ORP-114
(02/02)

ORP - REVIEW COMMENT RECORD (RCR)

1. Date	June 21 2005
2. Review No.	N/A
3. Project No.	200-MW-1
4. Page	1 of 1
5. Document Number(s)/Title(s)	Data Package SDG WSCF20050940
6. Program/Project/Building Number	GRP & Waste Sites/200-MW-1
7. Reviewer	Bill Thackaberry
8. Organization/Group	Env & Science Assurance (QA)
9. Location/Phone	E6-35 372-0742
17. Comment Submittal Approval	Organization Manager (optional)
10. Agreement with indicated comment disposition(s)	7/5/05 Date; W R Thackaberry Reviewer/Point of Contact; Requester
11. CLOSED	7/5/05 Date; W R Thackaberry Reviewer/Point of Contact; Requester

12. Item	13a. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted). Provide separate attachments if necessary.	16. Status
1	Inorganics - Page 36 is missing(part of the validation checklist).		Cur K	✓
2	Radiochemistry - pg 14, It appears that the wrong Pu result was flagged. Pu 238 is supposewd to be flagged. The validator has flagged the Pu 239/240.		Cur K	✓
3	Semivolatiles - pg 3, States "Due to LCS recovery outside QC limits (62.6%), all results were qualified as estimates and flagged "J"." This should be all **phenol** results.		Cur K	✓
4	Semivolatiles - Page 43 is missing (may only be a title page).		Cur K	✓
5	Wet Chemistry - pg 36, checklist item 6 comment says "pH <2X J all" should say "pH >2X J all"		Cur K	✓
	PCBs, Volatiles - No Comment			

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REVIEW COMMENT RECORD (RCR)

1. Date 06/27/05	2. Review No.
3. Project No. 200-MW-1	4. Page 1 of 2

5. Document Number(s)/Title(s)	6. Program/Project/Building Number	7. Reviewer	8. Organization/Group	9. Location/Phone
Validation Package for SDG WSCF20050940	Chracterization Soil Sampling	RL Weiss	ERC - S&DM	Sigma 1 372-9631

17. Comment Submittal Approval:	10. Agreement with indicated comment disposition(s)	11. Closed
Organization Manager (Optional)	06/27/2005 Date R. L. Weiss Reviewer/Point of Contract R. L. Weiss Author/Originator	7-6-05 Date Reviewer/Point of Contact Author/Originator

12. Item	13. Comment(s)/Discrepancy(s) (Provide technical justification for the comment and detailed recommendation of the action required to correct/resolve the discrepancy/problem indicated.)	14. Reviewer Concurrence Required	15. Disposition (Provide justification if NOT accepted.)	16. Status
1	Wet Chemistry, Page 10, typo; The pH result for B1C775 should be 9.7.			OK RLW
2	Semivolatile, Page 11, typo; The tributylphosphate result for B1C771 should be 160.			OK RLW
3	Radiochemistry, Pages 2, 4, 8, & 40; Radiochemistry validation for blank contamination does not assign "U" flags. U-235 results should only be flagged "J". Annotated lab reports are ok.			OK RLW
4	Volatile; Pages 22 and 23 are reversed.			OK RLW
5	PCB and Inorganic – No Comments			

Date: 21 June 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: 200-MW-1 Characterization Sampling and Analysis - Soil
Subject: PCB - Data Package No.WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	PCBs by 8082
B1C771	4/28/05	Soil	C	PCBs by 8082
B1C774	4/28/05	Soil	C	PCBs by 8082
B1C775	4/28/05	Soil	C	PCBs by 8082
B1C776	4/28/05	Soil	C	PCBs by 8082
B1C777	4/28/05	Soil	C	PCBs by 8082

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. 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. Qualified Data Summary and 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/Sample Preservation**

Sample data were assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Soil samples must be extracted within 14 days of sample collection and analyzed within 40 days of extraction.

If holding times are exceeded by less than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detected sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

All holding times were acceptable.

- **Method Blank**

Method blank analyses are performed to determine the extent of laboratory contamination introduced through sampling, sample preparation or analysis. At least one method blank analysis must be conducted for every 20 samples. Method blanks should not contain target compounds at a concentration greater than minimum detectable activity (MDA). If target compounds are present, sample results less than five times the blank concentration are qualified as undetected and flagged "U". If the sample result is less than five times the blank concentration and less than MDA, the result is qualified as undetected and elevated to the MDA.

All method blank target compound results were acceptable.

Field Blanks

No equipment blanks were submitted for analysis.

- **Accuracy**

Matrix Spike/Blank Spike

Matrix spike and blank spike analyses are used to assess the analytical accuracy of the reported data. The matrix spike is used to assess the effect of the matrix on the ability to accurately quantify sample concentrations and is done in duplicate. Matrix spike and blank spike analyses must be within control limits of 50% to 150%. If spike recoveries are outside control limits, detected sample results less than five times the spike concentration are qualified as estimates and flagged "J". Non-detected sample results with spike recoveries outside control limits are qualified as estimates and flagged "UJ". Sample results greater than five times the spike concentration require no qualification.

All matrix spike/blank spike results were acceptable.

Surrogate Recovery

The analysis of surrogate compounds provides a measure of performance for individual samples. Matrix-specific surrogate compound recovery control windows have been established by the laboratory. When a surrogate compound recovery is outside the control window, all positively identified target compounds associated with the unacceptable surrogate recoveries are qualified as estimates and flagged "J". Non-detected compounds with surrogate recoveries less than the lower control limit are qualified as having an estimated detection limit and flagged "UJ". Non-detected compounds with surrogate recoveries above the upper control limit require no qualification.

All surrogate results were acceptable.

- **Precision**

Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike/matrix spike duplicate results provide matrix-specific information on the precision of the method for specific target compound classes. Precision is expressed as the relative percent difference (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample. For soil samples, results must be within RPD limits of plus/minus 35%. If RPD values are out of specification and the sample concentration is less than five times the spike concentration, all associated detected sample results are qualified as estimates and flagged "J". If RPD values are out of specification and the sample concentration is greater than five times the spike concentration, no qualification is required.

All precision results were acceptable.

Field Duplicate Samples

No field duplicates were submitted for analysis.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the required target quantitation limits (RTQL) to ensure that laboratory detection levels meet the required criteria. All results exceeded the analyte specific RTQL. Under the FHI statement of work, no qualification is required.

- **Completeness**

Data Package No. 50940 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

All results exceeded the analyte specific RTQL. Under the FHI statement of work, no qualification is required.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work*, Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validators in compliance with the procedures herein are as follows:

U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

Appendix 2

Summary of Data Qualification

PCB DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE 1 OF 1
COMMENTS: No qualifiers assigned			

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

PCB ANALYSIS, SOIL MATRIX, (UG/KG)

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case:	SDG: WSCF20050940												
Sample Number		B1C769		B1C771		B1C774		B1C775		B1C776		B1C777	
Remarks													
Sample Date		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05	
Analysis Date		5/13/05		5/13/05		5/13/05		5/13/05		5/13/05		5/13/05	
PCB	RTQL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Aroclor-1016	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1221	16.5	<110	U	<110	U	<100	U	<100	U	<100	U	<100	U
Aroclor-1232	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1242	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1248	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1254	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1260	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroicor-1262	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U
Aroclor-1268	16.5	<54.0	U	<55.0	U	<52.0	U	<51.0	U	<51.0	U	<51.0	U

000010

Laboratory applied non-detect qualifiers "U" have been included in this table to minimize miss-interpretation of results. All other qualifiers shown were applied during validation. NA - Not analyzed

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Organic															
~~W050001286~~	~~B1C769~~	~~GRP~~	~~TRENT~~	~~TPHGASOLINE~~	~~Total Pet. Hydrocarbons Gas~~	~~SOIL~~	~~LA-528-448~~	~~U~~	~~< 250~~	~~ug/kg~~	~~1.00~~	~~2.5e+02~~	~~05/11/05~~	~~04/28/05~~	~~04/28/05~~
W050001286	B1C769	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 110	ug/kg	1.00	1.1e+02	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
~~W050001286~~	~~B1C769~~	~~GRP~~	~~TRENT~~	~~100-02-7~~	~~4-Nitrophenol~~	~~SOIL~~	~~LA-523-456~~	~~U~~	~~< 190~~	~~ug/kg~~	~~1.00~~	~~1.9e+02~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001286	B1C769	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 290	ug/kg	1.00	2.9e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 200	ug/kg	1.00	2.0e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 120	ug/kg	1.00	1.2e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05

MDL = Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (Inorganic) U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier

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

Report WGPP/ver. 1.1
Groundwater Remediation Program

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001286	B1C769	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 44.0	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 110	ug/kg	1.00	1.1e+02	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 290	ug/kg	1.00	2.9e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 200	ug/kg	1.00	2.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 120	ug/kg	1.00	1.2e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

U/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001287	B1C771	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 44.0	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.0e+02	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 280	ug/kg	1.00	2.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05

6/20/05

MDL=Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (Inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001288	B1C774	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.00e+03	ug/kg	1.00	4.0e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.00e+03	ug/kg	1.00	4.0e+03	05/12/05	04/28/05	04/28/05
~~W050001289~~	~~B1C775~~	~~GRP~~	~~TRENT~~	~~TPHGASOLINE~~	~~Total Pet. Hydrocarbons Gas~~	~~SOIL~~	~~LA-523-443~~	~~U~~	~~< 250~~	~~ug/kg~~	~~1.00~~	~~2.5e+02~~	~~05/11/05~~	~~04/28/05~~	~~04/28/05~~
W050001289	B1C775	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C775	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
~~W050001289~~	~~B1C775~~	~~GRP~~	~~TRENT~~	~~100-02-7~~	~~4-Nitrophenol~~	~~SOIL~~	~~LA-523-456~~	~~U~~	~~<~~	~~180~~	~~ug/kg~~	~~1.00~~	~~1.8e+02~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001289	B1C775	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	<	280	ug/kg	1.00	2.8e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	<	140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	<	190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	<	110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	<	97.0	ug/kg	1.00	97	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	<	140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	79-01-6	Trichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

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RQ=Result Qualifier

DF=Dilution Factor
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6/28/05

6/26/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C775	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
~~W050001290~~	~~B1C776~~	~~GRP~~	~~TRENT~~	~~TPHGASOLINE~~	~~Total Pet. Hydrocarbons Gas~~	~~SOIL~~	~~LA-523-443~~	~~U~~	~~< 250~~	~~ug/kg~~	~~1.00~~	~~2.5e+02~~	~~05/11/05~~	~~04/28/05~~	~~04/28/05~~
W050001290	B1C776	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C776	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 96.0	ug/kg	1.00	96	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

DF=Dilution Factor
* - Indicates results that have NOT been validated: + - Indicates more than six qualifier symbols

Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C776	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	<	3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	<	3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	<	250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	<	100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	<	180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	<	270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	<	140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	<	190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	<	110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	<	96.0	ug/kg	1.00	96	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	<	140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

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

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

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

4/20/05

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	**WSCF20050940**
Sample Matrix	**Soil**
Sample Visual	**N/A**
SAF Number	**F04-015**
Data Deliverable	**Summary Report**

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) 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 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.

- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.

- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.

- Sulfate – The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals – The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids – Analyzed for organic results correction.

pH – All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Urananium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)

[illegible] Number	[illegible]	[illegible]	[illegible]	[illegible]
Uranium-234/ Uranium-235				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
Plutonium-238				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americiam-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
[illegible]	[illegible]	[illegible]	[illegible]
Americium-243			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
Plutonium-242			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
[illegible]	[illegible]	[illegible]	[illegible] (Percent)
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
Strontium-85			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
Uranium-232			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample	[illegible]	[illegible]
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

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.

