PROJECT DESIGNATION 200-CW-3 Operable Unit Trench Bottoms and Side Walls Analyses			SAF NO. R07-010		AIR QUALITY <input type="checkbox"/>
ICE CHEST NO. 121405		FIELD LOGBOOK NO. HNF-N-507-3	COA 122333ES20	METHOD OF SHIPMENT GOVERNMENT VEHICLE			
SHIPPED TO Severn Trent Incorporated, Richland		OFFSITE PROPERTY NO. J7E180260		BILL OF LADING/AIR BILL NO. W05178 Due 06-08-07			
MATRIX* OL = OTHER LIQUID DS = OTHER SOLID S = SOIL W = WATER		SPECIAL HANDLING AND/OR STORAGE		POSSIBLE SAMPLE HAZARDS/ REMARKS Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)			
SAMPLE NO.	LAB ID	MATRIX*	SAMPLE DATE	SAMPLE TIME	NO./TYPE CONTAINER(S)	ANALYSIS	PRESERVATION
B1NHL2		S	5-16-07	0748	1X60mL G/P	Nickel-63; JW9R9	None 20g
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** Reporting format the same as GPP, including QC. ** STL is to send a copy of chain of custody (COC) to John Trechter within 24 hours of sample receipt and copy ^CPP Sample Management mailbox. ** STL will E-Mail results to John Trechter within 15 days of sample receipt, followed by a mailed hard copy.	
JG Hogan	5-18-07 09:30	RT-SCHMIDT	5-18-07 09:30				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RT-SCHMIDT	5-18-07 1145	A. Smith S. Smith	5-18-07 1145				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME	

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Appendix 5

Data Validation Supporting Documentation

**APPENDIX A
RADIOCHEMICAL DATA VALIDATION CHECKLIST**

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 200-CW-3 OU			DATA PACKAGE: VSR07-008		
VALIDATOR: Carl Schloesslin		LAB: WSCF & STL Richland		DATE: 06-07-2007	
SDG: WSCF20070837 & W05178					
ANALYSES PERFORMED					
Gross Alpha/Beta	Strontium-90 X	Technetium-99 X	Alpha Spectroscopy X	Gamma Spectroscopy X	
Total Uranium	Radium-22	Tritium X	Ni-63 X		
SAMPLES/MATRIX					
Soil samples: B1N HK1 - B1N HK9, B1N HL0 - B1N HL3					
Water sample: B1N JL6					

1. Completeness N/A

Technical verification forms present? Yes No N/A

Comments: Page 6 of COC R07-010-001 lists a collection date of 5-17-07 0840
for sample B1NHL1. The actual collection date is 5-16-07 0840.

2. Initial Calibration (Levels D, E) N/A

Instruments/detectors calibrated? Yes No N/A

Initial calibration acceptable? Yes No N/A

Standards NIST traceable? Yes No N/A

Standards Expired? Yes No N/A

Calculation check acceptable? Yes No N/A

Comments: _____

3. Continuing Calibration (Levels D, E)..... N/A

Calibration checked within required frequency?Yes No N/A

Calibration check acceptable?.....Yes No N/A

Calibration check standards traceable?Yes No N/A

Calibration check standards expired?Yes No N/A

Calculation check acceptable?Yes No N/A

Comments: _____

4. Background Counts (Levels D, E)..... N/A

Background Counts checked within required frequency?Yes No N/A

Background Counts acceptable?.....Yes No N/A

Calculation check acceptable?Yes No N/A

Comments: _____

5. Blanks (Levels B, C, D, E) N/A

Method blank analyzed within required frequency? Yes No N/A

Method blank results acceptable? Yes No N/A

Analytes detected in method blank? Yes No N/A

Field blank(s) analyzed? Yes No N/A

Field blank results acceptable? Yes No N/A

Analytes detected in field blank(s)? Yes No N/A

Transcription/Calculation Errors? (Levels D, E) Yes No N/A

Comments: MB detections: Am-241 (alpha), Pu-238, U-235 (alpha), Sr-89/90, Ra-226, Pb-214, Bi-214, Ra-228, Ac-228, Pb-212, Tl-208 & K-40.

Equipment blank B1NHL1 detections: Am-241 (alpha), U-233/234, U-238, Sr-89/90, Ra-226, Pb-214, Bi-214, Ra-228, Ac-228, Pb-212, Bi-212, Tl-208 & K-40.

Field blank B1NHL2 detections: U-233/234, U-238, Ra-226, Pb-214, Bi-214, Ra-228, Ac-228, Pb-212, Bi-212, Tl-208 & K-40.

6. Laboratory Control Samples or Blank Spike Samples (Levels C, D, E) N/A

LCS /BSS analyzed within required frequency? Yes No N/A

LCS/BSS recoveries acceptable? Yes No N/A

LCS/BSS traceable? (Levels D,E) Yes No N/A

LCS/BSS expired? (Levels D,E) Yes No N/A

LCS/BSS levels correct? (Levels D,E) Yes No N/A

Transcription/Calculation Errors? (Levels D, E) Yes No N/A

Comments: None

7. Chemical Carrier Recovery (Levels C, D, E) N/A

Chemical carrier added? Yes No N/A

Chemical recovery acceptable? Yes No N/A

Chemical carrier traceable? (Levels D, E) Yes No N/A

Chemical carrier expired? (Levels D, E)Yes No **N/A**
Transcription/Calculation errors? (Levels D, E).....Yes No **N/A**

Comments: None

8. Tracer Recovery (Levels C, D, E) N/A
Tracer added? **Yes** No N/A
Tracer recovery acceptable? **Yes** No N/A
Tracer traceable? (Levels D, E) Yes No **N/A**
Tracer expired? (Levels D, E)..... Yes No **N/A**
Transcription/Calculation errors? (Levels D, E)..... Yes No **N/A**

Comments: None

9. Matrix Spikes (Levels C, D, E)..... N/A
Matrix spike analyzed? **Yes** No N/A
Spike recoveries acceptable? **Yes** No N/A
Spike source traceable? (Levels D, E) Yes No **N/A**
Spike source expired? Levels D, E)..... Yes No **N/A**
Transcription/Calculation Errors? (Levels D, E) Yes No **N/A**

Comments: None

10. Duplicates (Levels C, D, E) N/A

Duplicates Analyzed at required frequency? Yes No N/A

RPD Values Acceptable? Yes No N/A

Transcription/Calculation Errors? (Levels D, E) Yes No N/A

Comments: Pu-239/240 RPD = 32%, RER < 1.0; U-233/234 RPD = 42%, RER < 1.0

11. Field QC Samples (Levels C, D E) N/A

Field duplicate sample(s) analyzed? Yes No N/A

Field duplicate RPD values acceptable? Yes No N/A

Field split sample(s) analyzed? Yes No N/A

Field split RPD values acceptable? Yes No N/A

Performance audit sample(s) analyzed? Yes No N/A

Performance audit sample results acceptable? Yes No N/A

Comments: B1NHK1 & B1NHK3 Pu-239/240 RPD = 72%, RER = 1.3

12. Holding Times (All levels)

Are sample holding times acceptable? Yes No N/A

Comments: None

13. Results and Detection Limits (All Levels)..... N/A

Results reported for all required sample analyses?..... Yes No N/A

Results supported in raw data?(Levels D, E)..... Yes No N/A

Results Acceptable? (Levels D, E) Yes No N/A

Transcription/Calculation errors? (Levels D, E)..... Yes No N/A

MDA's meet required detection limits? Yes No N/A

Transcription/calculation errors? (Levels D, E)..... Yes No N/A

Comments: None

Appendix 6

Additional Documentation Requested By Client

FORM II

Date: 01-Jun-07

DUPLICATE RESULTS

Lab Name: STL Richland

SDG: W05178

Collection Date: 5/16/2007 8:14:00 AM

Lot-Sample No.: J7E180260-1

Report No. : 35493

Received Date: 5/18/2007 11:45:00 AM

Client Sample ID: B1NHK1 DUP

COC No. : R07-010-003

Matrix: SOIL

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUncert	Analysis, Prep Date	Total Sa Size	Allquot Size	Analy Method, Primary Detector
Batch: 7138456	Work Order: JW9RA1AC		Report DB ID: JW9RA1CR		Orig Sa DB ID: 9JW9RA10							
NI-63	7.74E-01	U	1.3E+00	2.3E+00	3.06E+00	pCi/g	98%	0.25	5/31/07 03:49 p	22.15	0.44524	NI63_LSC
	-3.47E-01	U RPD	525.3			3.00E+01		0.68		G	G	LSC4

Number of Results: 1

Comments:

STL Richland RPD - Relative Percent Difference.
 rptSTLRichDupV5.1 MDC|MDA, Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
 .2 A2002 U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda or Total Uncert or not identified by gamma scan software.