Pauline D. Mix
WSCF Client Services

Abbreviations
Hg – mercury
IC – ion chromatography
ICP – inductively coupled plasma
ICP/AES – ICP/atomic emission spectroscopy
ICP/MS – ICP/mass spectrometry
Total U – total uranium
AT/TB – total alpha/total beta
AEA – Alpha Energy Analysis
WTPH-G – Total Hydrocarbons-Gasoline
Am – americium
Cm – curium
Pu – plutonium
Np – neptunium
GEA – gamma energy analysis
H3 – Tritium
Sr – Strontium 89, 90
WTPH-D – Total Hydrocarbons-Diesel
TSS – Total Suspended Solids

5/30/05

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-124	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock	TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N	DATA TURNAROUND: 45 Days / ~~45 Days~~ 15 4-26-05
SAMPLING LOCATION: 216-T-13; 10-11 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO.: F04-015	AIR QUALITY: ☐	
ICE CHEST NO.	FIELD LOGBOOK NO.	COA: 119144E510	METHOD OF SHIPMENT: Government Vehicle		
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

20050940

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C769 1.20050012B6	SOIL	4/28/5	0930

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
TSAPIZ/ [signature] 4-28-05	14:45	TA FRAZIER [signature]	4-28-05 14:45

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000027

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-124	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/08

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate; Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~ trans-1,2-Dichloroethylene}
(4)Semi-VOA – 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 – Total Sr;

A-6003-61 N(03/03)

000028

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-125	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock — TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N — DATA TURNAROUND: 45 Days / ~~45 Days~~ 1 Day 4-28-05
SAMPLING LOCATION: 216-T-13; 10-11 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO.: F04-015	AIR QUALITY: ☐
ICE CHEST NO.	FIELD LOGBOOK NO. — COA: 119144E510	METHOD OF SHIPMENT: Government Vehicle	
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGa*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C771	SOIL	4/28/5	0930										

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: JSPAul/ [signature] 4-28-05	DATE/TIME: 14:45	RECEIVED BY/STORED IN: TA FRAZIER [signature]	DATE/TIME: 4/28/05 14:45
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000029

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-125	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

PMG 2/14/05

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.
(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite,~~ Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene,~~ trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-818(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-137	PAGE 1 OF 2
COLLECTOR: Popa/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock	TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N
SAMPLING LOCATION: 216-T-13; 12-13 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO.: F04-015	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO.	COA: 119144ES10	METHOD OF SHIPMENT: Government Vehicle	DATA TURNAROUND: 45 Days / ~~45 Days~~
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C780

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C774	SOIL	4-27-05	0955	X	X	X	X	X	X				

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Popa/ASHy 4-28-05	1445	Victor Rivas	4/28/05 14:45

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000031

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-137	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen-in-Nitrate, Nitrogen-in-Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;

(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}

(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, ~~trans~~-1,2-Dichloroethylene}

(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}

(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-138	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock	TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N
SAMPLING LOCATION: 216-T-13; 14-15 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO.: F04-015	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO.	COA: 119144ES10	METHOD OF SHIPMENT: Government Vehicle	DATA TURNAROUND: 45 Days / ~~45 Days~~ 9-28-05
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C781

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGa*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	[redacted]									
B1C775	SOIL	4-28-05	1015	X	X	X	X	X	X				

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: [signature] 4-28-05	DATE/TIME: 1445	RECEIVED BY/STORED IN: Victor Bines [signature] 4/28/05	DATE/TIME: 1445	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

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

A-6003-618(03/03)

000033

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-138	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 14-15 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

000034

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-139	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock	TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N
SAMPLING LOCATION: 216-T-13; 19-20 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO.: F04-015	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO.	COA: 119144E510	METHOD OF SHIPMENT: Government Vehicle	DATA TURNAROUND: 45 Days / ~~45 Days~~ 4-26-05
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C782

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C776	SOIL	4-28-05	1300	X	X	X	X	X	X				

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPORE	4-28-05 1445	Victor Bilus	4/28/05 1445
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-138	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 19-20 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen-in Nitrate, Nitrogen-in Nitrite~~, Phosphorous in phosphate, Sulfate} {~~Total Cyanide - 9010~~; pH (Soil) - 9045;

(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}

(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}

(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}

(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F04-015-140 PAGE 1 OF 2

COLLECTOR
Pope/Pfister/Tyra/Wiberg

SAMPLING LOCATION
216-T-13; 24-25 ft

ICE CHEST NO.

COMPANY CONTACT
CS Cearlock

TELEPHONE NO.
372-9638

PROJECT COORDINATOR
TRENT, SJ

PRICE CODE SN

DATA TURNAROUND
45 Days / ~~45 Days~~

AIR QUALITY ☐

PROJECT DESIGNATION
200-MW-1 Characterization Sampling and Analysis - Soil

SAF NO.
F04-015

FIELD LOGBOOK NO.

COA
119144E510

METHOD OF SHIPMENT
Government Vehicle

SHIPPED TO
Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C783

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None						
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P						
NO. OF CONTAINER(S)	1	1	1	3	1	1						
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL						
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS						

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME											
B1C777	SOIL	4-28-05	1330	X	X	X	X	X	X					

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPOPE	4-28-05 1445	Victor Bins	4/28/05 1445
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(03/03)

000037

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-140	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 24-25 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.

(1)IC Anions - 300.0 (~~Bromide, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate) ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, ~~Copper, Silver~~) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~; trans-1,2-Dichloroethylene)
(4)Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Appendix 5

Data Validation Supporting Documentation

PCB DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 200-MW-1			DATA PACKAGE: S0940		
VALIDATOR: TCI		LAB: WSCF		DATE: 6/18/05	
			SDG: S0940		
ANALYSES PERFORMED					
SW-846 8081	SW-846 8081 (TCLP)	SW-846 8082	SW-846 8081 (TCLP)		
SAMPLES/MATRIX					
B1C769	B1C771	B1C774	B1C775		
B1C776	B1C777				
					Soil

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments:

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:

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: NO PB

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: NO PB

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: _____

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: _____

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: all over

9. SAMPLE CLEANUP (Levels D and E)

Fluoricil ® (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

SDG Number: WSCF20050940
Matrix: SOLID
Test: PCBs complete list

SAF Number: F04-015
Sample Date: 04/27/05
Receive Date:04/27/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001268									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Aroclor-1260	11096-82-5	1045.1	111.000	% Recov	05/13/05	75.000	125.000	
MS	Decachlorobiphenyl	2051-24-3	960.09	102.000	% Recov	05/13/05	50.000	150.000	
MS	Tetrachloro-m-xylene	877-09-8	888.18	94.200	% Recov	05/13/05	50.000	150.000	
MSD	Aroclor-1260	11096-82-5	1075.7	111.000	% Recov	05/13/05	75.000	125.000	
MSD	Decachlorobiphenyl	2051-24-3	972.47	101.000	% Recov	05/13/05	50.000	150.000	
MSD	Tetrachloro-m-xylene	877-09-8	943.22	97.700	% Recov	05/13/05	50.000	150.000	
SPK-RPD	Aroclor-1260	11096-82-5	111.000	0.000	RPD	05/23/05	0.000	25.000	
SPK-RPD	Decachlorobiphenyl	2051-24-3	101.000	0.985	RPD	05/23/05	0.000	20.000	
SPK-RPD	Tetrachloro-m-xylene	877-09-8	97.700	3.648	RPD	05/23/05	0.000	20.000	
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1146.9	106.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1079.6	99.400	% Recov	05/13/05	50.000	150.000	
Lab ID: W050001287									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1118.7	102.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1042.4	95.300	% Recov	05/13/05	50.000	150.000	
Lab ID: W050001288									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1050.9	100.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	993.25	94.800	% Recov	05/13/05	50.000	150.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: PCBs complete list

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001289									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1056.9	104.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	952.31	93.800	% Recov	05/13/05	50.000	150.000	
Lab ID: W050001290									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1050.1	102.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1051.2	102.000	% Recov	05/13/05	50.000	150.000	
Lab ID: W050001291									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1073.5	105.000	% Recov	05/13/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	973.05	95.300	% Recov	05/13/05	50.000	150.000	
BATCH QC									
BLANK	Aroclor-1016	12674-11-2	< 50	n/a	UGKG	05/13/05			U
BLANK	Aroclor-1221	11104-28-2	< 100	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1232	11141-16-5	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1242	53469-21-9	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1248	12672-29-6	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1254	11097-69-1	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1260	11096-82-5	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1262	37324-23-5	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Aroclor-1268	11100-14-4	< 50	n/a	ug/Kg	05/13/05			U
BLANK	Decachlorobiphenyl	2051-24-3	1041.0	104.000	% Recov	05/13/05	50.000	150.000	
BLANK	Tetrachloro-m-xylene	877-09-8	949.26	94.900	% Recov	05/13/05	50.000	150.000	
LCS	Aroclor-1260	11096-82-5	1117.1	112.000	% Recov	05/13/05	70.000	130.000	
LCS	Decachlorobiphenyl	2051-24-3	1026.2	103.000	% Recov	05/13/05	50.000	150.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: PCBs complete list

SAF Number: F04-015
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
LCS	Tetrachloro-m-xylene	877-09-8	919.52	92.000	% Recov	05/13/05	50.000	150.000	

Date: 21 June 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: 200-MW-1 Characterization Sampling and Analysis - Soil
Subject: Inorganics - Data Package No. WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	ICP/MS metals by 200.8
B1C771	4/28/05	Soil	C	ICP/MS metals by 200.8
B1C774	4/28/05	Soil	C	ICP/MS metals by 200.8
B1C775	4/28/05	Soil	C	ICP/MS metals by 200.8
B1C776	4/28/05	Soil	C	ICP/MS metals by 200.8
B1C777	4/28/05	Soil	C	ICP/MS metals by 200.8

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. 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. Qualified Data Summary and 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

JUL 2005
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DATA QUALITY PARAMETERS

- **Holding Times**

Analytical holding times for metals are assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Soil samples must be analyzed within 6 months for ICP metals and 28 days for mercury.

All holding times were acceptable.

- **Preparation (Method) Blanks**

Preparation Blanks

At least one preparation blank, consisting of deionized distilled water processed through each sample preparation and analysis procedure, must be prepared and analyzed with every sample delivery group. In the case of positive blank results, samples with digestate concentrations less than five times the preparation blank value have had their associated values qualified as non-detected and flagged "U". Samples with concentrations of greater than five times the highest blank concentration do not require qualification.

In the case of negative blank results, if the absolute value exceeds the contract required detection limit (CRDL), all nondetects are rejected and flagged "UR" and all detects that are less than ten times the absolute value of the associated preparation blank result are qualified as estimates and flagged "J". If the absolute value of the negative preparation blank is greater than the instrument detection limit (IDL) and less than or equal to the CRDL, all nondetects are qualified as estimates and flagged "UJ" and all detects less than ten times the absolute value of the blank are qualified as estimates and flagged "J". If the sample results are greater than ten times the absolute value of the preparation blank, no qualification is necessary.

All preparation blank results were acceptable.

Field (Equipment) Blank

No field blanks were submitted for analysis.

- **Accuracy**

Matrix Spike & Matrix Spike Duplicate

Matrix spike (MS), matrix spike duplicate (MSD) and laboratory control sample (LCS) analyses are used to assess the analytical accuracy of the reported data. The matrix spike is used to assess effect of the matrix on the ability to accurately quantify sample concentrations. Recoveries must fall within the range of 75% to 125%. Samples with a spike recovery of less than 30% and a sample result below the IDL are rejected and flagged "UR". Samples with a spike recovery of 30% to 74% and a sample result less than the IDL are qualified "UJ". Samples with a spike recovery of greater than 125% or less than 74% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a spike recovery greater than 125% and a sample result less than the IDL, no qualification is required.

All MS/MSD results were acceptable.

Laboratory Control Sample

The LCS is used to monitor the overall performance of all steps in the analysis. Recoveries must fall within the range of 80% to 120% for LCS analysis. Samples with a recovery of less than 50% are rejected and flagged "UR". Samples with a recovery of 50% to 79% and a sample recovery below the IDL are qualified "UJ". Samples with a recovery of greater than 120% or less than 80% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a recovery greater than 120% and a sample result less than the IDL, no qualification is required.