FORM II
BLANK RESULTS

Date: 01-Jun-07

Lab Name: STL Richland

SDG: W05178

Lot-Sample No.: J7E180000-456

Report No. : 35493

Matrix: SOIL

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Analy Method, Primary Detector
Batch: 7138456	Work Order: JXAD01AA		Report DB ID: JXAD01AB									
NI-63	2.25E-01	U	1.5E-01	2.7E-01	3.48E-01	pCi/g	96%	0.65	6/1/07 05:28 a		4.0	NI63_LSC
					1.69E-01	3.00E+01		(1.7)			G	LSC4

Number of Results: 1

Comments:

FORM II
LCS RESULTS

Date: 01-Jun-07

Lab Name: STL Richland

SDG: W05178

Lot-Sample No.: J7E180000-456

Report No.: 35493

Matrix: SOIL

Parameter	Result	Qual	Count Error (2σ)	Total Uncert(2σ)	MDC/MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Allquot Size	Analy Method, Primary Detector	
Batch: 7138456	Work Order: JXAD01AC		Report DB ID: JXAD01CS											
Ni-63	3.16E+01		5.1E-01	2.3E+00	3.60E-01	pCi/g	92.68%	3.80E+01	1.26E+00	83%	6/1/07 07:11 a	4.0	Ni63_LSC	
Rec Limits:								70.	130.	-0.2			G	LSC4

Number of Results: 1

Comments:

STL Richland Bias - (Result/Expected)-1 as defined by ANSI N13.30.

rp1STLRchLcs
V6.1.2 A2002

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: Plutonium Isotopics by AEA

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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Lab ID: W070000548
 BATCH QC ASSOCIATED WITH SAMPLE

DUP	Plutonium-238	13981-18-3	U4.6e-2		RPD			n/a	20.000		05/24/07
DUP	Pu-239/240 by AEA	PU-239/240	0.62		RPD			31.776	20.000		05/24/07
DUP	Pu-242 tracer by AEA	PU242	7.328	92.620	% Recov	30.000	105.000				05/24/07
SURR	Pu-242 tracer by AEA	PU242	6.968	98.320	% Recov	30.000	105.000				05/24/07

Lab ID: W070000549
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Pu-242 tracer by AEA	PU242	7.415	95.040	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000550
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Pu-242 tracer by AEA	PU242	6.687	97.580	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000551
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Pu-242 tracer by AEA	PU242	7.199	91.730	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000552
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Pu-242 tracer by AEA	PU242	8.054	96.010	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000553
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Pu-242 tracer by AEA	PU242	6.569	100.740	% Recov	30.000	105.000				05/24/07
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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: Plutonium Isotopics by AEA

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W070000554											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Pu-242 tracer by AEA	PU242	7.422	97.610	% Recov	30.000	105.000				05/24/07
Lab ID: W070000555											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Pu-242 tracer by AEA	PU242	6.36	90.700	% Recov	30.000	105.000				05/24/07
BATCH QC											
BLANK	Plutonium-238	13981-16-3	2.034e-02	0.020	pCi/g	-10.000	1000.000				05/24/07
BLANK	Pu-239/240 by AEA	PU-239/240	U1.13e-02	n/a	pCi/g	-10.000	1000.000				05/24/07
BLANK	Pu-242 tracer by AEA	PU242	7.804	95.770	% Recov	30.000	105.000				05/24/07
LCS	Pu-239/240 by AEA	PU-239/240	11.87	92.409	% Recov	80.000	120.000				05/24/07
LCS	Pu-242 tracer by AEA	PU242	17.32	95.590	% Recov	30.000	105.000				05/24/07

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: Americium by AEA

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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Lab ID: W070000548
 BATCH QC ASSOCIATED WITH SAMPLE

DUP	Americium-241	14596-10-2	9.1e-2		RPD			9.424	20.000		05/24/07
DUP	Am-243 tracer by AEA	AM243	4.514	89.010	% Recov	30.000	105.000				05/24/07
SURR	Am-243 tracer by AEA	AM243	4.459	87.130	% Recov	30.000	105.000				05/24/07

Lab ID: W070000549
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Am-243 tracer by AEA	AM243	4.745	93.240	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000550
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Am-243 tracer by AEA	AM243	4.28	99.900	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000551
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Am-243 tracer by AEA	AM243	4.607	79.380	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000552
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Am-243 tracer by AEA	AM243	5.154	87.100	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000553
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Am-243 tracer by AEA	AM243	4.204	92.780	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000554
 BATCH QC ASSOCIATED WITH SAMPLE

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: Americium by AEA

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Am-243 tracer by AEA	AM243	4.75	94.600	% Recov	30.000	105.000				05/24/07
Lab ID: W070000555 BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Am-243 tracer by AEA	AM243	4.07	85.940	% Recov	30.000	105.000				05/24/07
BATCH QC											
BLANK	Americium-241	14596-10-2	3.8e-2	0.038	pCi/g	-10.000	1000.000				05/24/07
BLANK	Am-243 tracer by AEA	AM243	4.994	91.880	% Recov	30.000	105.000				05/24/07
LCS	Americium-241	14596-10-2	11.46	96.709	% Recov	80.000	120.000				05/24/07
LCS	Am-243 tracer by AEA	AM243	11.09	95.990	% Recov	30.000	105.000				05/24/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: Uranium Isotopics by AEA

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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Lab ID: W070000548
 BATCH QC ASSOCIATED WITH SAMPLE

DUP	U-232 tracer by AEA	U232	4.715	92.240	% Recov	30.000	105.000				05/24/07
DUP	Uranium-233/234	U-233/234	0.15		RPD			42.105	20.000 *		05/24/07
DUP	Uranium-235	15117-96-1	2.8e-2		RPD			28.571	20.000 *		05/24/07
DUP	Uranium-238	U-238	0.18		RPD			24.390	20.000 *		05/24/07
SURR	U-232 tracer by AEA	U232	4.658	81.060	% Recov	30.000	105.000				05/24/07

Lab ID: W070000549
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	U-232 tracer by AEA	U232	4.956	91.530	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000550
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	U-232 tracer by AEA	U232	4.47	96.390	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000551
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	U-232 tracer by AEA	U232	4.812	97.680	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000552
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	U-232 tracer by AEA	U232	5.384	81.570	% Recov	30.000	105.000				05/24/07
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Lab ID: W070000553
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	U-232 tracer by AEA	U232	4.391	89.230	% Recov	30.000	105.000				05/24/07
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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: Uranium Isotopics by AEA

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W070000554											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	U-232 tracer by AEA	U232	4.961	91.590	% Recov	30.000	105.000				05/24/07
Lab ID: W070000555											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	U-232 tracer by AEA	U232	4.252	96.070	% Recov	30.000	105.000				05/24/07
BATCH QC											
BLANK	U-232 tracer by AEA	U232	5.217	90.900	% Recov	30.000	105.000				05/24/07
BLANK	Uranium-233/234	13986-29-5	U1.3e-2	n/a	pCi/g	-10.000	1000.000				05/24/07
BLANK	Uranium-235	15117-96-1	2e-2	0.020	pCi/g	-10.000	1000.000				05/24/07
BLANK	Uranium-238	24678-82-8	U1.1e-2	n/a	pCi/g	-10.000	1000.000				05/24/07
LCS	U-232 tracer by AEA	U232	11.58	85.590	% Recov	30.000	105.000				05/24/07
LCS	Uranium-233/234	13986-29-5	N/A	n/a	% Recov	75.000	125.000				05/24/07
LCS	Uranium-235	15117-96-1	N/A	n/a	% Recov	75.000	125.000				05/24/07
LCS	Uranium-238	24678-82-8	20	105.513	% Recov	80.000	120.000				05/24/07

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: TC99 by Liquid Scin.

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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Lab ID: W070000548
 BATCH QC ASSOCIATED WITH SAMPLE

DUP	Technetium-99	14133-76-7	U-0.1		RPD			n/a	20.000		05/23/07
MS	Technetium-99	14133-76-7	91.07	101.841	% Recov	75.000	125.000				05/23/07

BATCH QC

BLANK	Technetium-99	14133-76-7	U-0.1	n/a	pCi/g	-10.000	1000.000				05/23/07
LCS	Technetium-99	14133-76-7	11.9	88.148	% Recov	80.000	120.000				05/23/07