All LCS results were acceptable.

- **Precision**

Laboratory Duplicate Samples

Analytical precision is expressed by the relative percent differences (RPD) between the recoveries of matrix spike and matrix spike duplicate (MSD) analyses performed on a sample in the analytical batch. Precision may alternatively be assessed using unspiked duplicate analyses performed on a sample in the analytical batch. If both sample and replicate activities (concentrations) are greater than five times the CRDL and the RPD is less than +/- 35%, no qualification is required. If either activity (concentration) is less than five times the CRDL, the RPD control limit is less than or equal to two times the CRDL. If the RPD is outside the applicable control limit, associated results are qualified as estimated detects or estimated non-detects.

All laboratory duplicate results were acceptable.

Field Duplicate

No field duplicates were submitted for analysis.

- **Analytical Detection Limits**

Reported analytical detection levels are compared against the required target quanitiation limits (RTQLs) to ensure that laboratory detection levels meet the required criteria. The chromium result in sample B1C777 was reported above the RTQL. Under the FHI statement of work, no qualification is required. All other results met the analyte specific RTQL.

- **Completeness**

Data package No. 50940 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

The chromium result in sample B1C777 was reported above the RTQL. Under the FHI statement of work, no qualification is required.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work*, Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validators in compliance with FHI validation SOW are as follows:

U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated concentration is an estimate, but the data are usable for decision-making purposes.

BJ - Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

Appendix 2

Summary of Data Qualification

INORGANIC DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE_1_OF_1_
COMMENTS: No qualifiers assigned			

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

INORGANIC ANALYSIS, SOIL MATRIX, MG/KG

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case	**SDG: WSCF20050940**												
Sample Number		B1C769		B1C771		B1C774		B1C775		B1C776		B1C777	
Remarks													
Sample Date		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05	
Inorganics	**RTQL**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**	**Result**	**Q**
Cadmium	**0.5**	0.159		0.246		0.306		0.167		0.141		<0.0993	U
Chromium	**1**	7.26		6.07		6.92		6.45		4.22		<3.97	U
Lead	**10**	10.9		8.18		13.4		7.45		3.02		3.11	
Uranium	**1**	0.901		1.03		1.01		0.928		0.544		0.459	

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REVISED
8/15/05

Laboratory applied non-detect qualifiers "U" have been included in this table to minimize miss-interpretation of results. All other qualifiers shown were applied during validation.

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Inorganic															
~~W050001288~~	~~B1C769~~	~~GRP~~	~~TRENT~~	~~TS~~	~~Total solids~~	~~SOIL~~	~~LA-519-412~~		~~91.2~~	~~%~~	~~1.00~~	~~0.0~~	~~05/03/05~~	~~04/28/05~~	~~04/28/05~~
W050001286	B1C769	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411		9.52	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	U	< 2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
~~W050001286~~	~~B1C769~~	~~GRP~~	~~TRENT~~	~~14808-79-8~~	~~Sulfate~~	~~SOIL~~	~~LA-533-410~~	~~B~~	~~13.0~~	~~mg/kg~~	~~50.00~~	~~5.0~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001286	B1C769	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.159	mg/kg	0.93	0.093	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		7.26	mg/kg	0.93	3.7	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		10.9	mg/kg	0.93	0.19	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412		0.901	mg/kg	0.93	0.093	05/10/05	04/28/05	04/28/05
~~W050001287~~	~~B1C771~~	~~GRP~~	~~TRENT~~	~~TS~~	~~Total solids~~	~~SOIL~~	~~LA-519-412~~		~~90.7~~	~~%~~	~~1.00~~	~~0.0~~	~~05/02/05~~	~~04/28/05~~	~~04/28/05~~
W050001287	B1C771	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411		9.57	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410		2.65	mg/kg	49.00	2.6	05/10/05	04/28/05	04/28/05
~~W050001287~~	~~B1C771~~	~~GRP~~	~~TRENT~~	~~14808-79-8~~	~~Sulfate~~	~~SOIL~~	~~LA-533-410~~	~~U~~	~~< 4.90~~	~~mg/kg~~	~~49.00~~	~~4.9~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001287	B1C771	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.246	mg/kg	0.95	0.095	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		6.07	mg/kg	0.95	3.8	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		8.18	mg/kg	0.95	0.19	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412		1.03	mg/kg	0.95	0.095	05/10/05	04/28/05	04/28/05
~~W050001288~~	~~B1C774~~	~~GRP~~	~~TRENT~~	~~TS~~	~~Total solids~~	~~SOIL~~	~~LA-519-412~~		~~94.4~~	~~%~~	~~1.00~~	~~0.0~~	~~05/03/05~~	~~04/28/05~~	~~04/28/05~~
W050001288	B1C774	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411		9.58	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	U	< 2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
~~W050001288~~	~~B1C774~~	~~GRP~~	~~TRENT~~	~~14808-79-8~~	~~Sulfate~~	~~SOIL~~	~~LA-533-410~~	~~B~~	~~16.7~~	~~mg/kg~~	~~50.00~~	~~5.0~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001288	B1C774	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.306	mg/kg	0.91	0.091	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		6.92	mg/kg	0.91	3.6	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		13.4	mg/kg	0.91	0.18	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412		1.01	mg/kg	0.91	0.091	05/10/05	04/28/05	04/28/05
~~W050001289~~	~~B1C775~~	~~GRP~~	~~TRENT~~	~~TS~~	~~Total solids~~	~~SOIL~~	~~LA-519-412~~		~~96.2~~	~~%~~	~~1.00~~	~~0.0~~	~~05/03/05~~	~~04/28/05~~	~~04/28/05~~
W050001289	B1C775	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411		9.70	pH	1.00	0.010	05/03/05	04/28/05	04/28/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

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

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

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

Report WGPP/ver. 1.1
Groundwater Remediation Program

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
~~W050001289~~	~~B1C775~~	~~GRP~~	~~TRENT~~	~~PO4-P~~	~~Phosphate (P) by IC~~	~~SOIL~~	~~LA-533-410~~	~~U~~	~~< 2.65~~	~~mg/kg~~	~~49.00~~	~~2.6~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
~~W050001289~~	~~B1C775~~	~~GRP~~	~~TRENT~~	~~14808-79-8~~	~~Sulfate~~	~~SOIL~~	~~LA-533-410~~	~~B~~	~~18.5~~	~~mg/kg~~	~~49.00~~	~~4.0~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001289	B1C775	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.167	mg/kg	0.93	0.093	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		6.45	mg/kg	0.93	3.7	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		7.45	mg/kg	0.93	0.19	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412		0.928	mg/kg	0.93	0.093	05/10/05	04/28/05	04/28/05
~~W050001290~~	~~B1C776~~	~~GRP~~	~~TRENT~~	~~TS~~	~~Total solids~~	~~SOIL~~	~~LA-510-412~~		~~97.0~~	~~%~~	~~1.00~~	~~0.0~~	~~05/03/05~~	~~04/28/05~~	~~04/28/05~~
W050001290	B1C776	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411		9.69	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	U	< 2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
~~W050001290~~	~~B1C776~~	~~GRP~~	~~TRENT~~	~~14808-79-8~~	~~Sulfate~~	~~SOIL~~	~~LA-533-410~~	~~B~~	~~7.32~~	~~mg/kg~~	~~50.00~~	~~5.0~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001290	B1C776	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.141	mg/kg	0.89	0.089	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		4.22	mg/kg	0.89	3.6	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		3.02	mg/kg	0.89	0.18	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412		0.544	mg/kg	0.89	0.089	05/10/05	04/28/05	04/28/05
~~W050001291~~	~~B1C777~~	~~GRP~~	~~TRENT~~	~~TS~~	~~Total solids~~	~~SOIL~~	~~LA-510-412~~		~~98.0~~	~~%~~	~~1.00~~	~~0.0~~	~~05/03/05~~	~~04/28/05~~	~~04/28/05~~
W050001291	B1C777	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411		9.44	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	U	< 2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
~~W050001291~~	~~B1C777~~	~~GRP~~	~~TRENT~~	~~14808-79-8~~	~~Sulfate~~	~~SOIL~~	~~LA-533-410~~	~~B~~	~~35.0~~	~~mg/kg~~	~~50.00~~	~~5.0~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001291	B1C777	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	U	< 0.0993	mg/kg	0.99	0.099	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412	U	< 3.97	mg/kg	0.99	4.0	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		3.11	mg/kg	0.99	0.20	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412		0.459	mg/kg	0.99	0.099	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	**WSCF20050940**
Sample Matrix	**Soil**
Sample Visual	**N/A**
SAF Number	**F04-015**
Data Deliverable	**Summary Report**

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) 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 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.

- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.

- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.

- Sulfate – The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals – The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids – Analyzed for organic results correction.

pH – All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Urananium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)

[illegible] Number	[illegible]	[illegible]	[illegible]	[illegible]
Uranium-234/ Uranium-235				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
Plutonium-238				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
[illegible] Number	[illegible] Sample [illegible]	[illegible]	Results [illegible]	[illegible]
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americiam-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample [illegible]	[illegible]	Tracer Recovery (Percent)
Americium-243			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
Plutonium-242			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
[illegible]	[illegible]	[illegible]	[illegible] Percent
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
Strontium-85			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
Uranium-232			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample	[illegible]	[illegible]
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

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.

Pauline D. Mix
WSCF Client Services

Abbreviations
Hg – mercury
IC – ion chromatography
ICP – inductively coupled plasma
ICP/AES – ICP/atomic emission spectroscopy
ICP/MS – ICP/mass spectrometry
Total U – total uranium
AT/TB – total alpha/total beta
AEA – Alpha Energy Analysis
WTPH-G – Total Hydrocarbons-Gasoline
Am – americium
Cm - curium
Pu – plutonium
Np – neptunium
GEA – gamma energy analysis
H3 – Tritium
Sr – Strontium 89, 90
WTPH-D – Total Hydrocarbons-Diesel
TSS – Total Suspended Solids

5/30/05

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-124	PAGE 1 OF 2

COLLECTOR: Pope/Pfister/Tyre/Wiberg	COMPANY CONTACT: CS Cearlock	TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ
SAMPLING LOCATION: 216-T-13; 10-11 ft	PROJECT DESIGNATION: 200-HW-1 Characterization Sampling and Analysis - Soil		SAF NO.: F04-015
ICE CHEST NO.	FIELD LOGBOOK NO.	COA: 119144ES10	METHOD OF SHIPMENT: Government Vehicle
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

PRICE CODE: 8N
AIR QUALITY: ☐
DATA TURNAROUND: 45 Days / ~~45 Days~~ 4-26-05

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

20050940

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGa*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCN - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C769 W05000286	SOIL	4/28/5	0930										

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: TSAPE/ [signature] 4-28-05	DATE/TIME: 14:45	RECEIVED BY/STORED IN: TA FRAZIER [signature] 4-28-05	DATE/TIME: 14:45
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-124	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~ trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-125	PAGE 1 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐ 45 Days / ~~45 Days~~ 4-28-05
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aG*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C771	SOIL	4/28/05	0930										

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM JSPAR/ [signature] 4-28-05	DATE/TIME 14:45	RECEIVED BY/STORED IN TA FRAZIER [signature] 4/28/05 14:45	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-125	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

PMG 2/14/05

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-137	PAGE 1 OF 2
COLLECTOR Pope/Pfisbar/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN AIR QUALITY ☐
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	DATA TURNAROUND 45 Days / ~~45 Days~~ 4-28-05
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C780

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C774	SOIL	4-27-05	0955	X	X	X	X	X	X				

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM J Pope / [illegible] 4-28-05	DATE/TIME 1445	RECEIVED BY/STORED IN Victor Baus	DATE/TIME 4/28/05 14:45
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-137	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen-in-Nitrate, Nitrogen-in-Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F04-015-138 | PAGE 1 OF 2

COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock	TELEPHONE NO.: 372-9638
PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N	DATA TURNAROUND: 45 Days / ~~45 Days~~ 4-26-05
SAMPLING LOCATION: 216-T-13; 14-15 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO.: F04-015
AIR QUALITY: ☐	ICE CHEST NO.	FIELD LOGBOOK NO.
CDA: 119144E510	METHOD OF SHIPMENT: Government Vehicle	SHIPPED TO: Waste Sampling & Characterization
OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C781

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aG*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C775	SOIL	4-28-05	1015	X	X	X	X	X	X				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	4-28-05 1445	Victor Bines	4/28/05 1445
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-138	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 218-T-13; 14-15 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene, trans-1,2-Dichloroethylene~~}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

000028

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-139	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock	TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N
SAMPLING LOCATION: 216-T-13; 19-20 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO.: F04-015	AIR QUALITY: ☐
ICE CHEST NO.	FIELD LOGBOOK NO.	COA: 119144ES10	METHOD OF SHIPMENT: Government Vehicle	DATA TURNAROUND: 45 Days / ~~45 Days~~ 4-28-05
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C782

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C776	SOIL	4-28-05	1300	X	X	X	X	X	X				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPope/ [signature] 4-28-05	1445	Victor Bailey [signature] 4/28/05	1445
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000029

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-139	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Dearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N AIR QUALITY ☐	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 19-20 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015		
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene, trans~~-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F04-015-140 PAGE 1 OF 2

COLLECTOR
Pope/Pfister/Tyra/Wiberg

SAMPLING LOCATION
216-T-13; 24-25 ft

ICE CHEST NO.