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837

Matrix: SOLID

Test: Gamma Energy Analysis-grd H2O

Sample Date: 05/16/07

Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W070000548											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Actinium-228	14331-83-0	0.5445		RPD			9.964	20.000		05/21/07
DUP	Americium-241	14596-10-2	6.779e-2		RPD			n/a	20.000		05/21/07
DUP	Ba-133 by GEA	13981-41-4	U1.579e-3		RPD			n/a	20.000		05/21/07
DUP	Bismuth-212	14913-49-6	0.4051		RPD			3.516	20.000		05/21/07
DUP	Bismuth-214	14733-03-0	0.5043		RPD			12.074	20.000		05/21/07
DUP	Cerium-144	14762-78-8	U1.574e-2		RPD			n/a	20.000		05/21/07
DUP	Cerium/Praseodymium-144	CE/PR-144	U3.148e-2		RPD			n/a	20.000		05/21/07
DUP	Cobalt-60	10198-40-0	U9.61e-3		RPD			n/a	20.000		05/21/07
DUP	Cesium-134	13967-70-9	U3.634e-2		RPD			n/a	20.000		05/21/07
DUP	Cesium-137	10045-97-3	0.254		RPD			2.104	20.000		05/21/07
DUP	Europium-152	14683-23-9	0.1325		RPD			23.064	20.000		05/21/07
DUP	Europium-154	15585-10-1	U1.354e-2		RPD			n/a	20.000		05/21/07
DUP	Europium-155	14391-16-3	U2.773e-2		RPD			n/a	20.000		05/21/07
DUP	Potassium-40	13966-00-2	13.73		RPD			1.838	20.000		05/21/07
DUP	Niobium-94	14681-63-1	U2.821e-3		RPD			n/a	20.000		05/21/07
DUP	Lead-212	15092-94-1	0.6689		RPD			1.705	20.000		05/21/07
DUP	Lead-214	15067-28-4	0.7036		RPD			19.149	20.000		05/21/07
DUP	Radium-226	13982-63-3	0.4655		RPD			7.127	20.000		05/21/07
DUP	Radium-228	15262-20-1	0.635		RPD			2.052	20.000		05/21/07
DUP	Ruthenium-103	13968-53-1	U5.992e-3		RPD			n/a	20.000		05/21/07
DUP	Ruthenium-106	13967-48-1	U1.143e-2		RPD			n/a	20.000		05/21/07
DUP	Antimony-125	14234-35-6	U1.6e-3		RPD			n/a	20.000		05/21/07
DUP	Tin-113	13966-06-8	U2.933e-4		RPD			n/a	20.000		05/21/07
DUP	Tin-126	15832-50-5	U0.1544		RPD			n/a	20.000		05/21/07
DUP	Thorium-234	15065-10-8	0.6836		RPD			n/a	20.000		05/21/07
DUP	Thallium-208	14913-50-9	0.1845		RPD			5.277	20.000		05/21/07

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: Gamma Energy Analysis-grd H2O

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
DUP	Uranium-235	15117-96-1	U5.709e-2		RPD			n/a	20.000		05/21/07
DUP	Zinc-65	13982-39-3	U1.225e-3		RPD			n/a	20.000		05/21/07
BATCH QC											
BLANK	Actinium-228	14331-83-0	4.803e-2	0.048	pCi/g	-10.000	1000.000				05/23/07
BLANK	Americium-241	14596-10-2	U1.282e-2	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Ba-133 by GEA	13981-41-4	U-1.179e-4	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Bismuth-212	14913-49-6	U7.47e-3	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Bismuth-214	14733-03-0	7.533e-2	0.075	pCi/g	-10.000	1000.000				05/23/07
BLANK	Cerium-144	14762-78-8	U1.43e-2	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Cerium/Praseodymium-144	CE/PR-144	U2.861e-2	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Cobalt-60	10198-40-0	U-9.161e-4	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Cesium-134	13967-70-9	U2.943e-3	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Cesium-137	10045-97-3	U-1.795e-3	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Europium-152	14683-23-9	U8.727e-4	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Europium-154	15585-10-1	U-6.583e-3	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Europium-155	14391-16-3	U-2.312e-3	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Potassium-40	13966-00-2	9.367e-2	0.094	pCi/g	-10.000	1000.000				05/23/07
BLANK	Niobium-94	14681-83-1	U2.704e-3	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Lead-212	15092-94-1	5.182e-2	0.052	pCi/g	-10.000	1000.000				05/23/07
BLANK	Lead-214	15067-28-4	6.217e-2	0.062	pCi/g	-10.000	1000.000				05/23/07
BLANK	Radium-226	13982-63-3	4.417e-2	0.044	pCi/g	-10.000	1000.000				05/23/07
BLANK	Radium-228	15262-20-1	4.594e-2	0.046	pCi/g	-10.000	1000.000				05/23/07
BLANK	Ruthenium-103	13968-53-1	U1.344e-3	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Ruthenium-106	13967-48-1	U1.83e-2	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Antimony-125	14234-35-6	U4.754e-3	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Tin-113	13966-06-8	U2.466e-3	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Tin-126	15832-50-5	U8.395e-03	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Thorium-234	15065-10-8	U8.271e-2	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Thallium-208	14913-50-9	1.109e-2	0.011	pCi/g	-10.000	1000.000				05/23/07