COMPANY CONTACT
CS Cearlock

TELEPHONE NO.
372-9638

PROJECT DESIGNATION
200-MW-1 Characterization Sampling and Analysis - Soil

FIELD LOGBOOK NO.
COA
119144ES10

PROJECT COORDINATOR
TRENT, SJ

SAF NO.
F04-015

METHOD OF SHIPMENT
Government Vehicle

PRICE CODE SN

AIR QUALITY ☐

DATA TURNAROUND
45 Days / ~~45 Days~~

SHIPPED TO
Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C783

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None						
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P						
NO. OF CONTAINER(S)	1	1	1	3	1	1						
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL						
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS						

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C777	SOIL	4-28-05	1330	X	X	X	X	X	X				

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Pope	4-28-05 1445	Victor Bins	4/28/05 1445

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000031

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-140	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 24-25 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.

(1)IC Anions - 300.0 (~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate) ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, ~~Copper, Silver~~) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~; trans-1,2-Dichloroethylene)
(4)Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Appendix 5

Data Validation Supporting Documentation

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 200-MW-1			DATA PACKAGE: S0940		
VALIDATOR: TLT		LAB: WSCF		DATE: 6/18/05	
			SDG: 50940		

ANALYSES PERFORMED					
SW-846/ICP	SW-846/GFAA	SW-846/Hg	SW-846 Cyanide	200.8	

SAMPLES/MATRIX				
B1C769	B1C771	B1C774	~~B1C775~~ UL	B1C775
B1C776	B1C777			
				Soil

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? ..... Yes (No) N/A

Comments:

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: no FB

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: no PAS

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: _____

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:

INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

9. RESULT QUANTITATION AND DETECTION LIMITS (all levels)

Results reported for all requested analyses? ..... Yes No N/A

Rresults 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: CR - 777 over

Appendix 6

Additional Documentation Requested by Client

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Cadmium	7440-43-9	186.3407	93.170	% Recov	05/10/05	70.000	130.000	
MS	Chromium	7440-47-3	181.037	90.519	% Recov	05/10/05	70.000	130.000	
MS	Lead	7439-92-1	195.29	97.645	% Recov	05/10/05	70.000	130.000	
MS	Uranium	7440-61-1	196.099	98.049	% Recov	05/10/05	70.000	130.000	
MSD	Cadmium	7440-43-9	198.2407	99.120	% Recov	05/10/05	70.000	130.000	
MSD	Chromium	7440-47-3	187.437	93.719	% Recov	05/10/05	70.000	130.000	
MSD	Lead	7439-92-1	202.59	101.295	% Recov	05/10/05	70.000	130.000	
MSD	Uranium	7440-61-1	202.799	101.400	% Recov	05/10/05	70.000	130.000	
SPK-RPD	Cadmium	7440-43-9	99.120	6.189	RPD	05/10/05	0.000	20.000	
SPK-RPD	Chromium	7440-47-3	93.719	3.474	RPD	05/10/05	0.000	20.000	
SPK-RPD	Lead	7439-92-1	101.295	3.669	RPD	05/10/05	0.000	20.000	
SPK-RPD	Uranium	7440-61-1	101.400	3.360	RPD	05/10/05	0.000	20.000	
BATCH QC									
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L	05/10/05			U
BLANK	Chromium	7440-47-3	<4	n/a	ug/L	05/10/05			U
BLANK	Lead	7439-92-1	<0.2	n/a	ug/L	05/10/05			U
BLANK	Uranium	7440-61-1	<0.1	n/a	ug/L	05/10/05			U
LCS	Cadmium	7440-43-9	139.9	109.297	% Recov	05/10/05	88.000	127.000	
LCS	Chromium	7440-47-3	72.59	104.446	% Recov	05/10/05	50.000	126.000	
LCS	Lead	7439-92-1	153.9	108.380	% Recov	05/10/05	87.000	120.000	
LCS	Uranium	7440-61-1	406.7	101.675	% Recov	05/10/05	89.000	107.000	

Date: 21 June 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: 200-MW-1 Characterization Sampling and Analysis - Soil
Subject: Radiochemistry - Data Package No. WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	See note 1
B1C771	4/28/05	Soil	C	See note 1
B1C774	4/28/05	Soil	C	See note 1
B1C775	4/28/05	Soil	C	See note 1
B1C776	4/28/05	Soil	C	See note 1
B1C777	4/28/05	Soil	C	See note 1

1 - Strontium-90, gamma spectroscopy and alpha spectroscopy.

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. 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. Qualified Data Summary and 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**

Holding times are calculated from Chain-of-Custody forms to determine the validity of the results. The maximum holding time for radiochemical analysis is 6 months.

All holding times were acceptable.

- **Laboratory (Method) Blanks**

Laboratory Blanks

Blank samples are analyzed to determine if positive results are due to laboratory reagent, sample container, or detector contamination. If blank analysis results indicate the presence of an analyte above the required detection limit (RDL), the following qualifiers are applied: All positive sample results less than five times the highest blank concentration are qualified as estimates and flagged "J"; sample results below the minimum detectable activity (MDA) are qualified as undetected and flagged "U"; sample results above the MDA and greater than five times the highest blank concentration are not qualified.

Due to method blank contamination, all uranium-235 results were qualified as estimates and flagged "J".

All other laboratory blank results were acceptable.

Field Blanks

No field blanks were submitted for analysis.

- **Accuracy**

Accuracy is evaluated by analyzing distilled water or field samples spiked with known amounts of radionuclides. The sample activity as determined by analysis is compared to the known activity to assess accuracy. The acceptable laboratory control sample (LCS) and matrix spike (MS) recovery range is either 65-135% or 70-130%, depending on the analyte. In addition, samples may be spiked with a radiochemical tracer to assist in isolating the radioisotope of interest with the yield of the tracer being used in calculating sample activity. The acceptable range for tracer recovery is 20% to 105%. Spike sample results outside the above ranges result in associated sample results being qualified as estimates, rejected, or not qualified, depending on the activity of the individual sample.

Due to the lack of an LCS analysis, all plutonium-238, uranium-233/234 and uranium-235 results were qualified as estimates and flagged "J".

All other accuracy results were acceptable.

- **Precision**

Analytical precision is expressed by the relative percent difference (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample. Precision may also be assessed using unspiked duplicate sample analyses. If both sample and replicate activities are greater than five times the contract required detection limit (CRDL) and the RPD is less than +/- 35 percent, the results are acceptable. If either activities are less then five times the CRDL, a control limit of less than or equal to two times the CRDL is used for soil samples and less than or equal to the CRDL for water samples. If either the original or replicate value is below the CRDL, the applicable control limits are less than or equal to the CRDL for water samples and less than or equal to two times the CRDL for soil samples. If the RPD is outside the applicable control limit, associated results are qualified as estimated detects or estimated non-detects.

All duplicate results were acceptable.

Field Duplicate Samples

No field duplicates were submitted for analysis.

- **Detection Levels**

Reported analytical detection levels are compared against the required target quanitation limits (RTQLs) to ensure that laboratory detection levels meet the required criteria. All reported laboratory detection levels met the analyte specific RTQL.

- **Completeness**

Data package SDG No. 50940 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

Due to method blank contamination, all uranium-235 results were qualified as estimates and flagged "J". Due to the lack of an LCS analysis, all plutonium-238, uranium-233/234 and uranium-235 results were qualified as estimates and flagged "J". Data flagged "J" is an estimate, but under the FHI validation SOW, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work,* Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

Appendix 1

Glossary of Data Reporting Qualifiers

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

U - Indicates the compound or analyte was analyzed for and not detected above the minimum detectable activity (MDA) in the sample. The value reported is the sample result corrected for sample dilution and moisture content by the laboratory. The data is usable for decision making purposes.

UJ - Indicates the compound or analyte was analyzed for and not detected at concentrations above the minimum detectable activity (MDA) in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate, but is usable for decision making purposes.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated concentration is an estimate, but the data are usable for decision-making purposes.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

Appendix 2

Summary of Data Qualification

RADIOCHEMISTRYCHEMISTRY DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE 1 OF 1
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Uranium-235	J	All	Blank contamination
Uranium-233/234 Uranium-235 Plutonium-238	J	All	No LCS analysis

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

RADIOCHEMISTRY ANALYSIS, SOIL MATRIX, (PCi/G)

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case	SDG: WSCF20050940												
Sample Number		B1C769		B1C771		B1C774		B1C775		B1C776		B1C777	
Remarks													
Sample Date		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05	
Radiochemistry	RTQL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Americium-241	1	0.0170	U	0.0330	U	0.00940	U	0.0120	U	0.0330	U	0.00330	U
Cobalt-60	0.05	-0.00670	U	-0.00297	U	0.000685	U	-0.00955	U	0.00284	U	-0.00181	U
Cesium-137	0.1	0.611		0.548		0.310		0.221		0.00308	U	0.0121	
Europium 152	0.1	0.00630	U	0.0182	U	-0.000565	U	0.0367	U	-0.0137	U	0.00251	U
Europium 154	0.1	0.0135	U	-0.0259	U	-0.0216	U	-0.0358	U	-0.00635	U	0.00158	U
Europium 155	0.1	-0.00948	U	0.0868		0.0113	U	0.0507	U	0.00232	U	0.0125	U
Plutonium-238	1	-0.0120	UJ	0.0170	UJ	-0.00890	UJ	0.00490	UJ	0.0150	UJ	0.0180	UJ
Plutonium-239/240	1	0.0220		0.0280		0.0550		0.00820	U	-0.00560	U	0.0130	
Strontium-89/90	1	0.520		0.330		-0.100	U	0.0320	U	1.10		0.300	U
Uranium-233/234	1	0.310	J	0.230	J	0.270	J	0.260	J	0.180	J	0.110	J
Uranium-235	1	0.0270	J	0.0230	J	0.0300	J	0.0150	J	0.00960	J	0.0200	J
Uranium-238	1	0.320		0.320		0.320		0.300		0.160		0.150	

000010

* - TDL exceeded

Laboratory applied non-detect qualifiers "U" have been included in this table to minimize potential miss-interpretation of results. All other qualifiers shown were applied during validation.

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Radiochemistry															
W050001286	B1C769	GRP	TRENT	14596-10-2	Americium-241	SOIL	LA-508-471	U	0.0170	pCi/g	1.00	0.041	05/11/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.026	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U	-6.70e-03	pCi/g	1.00	0.014	05/02/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 8.4e-03	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481		0.611	pCi/g	1.00	0.014	05/02/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.10	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	14683-23-9	Europium-152	SOIL	LA-508-481	U	6.30e-03	pCi/g	1.00	0.043	05/02/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.030	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	15585-10-1	Europium-154	SOIL	LA-508-481	U	0.0135	pCi/g	1.00	0.044	05/02/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.030	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	14391-16-3	Europium-155	SOIL	LA-508-481	U	-9.48e-03	pCi/g	1.00	0.059	05/02/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.036	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471	U J	-0.0120	pCi/g	1.00	0.055	05/11/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.030	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471		0.0220	pCi/g	1.00	0.016	05/11/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+- 0.015	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415		0.520	pCi/g	1.00	0.30	05/11/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+- 0.47	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471	J	0.310	pCi/g	1.00	0.016	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+- 0.093	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	15117-96-1	Uranium-235	SOIL	LA-508-471	J	0.0270	pCi/g	1.00	5.2e-03	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.016	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.320	pCi/g	1.00	4.8e-03	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.093	pCi/g	1.00	0.10	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	14596-10-2	Americium-241	SOIL	LA-508-471	U	0.0330	pCi/g	1.00	0.037	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.026	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05

MDL = Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier

6/20/05

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001287	B1C771	GRP	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U	-2.97e-03	pCi/g	1.00	0.015	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 9.0e-03	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481		0.548	pCi/g	1.00	0.015	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.092	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	14683-23-9	Europium-152	SOIL	LA-508-481	U	0.0182	pCi/g	1.00	0.041	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.041	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	15585-10-1	Europium-154	SOIL	LA-508-481	U	-0.0259	pCi/g	1.00	0.047	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.029	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	14391-16-3	Europium-155	SOIL	LA-508-481		0.0868	pCi/g	1.00	0.055	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.048	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471	U J	0.0170	pCi/g	1.00	0.040	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.024	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471		0.0280	pCi/g	1.00	4.7e-03	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+- 0.016	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415		0.330	pCi/g	1.00	0.30	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+- 0.43	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471	J	0.230	pCi/g	1.00	0.013	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+- 0.071	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	15117-96-1	Uranium-235	SOIL	LA-508-471	J	0.0230	pCi/g	1.00	5.1e-03	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.014	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.320	pCi/g	1.00	0.013	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.093	pCi/g	1.00	0.10	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	14596-10-2	Americium-241	SOIL	LA-508-471	U	9.40e-03	pCi/g	1.00	0.049	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.028	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U	6.85e-04	pCi/g	1.00	0.010	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 6.1e-03	pCi/g	1.00	0.0	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481		0.310	pCi/g	1.00	0.012	05/05/05	04/28/05	04/28/05

MDL = Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier

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

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001288	B1C774	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.056	pCi/g	1.00	0.0	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	14683-23-9	Europium-152	SOIL	LA-508-481	U	-5.65e-04	pCi/g	1.00	0.037	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 5.6e-03	pCi/g	1.00	0.0	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	15585-10-1	Europium-154	SOIL	LA-508-481	U	-0.0216	pCi/g	1.00	0.034	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.022	pCi/g	1.00	0.0	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	14391-16-3	Europium-155	SOIL	LA-508-481	U	0.0113	pCi/g	1.00	0.063	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.037	pCi/g	1.00	0.0	05/05/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471	U J	-8.90e-03	pCi/g	1.00	0.045	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.023	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471		0.0550	pCi/g	1.00	4.8e-03	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+- 0.024	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	U	-0.100	pCi/g	1.00	0.30	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+- 0.41	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471	J	0.270	pCi/g	1.00	0.018	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+- 0.081	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	15117-96-1	Uranium-235	SOIL	LA-508-471	J	0.0300	pCi/g	1.00	5.0e-03	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.017	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.320	pCi/g	1.00	4.6e-03	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.093	pCi/g	1.00	0.10	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	14596-10-2	Americium-241	SOIL	LA-508-471	U	0.0120	pCi/g	1.00	0.053	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.030	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U	-9.55e-03	pCi/g	1.00	0.016	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 8.7e-03	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481		0.221	pCi/g	1.00	0.020	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.039	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	14683-23-9	Europium-152	SOIL	LA-508-481	U	0.0367	pCi/g	1.00	0.049	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.041	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05

MDL = Minimum Detection Limit B - The analyte < the RDL but >= the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier

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

Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C775	GRP	TRENT	15585-10-1	Europium-154	SOIL	LA-508-481	U	-0.0358	pCi/g	1.00	0.050	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.036	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	14391-16-3	Europium-155	SOIL	LA-508-481	U	0.0507	pCi/g	1.00	0.058	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.038	pCi/g	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471	U J	4.90e-03	pCi/g	1.00	0.055	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.031	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471	U	8.20e-03	pCi/g	1.00	0.015	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+- 9.8e-03	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	U	0.0320	pCi/g	1.00	0.30	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+- 0.32	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471	J	0.260	pCi/g	1.00	0.019	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+- 0.078	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	15117-96-1	Uranium-235	SOIL	LA-508-471	J	0.0150	pCi/g	1.00	0.014	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.012	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.300	pCi/g	1.00	4.7e-03	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.090	pCi/g	1.00	0.10	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	14596-10-2	Americium-241	SOIL	LA-508-471	U	0.0330	pCi/g	1.00	0.045	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.030	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U	2.84e-03	pCi/g	1.00	7.5e-03	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 4.2e-03	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481	U	3.08e-03	pCi/g	1.00	8.4e-03	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 5.5e-03	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	14683-23-9	Europium-152	SOIL	LA-508-481	U	-0.0137	pCi/g	1.00	0.023	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.015	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	15585-10-1	Europium-154	SOIL	LA-508-481	U	-8.35e-03	pCi/g	1.00	0.023	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.015	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	14391-16-3	Europium-155	SOIL	LA-508-481	U	2.32e-03	pCi/g	1.00	0.035	05/04/05	04/28/05	04/28/05

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RQ=Result Qualifier

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

pr 6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C776	GRP	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.021	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471	U J	0.0150	pCi/g	1.00	0.052	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.030	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471	U	-5.60e-03	pCi/g	1.00	0.026	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+- 0.011	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415		1.10	pCi/g	1.00	0.30	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+- 0.50	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471	J	0.180	pCi/g	1.00	0.013	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+- 0.058	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	15117-96-1	Uranium-235	SOIL	LA-508-471	J	9.60e-03	pCi/g	1.00	5.2e-03	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+- 8.9e-03	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.160	pCi/g	1.00	0.013	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.053	pCi/g	1.00	0.10	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	14596-10-2	Americium-241	SOIL	LA-508-471	U	3.30e-03	pCi/g	1.00	0.046	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.026	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U	-1.81e-03	pCi/g	1.00	8.2e-03	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 4.8e-03	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481		0.0121	pCi/g	1.00	8.3e-03	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 7.2e-03	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	14683-23-9	Europium-152	SOIL	LA-508-481	U	2.51e-03	pCi/g	1.00	0.027	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.018	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	15585-10-1	Europium-154	SOIL	LA-508-481	U	1.58e-03	pCi/g	1.00	0.027	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.015	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	14391-16-3	Europium-155	SOIL	LA-508-481	U	0.0125	pCi/g	1.00	0.038	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.023	pCi/g	1.00	0.0	05/04/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471	U J	0.0180	pCi/g	1.00	0.067	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.034	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05

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RQ=Result Qualifier

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

PR 6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001291	B1C777	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471			0.0130	pCi/g	1.00	4.9e-03	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+-	0.010	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	U		0.300	pCi/g	1.00	0.30	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+-	0.39	pCi/g	1.00	0.0	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471	J		0.110	pCi/g	1.00	0.022	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+-	0.041	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	15117-96-1	Uranium-235	SOIL	LA-508-471	J		0.0200	pCi/g	1.00	5.3e-03	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+-	0.014	pCi/g	1.00	0.0	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	U-238	Uranium-238	SOIL	LA-508-471			0.150	pCi/g	1.00	4.9e-03	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+-	0.051	pCi/g	1.00	0.10	05/10/05	04/28/05	04/28/05

K 6/20/05

MDL=Minimum Detection Limit B - The analyte < the RDL but >= the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	**WSCF20050940**
Sample Matrix	**Soil**
Sample Visual	**N/A**
SAF Number	**F04-015**
Data Deliverable	**Summary Report**

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) 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 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.

- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.

- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.

- Sulfate – The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals – The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids – Analyzed for organic results correction.

pH – All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Urananium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)				
[illegible] Number	[illegible]	[illegible]	[illegible] (pCi/gram)	[illegible]
Uranium-234/ Uranium-235				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
Plutonium-238				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americiam-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
[illegible]	[illegible]	[illegible]	[illegible]
Americium-243			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
Plutonium-242			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
[illegible]	[illegible]	[illegible]	[illegible] (Percent)
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
Strontium-85			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
Uranium-232			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample	[illegible]	Tracer Percent Recovery
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

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.

Pauline D. Mix
WSCF Client Services

Abbreviations

Hg – mercury
IC – ion chromatography
ICP – inductively coupled plasma
ICP/AES – ICP/atomic emission spectroscopy
ICP/MS – ICP/mass spectrometry
Total U – total uranium
AT/TB – total alpha/total beta
AEA – Alpha Energy Analysis
WTPH-G – Total Hydrocarbons-Gasoline
Am – americium
Cm - curium
Pu – plutonium
Np – neptunium
GEA – gamma energy analysis
H3 – Tritium
Sr – Strontium 89, 90
WTPH-D – Total Hydrocarbons-Diesel
TSS – Total Suspended Solids

5/30/05

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-124	PAGE 1 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐ 45 Days / ~~45 Days~~ 15 4-28-05
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

20050940

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C769 W05000286	SOIL	4/28/5	0930	✓	✓	✓	✓	✓	✓				

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM TSRAE/ [illegible] 4-28-05	DATE/TIME 14:45	RECEIVED BY/STORED IN TA FRAZIER [illegible] 4-28-05	DATE/TIME 14:45
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000025

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-124	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen-in-Nitrate, Nitrogen-in-Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;

(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}

(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}

(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}

(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-125	PAGE 1 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐ 45 Days / ~~45 Days~~
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C771	SOIL	4/28/05	0930										

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSMPd/ [signature] 4-28-05	14:45	TA FRAZIER [signature]	4/28/05 14:45
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-125	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N AIR QUALITY ☐	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015		
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

PMG 2/14/05

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.
(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-137	PAGE 1 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐ 45 Days / ~~45 Days~~ 14 4-26-05
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C780

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C774	SOIL	4-26-05	0955	X	X	X	X	X	X				

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM J Stofel / A Stofel 4-26-05	DATE/TIME 1445	RECEIVED BY/STORED IN Victor Burns	DATE/TIME 4/28/05 14:45
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-137	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Ceartock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE SN AIR QUALITY ☐	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015		
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen-In-Nitrate, Nitrogen-In-Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;

(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}

(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}

(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}

(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

000030

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-138	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock — TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N — DATA TURNAROUND: 45 Days / ~~15 Days~~ 4-26-05
SAMPLING LOCATION: 216-T-13; 14-15 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO.: F04-015	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO. — CDA: 119144ES10	METHOD OF SHIPMENT: Government Vehicle	
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C781

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C775	SOIL	4-28-05	1015	X	X	X	X	X	X				

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	4-28-05 1145	[signature]	4/28/05 1145
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-138	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 14-15 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05
(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-139	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock; TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N; DATA TURNAROUND: 45 Days / ~~45 Days~~ 4-26-05
SAMPLING LOCATION: 216-T-13; 19-20 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO.: F04-015	AIR QUALITY: ☐
ICE CHEST NO.	FIELD LOGBOOK NO.; COA: 119144ES10	METHOD OF SHIPMENT: Government Vehicle	
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C782

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C776	SOIL	4-28-05	1300	X	X	X	X	X	X				

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: JSPope/ 4-28-05	DATE/TIME: 1445	RECEIVED BY/STORED IN: Victor Bins	DATE/TIME: 4/28/05 1445
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			P04-015-138	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 19-20 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} {~~Total Cyanide - 9010~~; pH (Soil) - 9045;