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: Gamma Energy Analysis-grd H2O

Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Uranium-235	15117-96-1	U2.053e-2	n/a	pCi/g	-10.000	1000.000				05/23/07
BLANK	Zinc-65	13982-39-3	U2.33e-3	n/a	pCi/g	-10.000	1000.000				05/23/07
LCS	Americium-241	14596-10-2	4249	108.393	% Recov	80.000	120.000				05/22/07
LCS	Cobalt-60	10198-40-0	4548	108.544	% Recov	80.000	120.000				05/22/07
LCS	Cesium-137	10045-97-3	4260	118.994	% Recov	80.000	120.000				05/22/07

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: Strontium 89/90

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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Lab ID: W070000548
 BATCH QC ASSOCIATED WITH SAMPLE

DUP	Sr-85 Tracer by Beta Counting	SR85	92.7	92.700	% Recov	30.000	105.000				05/22/07
DUP	Strontium-89/90	SR-RAD	2.2E-01		RPD			27.451	20.000		05/22/07
SURR	Sr-85 Tracer by Beta Counting	SR85	100.6	100.600	% Recov	30.000	105.000				05/22/07

Lab ID: W070000549
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Sr-85 Tracer by Beta Counting	SR85	99.0	99.000	% Recov	30.000	105.000				05/22/07
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Lab ID: W070000550
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Sr-85 Tracer by Beta Counting	SR85	102.9	102.900	% Recov	30.000	105.000				05/22/07
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Lab ID: W070000551
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Sr-85 Tracer by Beta Counting	SR85	93.2	93.200	% Recov	30.000	105.000				05/22/07
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Lab ID: W070000552
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Sr-85 Tracer by Beta Counting	SR85	103.7	103.700	% Recov	30.000	105.000				05/22/07
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Lab ID: W070000553
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	Sr-85 Tracer by Beta Counting	SR85	101.6	101.600	% Recov	30.000	105.000				05/22/07
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Lab ID: W070000554
 BATCH QC ASSOCIATED WITH SAMPLE

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: SOLID
 Test: Strontium 89/90

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Sr-85 Tracer by Beta Counting	SR85	93.6	93.600	% Recov	30.000	105.000				05/22/07
Lab ID: W070000555 BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	99.0	99.000	% Recov	30.000	105.000				05/22/07
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	101.1	101.100	% Recov	30.000	105.000				05/22/07
BLANK	Strontium-89/90	10098-97-2	1.3E-01	0.130	pCi/g	-10.000	300.000				05/22/07
LCS	Sr-85 Tracer by Beta Counting	SR85	103.8	103.800	% Recov	30.000	105.000				05/22/07
LCS	Strontium-89/90	10098-97-2	83.5	97.206	% Recov	80.000	120.000				05/22/07

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20070837
 Matrix: WATER
 Test: Tritium by Liq Sct column prep

Sample Date: 05/16/07
 Receive Date: 05/17/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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Lab ID: W070000559
BATCH QC ASSOCIATED WITH SAMPLE

DUP	Tritium	10028-17-8	U20.7		RPD			n/a	20.000		05/17/07
MS	Tritium	10028-17-8	17023.9	98.836	% Recov	75.000	125.000				05/17/07

BATCH QC

BLANK	Tritium	10028-17-8	U5.5E+01	n/a	pCi/L	-10.000	1000.000				05/17/07
LCS	Tritium	10028-17-8	2110.0	103.411	% Recov	80.000	120.000				05/17/07

Lab ID: W070000556
BATCH QC ASSOCIATED WITH SAMPLE

DUP	Tritium	10028-17-8	U9.3E-02	n/a	Ratio	0.000	20.000				05/22/07
MS	Tritium	10028-17-8	1436.77	97.773	% Recov	75.000	125.000				05/22/07

BATCH QC

BLANK	Tritium	10028-17-8	U4.4E-01	n/a	pCi/g	-10.000	1000.000				05/22/07
LCS	Tritium	10028-17-8	3449.27	95.006	% Recov	80.000	120.000				05/22/07

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