(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}

(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}

(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}

(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-140	PAGE 1 OF 2

COLLECTOR Pope/Pfister/Tyra/Wiberg	**COMPANY CONTACT** CS Cearlock	**TELEPHONE NO.** 372-9638	**PROJECT COORDINATOR** TRENT, SJ
SAMPLING LOCATION 216-T-13; 24-25 ft	**PROJECT DESIGNATION** 200-MW-1 Characterization Sampling and Analysis - Soil		**SAF NO.** F04-015
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA** 119144ES10	**METHOD OF SHIPMENT** Government Vehicle
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 8N **AIR QUALITY** ☐ **DATA TURNAROUND** 45 Days / ~~45 Days~~

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

POSSIBLE SAMPLE HAZARDS/ REMARKS N/A

SPECIAL HANDLING AND/OR STORAGE Radioactive Tie To: B1C783

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P
NO. OF CONTAINER(S)	1	1	1	3	1	1
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1C777	SOIL	4-28-05	1330	X	X	X	X	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JPope	4-28-05 1445	Victor Bins	4/28/05 1445

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-140	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13: 24-25 ft	PROJECT DESIGNATION 200-NW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.
(1)IC Anions - 300.0 (Fluoride, ~~Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate) ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, ~~Copper, Silver~~) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene)
(4)Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

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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-MW-1			DATA PACKAGE: S0940		
VALIDATOR: TLT		LAB: WSCF		DATE: 6/18/05	
			SDG: S0940		
ANALYSES PERFORMED					
Gross Alpha/Beta	Strontium-90	Technetium-99	Alpha Spectroscopy	Gamma Spectroscopy	
Total Uranium	Radium-22	Tritium			
SAMPLES/MATRIX					
B1C769	B1C771	B1C774	B1C775		
B1C776	B1C777				
					Soil

1. Completeness ..... ☐ N/A

Technical verification forms present? ..... Yes No N/A

Comments: _____

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: U-235 — ~~KO~~ J all MB

No FB

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: no pu-238, u233/234 or u235 LCS — J all

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: _____

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: _____

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: _____

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:

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: No Field QC

12. Holding Times (All levels)

Are sample holding times acceptable? ..... Yes No N/A

Comments:

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:

Appendix 6

Additional Documentation Requested by Client

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: Gamma Energy Analysis-grd H2O

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001285									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Cobalt-60	10198-40-0	U2.29e-3	n/a	RPD	05/03/05	0.000	20.000	
DUP	Cesium-137	10045-97-3	1.20e+00	0.830	RPD	05/03/05	0.000	20.000	
DUP	Europium-152	14683-23-9	U8.36e-3	n/a	RPD	05/03/05	0.000	20.000	
DUP	Europium-154	15585-10-1	U-1.0e-2	n/a	RPD	05/03/05	0.000	20.000	
DUP	Europium-155	14391-16-3	6.34e-02	n/a	RPD	05/03/05	0.000	20.000	
BATCH QC									
BLANK	Cobalt-60	10198-40-0	U-9.8e-4	n/a	pCi/g	05/03/05	-10.000	1000.000	
BLANK	Cesium-137	10045-97-3	U-1.5e-3	n/a	pCi/g	05/03/05	-10.000	1000.000	
BLANK	Europium-152	14683-23-9	U-2.0e-2	n/a	pCi/g	05/03/05	-10.000	1000.000	
BLANK	Europium-154	15585-10-1	U-4.7e-3	n/a	pCi/g	05/03/05	-10.000	1000.000	
BLANK	Europium-155	14391-16-3	U-1.8e-3	n/a	pCi/g	05/03/05	-10.000	1000.000	
LCS	Cobalt-60	10198-40-0	4.41e+03	105.251	% Recov	05/03/05	80.000	120.000	
LCS	Cesium-137	10045-97-3	3.94e+03	110.056	% Recov	05/03/05	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: Americium by AEA

SAF Number: F04-015
Sample Date: 04/27/05
Receive Date:04/27/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001268									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Americium-241	14596-10-2	U1.7e-02	n/a	RPD	05/11/05	0.000	20.000	
BATCH QC									
BLANK	Americium-241	14596-10-2	U2.3e-02	n/a	pCi/g	05/11/05	-10.000	1000.000	
LCS	Americium-241	14596-10-2	4.6e+01	95.634	% Recov	05/11/05	75.000	125.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: Strontium 89/90

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001285									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Strontium-89/90	SR-RAD	1.1	34.043	RPD	05/11/05	0.000	20.000	*
BATCH QC									
BLANK	Strontium-89/90	10098-97-2	2.5E-02	0.025	pCi/g	05/11/05	-10.000	300.000	
LCS	Strontium-89/90	10098-97-2	70.7	99.437	% Recov	05/11/05	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: Plutonium Isotopics by AEA

SAF Number: F04-015
Sample Date: 04/27/05
Receive Date:04/27/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001268									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Plutonium-238	13981-16-3	U9.4e-03	n/a	RPD	05/11/05	0.000	20.000	
DUP	Pu-239/240 by AEA	PU-239/240	U1.3e-02	n/a	RPD	05/11/05	0.000	20.000	
BATCH QC									
BLANK	Plutonium-238	13981-16-3	U-2.4e-2	n/a	PCT	05/11/05	0.000	1000.000	
BLANK	Pu-239/240 by AEA	PU-239/240	U9.1e-03	n/a	pCi/g	05/11/05	-10.000	1000.000	
LCS	Pu-239/240 by AEA	PU-239/240	6.1e+01	103.659	% Recov	05/11/05	75.000	125.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: Uranium Isotopics by AEA

SAF Number: F04-015
Sample Date: 04/27/05
Receive Date:04/27/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001268									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Uranium-233/234	U-233/234	3.2e-01	0.000	RPD	05/10/05	0.000	20.000	
DUP	U-233/234 AEA Total Cntg Error	E,T,C	29.9	1.031	RPD	05/10/05	0.000	1000.000	
DUP	Uranium-235	15117-96-1	3.4e-02	22.951	RPD	05/10/05	0.000	20.000	
DUP	U-235 by AEA Total Cntg Error	E,T,C	58.8	0.948	RPD	05/10/05	0.000	1000.000	
DUP	Uranium-238	U-238	2.6e-01	17.544	RPD	05/10/05	0.000	20.000	
DUP	U-238 by AEA Total Cntg Error	E,T,C	30.8	1.027	RPD	05/10/05	0.000	1000.000	
BATCH QC									
BLANK	Uranium-238	24678-82-8	U8.1e-03	n/a	pCi/g	05/10/05	-10.000	1000.000	
LCS	Uranium-238	24678-82-8	9.2e+01	121.340	% Recov	05/10/05	75.000	125.000	

000049

Date: 21 June 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: 200-MW-1 Characterization Sampling and Analysis - Soil
Subject: Semivolatile - Data Package No.WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	See note 1
B1C771	4/28/05	Soil	C	See note 1
B1C774	4/28/05	Soil	C	See note 1
B1C775	4/28/05	Soil	C	See note 1
B1C776	4/28/05	Soil	C	See note 1
B1C777	4/28/05	Soil	C	See note 1

1 - Semivolatiles by 8270, TPH-D (diesel and kerosene) and gasoline range organics by 8015B.

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. 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. Qualified Data Summary and 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/Sample Preservation**

Analytical holding times were assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirement for semivolatile organics are extraction within 14 days of the date of sample collection and analysis within 40 days from the date of extraction. Method 8015B requires analysis within 14 days.

If holding times are exceeded, but not by greater than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detectable sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

All holding times were met.

- **Method Blanks**

Method blank analyses are conducted to determine the extent of laboratory contamination introduced through sampling, sample preparation and analysis. At least one acceptable method blank analysis must be conducted for every 20 samples. No contaminants should be present in the method blank. Analytical results for analytes present in any sample at less than five times the concentration of that analyte found in the associated blank are qualified as non-detects and flagged "U". Common laboratory contaminants present in samples at less than ten times the concentration of that analyte found in the associated blank are qualified as non-detects. If a sample result is less than the CRQL and is less than five times (or less than ten times for lab contaminants) the highest associated blank result, the sample result value is raised to the CRQL level and qualified as undetected "U".

All method blank results were acceptable.

<u>Field Blanks</u>

No field blanks were submitted for analysis.

- **Accuracy**

Matrix Spike/Matrix Spike Duplicate & Blank Spike

Matrix spike/matrix spike duplicate and blank spike sample analyses are used to assess the analytical accuracy of the reported data. Matrix spike/matrix duplicate results are used to assess the effect of the matrix on the ability to accurately quantify sample concentrations. Matrix spike/matrix spike duplicate analyses are performed in duplicate using five compounds for which percent recoveries must be within a range of 50-150% or within laboratory control limits. If spike recoveries are outside control limits, detected sample results less than five times the spike concentration are qualified as estimates and flagged "J". Undetected sample results with spike recoveries outside control limits are qualified as estimates and flagged "UJ". Sample results greater than five times the spike concentration require no qualification.

Due to an LCS recovery outside QC limits (62.6%), all phenol results were qualified as estimates and flagged "J".

Due to an LCS recovery outside QC limits (59.5%), all pentachlorophenol results were qualified as estimates and flagged "J".

All other matrix spike/matrix spike duplicate and blank spike results were acceptable.

Surrogate Recovery

The analyses of surrogate compounds provide a measure of performance for individual samples. Matrix-specific surrogate compound recovery control windows have been established by the EPA CLP program. If two surrogates of the same class of compounds (base/neutral or acid) are out of control limits, all associated sample results greater than the contract required quantitation limit (CRQL) are qualified as estimates and flagged "J". Sample results less than the CRQL and below the lower control limit are qualified as estimates and flagged "UJ". Sample results less than the CRQL with recoveries above the upper control limit require no qualification. If a surrogate recovery is less than 10%, detects are qualified as estimates and flagged "J" and nondetects are rejected and flagged "UR".

Due to a surrogate recovery outside QC limits (45.2%), the phenol result in sample B1C774 was qualified as an estimate and flagged "J".

All other surrogate results were acceptable.

- **Precision**

Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike (MS)/matrix spike duplicate (MSD) results provide matrix-specific information on the precision of the method for specific target compound classes. Precision is expressed by the relative percent difference (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample. Samples results must be within RPD limits of +/-35%. If RPD values are out of specification and the sample concentration is less than five times the spike concentration, all associated detected sample results are qualified as estimates and flagged "J". If RPD values are out of specification and the sample concentration is greater than five times the spike concentration, no qualification is required.

All MS/MSD RPD results were acceptable.

Field Duplicate Samples

No field duplicates were submitted for analysis.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the required target quantitation limits (RTQL's) to ensure that laboratory detection levels meet the required criteria. All analytes met the RTQL.

- **Completeness**

Data package No. 50940 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

Due to an LCS recovery outside QC limits (62.6%), all phenol results were qualified as estimates and flagged "J". Due to an LCS recovery outside QC limits (59.5%), all pentachlorophenol results were qualified as estimates and flagged "J". Due to a surrogate recovery outside QC limits (45.2%), the phenol result in sample B1C774 was qualified as an estimate and flagged "J". Data flagged "J" is an estimate, but under the FHI validation SOW, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work*, Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validators in compliance with the FHI validation SOW are as follows:

U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the same quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications usable for decision-making purposes).

Appendix 2

Summary of Data Qualification

SEMIVOLATILE DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE_1_OF_1_
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Phenol	J	B1C774	Surrogate recovery
Pentachlorophenol Phenol	J	All	LCS recovery

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

SEMIVOLATILE/8015B ANALYSIS, SOIL MATRIX, (UG/KG)

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case:	SDG: WSCF20050940												
Sample Number		B1C769		B1C771		B1C774		B1C775		B1C776		B1C777	
Remarks													
Sample Date		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05	
Analysis Date		5/10/05		5/10/05		5/10/05		5/10/05		5/10/05		5/10/05	
Semivolatile/8015B	RTQL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
4-Nitrophenol		<190	U	<190	U	<180	U	<180	U	<180	U	<180	U
1,4-Dichlorobenzene		<290	U	<290	U	<280	U	<280	U	<270	U	<270	U
Phenol		<150	UJ	<150	UJ	<150	UJ	<140	UJ	<140	UJ	<140	UJ
1,2,4-Trichlorobenzene		<200	U	<200	U	<190	U	<190	U	<190	U	<190	U
2,4-Dinitrotoluene		<120	U	<120	U	<110	U	<110	U	<110	U	<110	U
Pyrene		<170	U	<170	U	<160	U	<160	U	<160	U	<160	U
4-Chloro-3-methylphenol		<100	U	<100	U	<99.0	U	<97.0	U	<96.0	U	<96.0	U
N-Nitroso-di-n-propylamine		<160	U	<160	U	<160	U	<160	U	<150	U	<150	U
Acenaphthene		<150	U	<150	U	<150	U	<140	U	<140	U	<140	U
Pentachlorophenol		<160	UJ	<160	UJ	<150	UJ	<150	UJ	<150	UJ	<150	UJ
2-Chlorophenol		<170	U	<170	U	<160	U	<160	U	<160	U	<160	U
Tributylphosphate	3300	<150	U	<160	U	<150	U	<150	U	<150	U	<150	U
TPH-D	5000	<4100	U	<4100	U	<4000	U	<3900	U	<3900	U	<3900	U
Kerosene	5000	<4100	U	<4100	U	<4000	U	<3900	U	<3900	U	<3900	U
TPH-G (gasoline range organics)	5000	<250	U	<250	U	<250	U	<250	U	<250	U	<250	U

000011

Laboratory applied non-detect qualifiers "U" have been included in this table to minimize miss-interpretation of results. All other qualifiers shown were applied during validation.

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
Organic																
W050001286	B1C769	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	<	250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
~~W050001286~~	~~B1C769~~	~~GRP~~	~~TRENT~~	~~12674-11-2~~	~~Aroclor-1016~~	~~SOIL~~	~~LA-523-427~~	~~U~~	~~<~~	~~54.0~~	~~ug/kg~~	~~1.00~~	~~54~~	~~05/13/05~~	~~04/28/05~~	~~04/28/05~~
W050001286	B1C769	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	<	110	ug/kg	1.00	1.1e+02	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	<	54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
~~W050001286~~	~~B1C769~~	~~GRP~~	~~TRENT~~	~~11100-14-4~~	~~Aroclor-1268~~	~~SOIL~~	~~LA-523-427~~	~~U~~	~~<~~	~~54.0~~	~~ug/kg~~	~~1.00~~	~~54~~	~~05/13/05~~	~~04/28/05~~	~~04/28/05~~
W050001286	B1C769	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	<	190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	<	290	ug/kg	1.00	2.9e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U J	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	<	200	ug/kg	1.00	2.0e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	<	120	ug/kg	1.00	1.2e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	<	170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	<	100	ug/kg	1.00	1.0e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U J	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	<	170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
~~W050001286~~	~~B1C769~~	~~GRP~~	~~TRENT~~	~~75-35-4~~	~~1,1-Dichloroethene~~	~~SOIL~~	~~LA-523-455~~	~~U~~	~~<~~	~~2.20~~	~~ug/kg~~	~~1.00~~	~~2.2~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001286	B1C769	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05

MDL = Minimum Detection Limit B - The analyte < the RDL but >= the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier

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

Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001286	B1C769	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 44.0	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	06/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 110	ug/kg	1.00	1.1e+02	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 290	ug/kg	1.00	2.9e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U J	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 200	ug/kg	1.00	2.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 120	ug/kg	1.00	1.2e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U J	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

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

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

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

6/20/05

Report WGPP/ver. 1.1
Groundwater Remediation Program

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001287	B1C771	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	<	170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	<	2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but >= the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

DF=Dilution Factor

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Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001287	B1C771	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 44.0	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 280	ug/kg	1.00	2.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U J	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05

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Report WGPP/ver. 1.1
Groundwater Remediation Program

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001288	B1C774	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	<	110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	<	99.0	ug/kg	1.00	99	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U J	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

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RQ=Result Qualifier

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Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001288	B1C774	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.00e+03	ug/kg	1.00	4.0e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.00e+03	ug/kg	1.00	4.0e+03	05/12/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05

MDL = Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier

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

6/20/05

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
~~W050001289~~	~~B1C775~~	~~GRP~~	~~TRENT~~	~~37324-23-5~~	~~Aroclor-1262~~	~~SOIL~~	~~LA-523-427~~	~~U~~	~~<~~	~~51.0~~	~~ug/kg~~	~~1.00~~	~~51~~	~~05/13/05~~	~~04/28/05~~	~~04/28/05~~
~~W050001289~~	~~B1C775~~	~~GRP~~	~~TRENT~~	~~11100-14-4~~	~~Aroclor-1268~~	~~SOIL~~	~~LA-523-427~~	~~U~~	~~<~~	~~51.0~~	~~ug/kg~~	~~1.00~~	~~51~~	~~05/13/05~~	~~04/28/05~~	~~04/28/05~~
W050001289	B1C775	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	<	180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	<	280	ug/kg	1.00	2.8e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U J	<	140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	<	190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	<	110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	<	97.0	ug/kg	1.00	97	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	<	140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U J	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
~~W050001289~~	~~B1C775~~	~~GRP~~	~~TRENT~~	~~75-35-4~~	~~1,1-Dichloroethene~~	~~SOIL~~	~~LA-523-455~~	~~U~~	~~<~~	~~2.10~~	~~ug/kg~~	~~1.00~~	~~2.1~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001289	B1C775	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	10061-01-5	cis-1,3-Dichloroprdpene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but >= the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C775	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05

6/20/05

6/20/07

MDL = Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
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6/20/05

Report WGPP/ver. 1.1
Groundwater Remediation Program

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C776 GRP TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	108-95-2	Phenol	SOIL	LA-523-456	U J	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 96.0	ug/kg	1.00	96	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U J	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776 GRP TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL = Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier

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

Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
~~W050001290~~	~~B1C776~~	~~GRP~~	~~TRENT~~	~~156-60-5~~	~~trans-1,2-Dichloroethylene~~	~~SOIL~~	~~LA-523-455~~	~~U~~	~~< 2.10~~	~~ug/kg~~	~~1.00~~	~~2.1~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
~~W050001290~~	~~B1C776~~	~~GRP~~	~~TRENT~~	~~156-59-2~~	~~cis-1,2-Dichloroethylene~~	~~SOIL~~	~~LA-523-455~~	~~U~~	~~< 2.10~~	~~ug/kg~~	~~1.00~~	~~2.1~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001290	B1C776	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
~~W050001291~~	~~B1C777~~	~~GRP~~	~~TRENT~~	~~12674-11-2~~	~~Aroclor-1016~~	~~SOIL~~	~~LA-523-427~~	~~U~~	~~< 51.0~~	~~ug/kg~~	~~1.00~~	~~51~~	~~05/13/05~~	~~04/28/05~~	~~04/28/05~~
W050001291	B1C777	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
~~W050001291~~	~~B1C777~~	~~GRP~~	~~TRENT~~	~~11100-14-4~~	~~Aroclor-1268~~	~~SOIL~~	~~LA-523-427~~	~~U~~	~~< 51.0~~	~~ug/kg~~	~~1.00~~	~~51~~	~~05/13/05~~	~~04/28/05~~	~~04/28/05~~
W050001291	B1C777	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U J	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 96.0	ug/kg	1.00	96	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U J	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
~~W050001291~~	~~B1C777~~	~~GRP~~	~~TRENT~~	~~75-35-4~~	~~1,1-Dichloroethene~~	~~SOIL~~	~~LA-523-455~~	~~U~~	~~< 2.10~~	~~ug/kg~~	~~1.00~~	~~2.1~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~

MDL = Minimum Detection Limit
RQ = Result Qualifier

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

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

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

Report WGPP/ver. 1.1
Groundwater Remediation Program

K 6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001291	B1C777	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 41.0	ug/kg	1.00	41	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.8e+03	05/12/05	04/28/05	04/28/05

6/20/05

MDL=Minimum Detection Limit B - The analyte < the RDL but >= the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	**WSCF20050940**
Sample Matrix	**Soil**
Sample Visual	**N/A**
SAF Number	**F04-015**
Data Deliverable	**Summary Report**

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) 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 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.

- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.

- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.

- Sulfate – The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals – The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids – Analyzed for organic results correction.

pH – All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Urananium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)

[illegible] Number	[illegible]	[illegible]	[illegible]	[illegible]
Uranium-234/ Uranium-235				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
Plutonium-238				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americiam-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
[illegible]	[illegible]	[illegible]	[illegible]
Americium-243			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
Plutonium-242			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
[illegible]	[illegible]	[illegible]	[illegible] Percent
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
Strontium-85			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
Uranium-232			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
[illegible]	[illegible] Lab Sample [illegible]	[illegible]	[illegible]
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

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.

Pauline D. Mix
WSCF Client Services

Abbreviations
Hg – mercury
IC – ion chromatography
ICP – inductively coupled plasma
ICP/AES – ICP/atomic emission spectroscopy
ICP/MS – ICP/mass spectrometry
Total U – total uranium
AT/TB – total alpha/total beta
AEA – Alpha Energy Analysis
WTPH-G – Total Hydrocarbons-Gasoline
Am – americium
Cm - curium
Pu – plutonium
Np – neptunium
GEA – gamma energy analysis
H3 – Tritium
Sr – Strontium 89, 90
WTPH-D – Total Hydrocarbons-Diesel
TSS – Total Suspended Solids

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

5/30/05

F04-015-124

COLLECTOR	Pope/Pfister/Tyree/Wiberg
SAMPLING LOCATION	216-T-13; 10-11 ft
ICE CHEST NO.	
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	CS Cearlock
TELEPHONE NO.	372-9638
PROJECT DESIGNATION	200-MW-1 Characterization Sampling and Analysis - Soil
FIELD LOGBOOK NO.	
CDA	119144E510
OFFSITE PROPERTY NO.	N/A
PROJECT COORDINATOR	TRENT, SJ
SAF NO.	F04-015
PRICE CODE	8N
AIR QUALITY	☐
DATA TURNAROUND	45 Days / ~~45 Days~~ 15 4-28-05
METHOD OF SHIPMENT	Government Vehicle
BILL OF LADING/AIR BILL NO.	N/A

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

20050940

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGa*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C769 W0500128	SOIL	4/28/5	0930

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSAPI/ [signature]	4-28-05 14:45	TA FRAZIER [signature]	4-28-05 14:45
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000031

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-124	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cesrlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 (~~Fluoride, Nitrogen-in-Nitrate, Nitrogen-in-Nitrite~~, Phosphorous in phosphate, Sulfate) ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, ~~Copper, Silver~~) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene)
(4)Semi-VOA – 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 – Total Sr;

A-6003-61 (03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		FD4-015-125	PAGE 1 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N AIR QUALITY ☐	DATA TURNAROUND 45 Days / ~~45 Days~~ 1 Day
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015		
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGa*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C771	SOIL	4/28/5	0930										

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPAPE/ [signature] 4-28-05	14:45	TA FRAZIER [signature]	4/28/05 14:45
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000033

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-125	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

PMG 2/14/05

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.
(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

000034

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F04-015-137

COLLECTOR: Popp/Pfister/Tyra/Wiberg

COMPANY CONTACT: CS Cearlock

TELEPHONE NO.: 372-9638

PROJECT COORDINATOR: TRENT, SJ

PRICE CODE: 8N

DATA TURNAROUND: 45 Days / ~~45 Days~~ 4-28-05

SAMPLING LOCATION: 216-T-13; 12-13 ft

PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil

SAF NO.: F04-015

AIR QUALITY: ☐

ICE CHEST NO.:

FIELD LOGBOOK NO.:

COA: 119144ES10

METHOD OF SHIPMENT: Government Vehicle

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

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

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C780

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None					
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P					
NO. OF CONTAINER(S)	1	1	1	3	1	1					
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL					
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS					

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C774	SOIL	4-27-05	0955	X	X	X	X	X	X				

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible] 4-28-05	1445	Victor Flores	4/28/05 14:45

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/93)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-137	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	CDA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 (~~Fluoride, Nitrogen-In-Nitrate, Nitrogen-In-Nitrite~~, Phosphorous in phosphate, Sulfate) ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, ~~Copper, Silver~~) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene)
(4)Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

000036

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F04-015-138

COLLECTOR: Pope/Pfister/Tyra/Wiberg

COMPANY CONTACT: CS Cearlock

TELEPHONE NO.: 372-9638

PROJECT COORDINATOR: TRENT, SJ

PRICE CODE: 8N

DATA TURNAROUND: 45 Days / ~~45 Days~~ 4-26-05

SAMPLING LOCATION: 216-T-13; 14-15 ft

PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil

SAF NO.: F04-015

AIR QUALITY: ☐

ICE CHEST NO.:

FIELD LOGBOOK NO.:

CDA: 119144ES10

METHOD OF SHIPMENT: Government Vehicle

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

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

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C781

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGr*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C775	SOIL	4-28-05	1015	X	X	X	X	X	X				

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Spike Pfister	4-28-05 1445	Victor Bines	4/28/05 1445

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-138	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N AIR QUALITY ☐	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 14-15 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015		
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 (~~Fluoride, Nitrogen-in-Nitrate, Nitrogen-in-Nitrite~~, Phosphorous in phosphate, Sulfate) Total Cyanide - 9010; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, ~~Copper, Silver~~) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene)
(4)Semi-VOA – 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 – Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F04-015-139 | PAGE 1 OF 2

COLLECTOR: Pope/Pfister/Tyra/Wiberg

COMPANY CONTACT: CS Cearlock | TELEPHONE NO.: 372-9638

PROJECT COORDINATOR: TRENT, SJ

PRICE CODE: 8N | DATA TURNAROUND: 45 Days / ~~45 Days~~ 4-26-05

SAMPLING LOCATION: 216-T-13; 19-20 ft

PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil

SAF NO.: F04-015

AIR QUALITY: ☐

ICE CHEST NO.:

FIELD LOGBOOK NO.:

COA: 119144ES10

METHOD OF SHIPMENT: Government Vehicle

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

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

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C782

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C776	SOIL	4-28-05	1380	X	X	X	X	X	X				

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope	4-28-05 1445	Victor Bias	4/28/05 1445

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION — RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(03/03)

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-139	PAGE 2 OF 2
COLLECTOR Pope/Plister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 19-20 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PNG 7/14/05

(1)IC Anions - 300.0 (~~Fluoride, Nitrogen-In Nitrate, Nitrogen-In Nitrite~~, Phosphorous In phosphate, Sulfate) ~~Total Cyanide - 9010~~; pH (Soil) - 9045;

(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, ~~Copper, Silver~~) ICP/MS - 200.8 (Add-on) (Lead, Uranium)

(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene)

(4)Semi-VOA – 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)

(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 – Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F04-015-140 PAGE 1 OF 2

COLLECTOR
Pope/Pfister/Tyra/Wiberg

SAMPLING LOCATION
216-T-13; 24-25 ft

ICE CHEST NO.

COMPANY CONTACT
CS Cearlock

TELEPHONE NO.
372-9638

PROJECT DESIGNATION
200-MW-1 Characterization Sampling and Analysis - Soil

FIELD LOGBOOK NO.
COA 119144E510

PROJECT COORDINATOR
TRENT, SJ

SAF NO.
F04-015

METHOD OF SHIPMENT
Government Vehicle

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / ~~45 Days~~

SHIPPED TO
Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: 81C783

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P
NO. OF CONTAINER(S)	1	1	1	3	1	1
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C777	SOIL	4-28-05	1330	X	X	X	X	X	X				

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Pope	4-28-05 1445	Victor Bien	4/28/05 1445

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000041

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-140	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 24-25 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.

(1)IC Anions - 300.0 (~~Nitrite, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate) ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, ~~Copper, Silver~~) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~; trans-1,2-Dichloroethylene)
(4)Semi-VOA – 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

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Appendix 5

Data Validation Supporting Documentation

GC/MS ORGANIC DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 200-MW-1			DATA PACKAGE: S0940		
VALIDATOR: TLI		LAB: WSCF		DATE: 6/18/03	
			SDG: S0940		
ANALYSES PERFORMED					
SW-846 8260		SW-846 8260 (TCLP)	SW-846 8270	8015	SW-846 8270 (TCLP)
SAMPLES/MATRIX					
B1C769	B1C771	B1C774	B1C775		
B1C776	B1C777				
				Soil	

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments: _____

2. INSTRUMENT TUNING AND CALIBRATION (Levels D and E)

GC/MS tuning/performance check acceptable? ..... Yes No N/A

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

Comments: _____

GC/MS ORGANIC 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: no FB

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

Surrogates/system monitoring compounds analyzed? ..... Yes No N/A
Surrogate/system monitoring compound 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? (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: Surr - phenol J 74
LCS phenol J all NO PAS
LCS pentachlor-phenol J all

GC/MS ORGANIC DATA VALIDATION CHECKLIST

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

MS/MSD samples analyzed? ..... Yes No N/A
MS/MSD RPD values 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: _____

6. SYSTEM PERFORMANCE (Levels D and E)

Internal standards analyzed? ..... Yes No N/A
Iinternal standard areas acceptable? ..... Yes No N/A
Internal standard retention times 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: _____

7. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A
Sample holding times acceptable? ..... Yes No N/A
Comments: _____

GC/MS ORGANIC 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

Laboratory properly identified and coded all TIC? (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:

9. SAMPLE CLEANUP (Levels D and E)

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

SDG Number: WSCF20050940
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

Lab ID: W050001286
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	1,2,4-Trichlorobenzene	120-82-1	1360.2	93.200	% Recov	05/10/05	46.000	107.000	
MS	1,4-Dichlorobenzene	106-46-7	1381.6	94.600	% Recov	05/10/05	30.000	96.000	
MS	2,4-Dinitrotoluene	121-14-2	1258.1	86.200	% Recov	05/10/05	59.000	106.000	
MS	2-Fluorophenol	367-12-4	1486.9	102.000	% Recov	05/10/05	42.000	105.000	
MS	Acenaphthene	83-32-9	1436.7	98.400	% Recov	05/10/05	61.000	116.000	
MS	4-Chloro-3-methylphenol	59-50-7	1634.5	74.600	% Recov	05/10/05	61.000	106.000	
MS	2-Chlorophenol	95-57-8	1976.0	90.200	% Recov	05/10/05	66.000	106.000	
MS	N-Nitrosodi-n-dipropylamine	621-64-7	1321.4	90.500	% Recov	05/10/05	71.000	114.000	
MS	2-Fluorobiphenyl	321-60-8	1519.4	104.000	% Recov	05/10/05	56.000	122.000	
MS	Phenol	108-95-2	1664.5	76.000	% Recov	05/10/05	42.000	111.000	
MS	Nitrobenzene-d5	4165-60-0	1298.6	89.000	% Recov	05/10/05	64.000	111.000	
MS	4-Nitrophenol	100-02-7	1924.1	87.900	% Recov	05/10/05	32.000	118.000	
MS	Pentachlorophenol	87-86-5	2145.7	98.000	% Recov	05/10/05	62.000	114.000	
MS	Phenol-d5	4165-62-2	1053.4	72.200	% Recov	05/10/05	54.000	120.000	
MS	Pyrene	129-00-0	1367.2	93.700	% Recov	05/10/05	66.000	118.000	
MS	2,4,6-Tribromophenol	118-79-6	1165.2	79.800	% Recov	05/10/05	24.000	122.000	
MS	Terphenyl-d14 (7Cl)	98904-43-9	1389.1	95.200	% Recov	05/10/05	35.000	150.000	
MSD	1,2,4-Trichlorobenzene	120-82-1	1371.3	94.000	% Recov	05/10/05	46.000	107.000	
MSD	1,4-Dichlorobenzene	106-46-7	1308.7	89.700	% Recov	05/10/05	30.000	96.000	
MSD	2,4-Dinitrotoluene	121-14-2	1142.3	78.300	% Recov	05/10/05	59.000	106.000	
MSD	2-Fluorophenol	367-12-4	1483.2	102.000	% Recov	05/10/05	42.000	105.000	
MSD	Acenaphthene	83-32-9	1420.0	97.300	% Recov	05/10/05	61.000	116.000	
MSD	4-Chloro-3-methylphenol	59-50-7	1728.4	79.000	% Recov	05/10/05	61.000	106.000	
MSD	2-Chlorophenol	95-57-8	1897.4	86.700	% Recov	05/10/05	66.000	106.000	
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	1305.2	89.400	% Recov	05/10/05	71.000	114.000	
MSD	2-Fluorobiphenyl	321-60-8	1544.3	106.000	% Recov	05/10/05	56.000	122.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	Phenol	108-95-2	1474.2	67.300	% Recov	05/10/05	42.000	111.000	
MSD	Nitrobenzene-d5	4165-60-0	1301.0	89.100	% Recov	05/10/05	64.000	111.000	
MSD	4-Nitrophenol	100-02-7	2012.4	91.900	% Recov	05/10/05	32.000	118.000	
MSD	Pentachlorophenol	87-86-5	1959.9	89.500	% Recov	05/10/05	62.000	114.000	
MSD	Phenol-d5	4165-62-2	915.25	62.700	% Recov	05/10/05	54.000	120.000	
MSD	Pyrene	129-00-0	1379.2	94.500	% Recov	05/10/05	66.000	118.000	
MSD	2,4,6-Tribromophenol	118-79-6	1193.5	81.800	% Recov	05/10/05	24.000	122.000	
MSD	Terphenyl-d14 (7Cl)	98904-43-9	1399.2	95.900	% Recov	05/10/05	35.000	150.000	
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	94.000	0.855	RPD	05/10/05	0.000	20.000	
SPK-RPD	1,4-Dichlorobenzene	106-46-7	89.700	5.317	RPD	05/10/05	0.000	20.000	
SPK-RPD	2,4-Dinitrotoluene	121-14-2	78.300	9.605	RPD	05/10/05	0.000	20.000	
SPK-RPD	2-Fluorophenol	367-12-4	102.000	0.000	RPD	05/10/05	0.000	20.000	
SPK-RPD	Acenaphthene	83-32-9	97.300	1.124	RPD	05/10/05	0.000	20.000	
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	79.000	5.729	RPD	05/10/05	0.000	20.000	
SPK-RPD	2-Chlorophenol	95-57-8	86.700	3.957	RPD	05/10/05	0.000	20.000	
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	89.400	1.223	RPD	05/10/05	0.000	20.000	
SPK-RPD	2-Fluorobiphenyl	321-60-8	106.000	1.905	RPD	05/10/05	0.000	20.000	
SPK-RPD	Phenol	108-95-2	67.300	12.142	RPD	05/10/05	0.000	20.000	
SPK-RPD	Nitrobenzene-d5	4165-60-0	89.100	0.112	RPD	05/10/05	0.000	20.000	
SPK-RPD	4-Nitrophenol	100-02-7	91.900	4.449	RPD	05/10/05	0.000	20.000	
SPK-RPD	Pentachlorophenol	87-86-5	89.500	9.087	RPD	05/10/05	0.000	20.000	
SPK-RPD	Phenol-d5	4165-62-2	62.700	14.085	RPD	05/10/05	0.000	20.000	
SPK-RPD	Pyrene	129-00-0	94.500	0.850	RPD	05/10/05	0.000	20.000	
SPK-RPD	2,4,6-Tribromophenol	118-79-6	81.800	2.475	RPD	05/10/05	0.000	20.000	
SPK-RPD	Terphenyl-d14 (7Cl)	98904-43-9	95.900	0.733	RPD	05/10/05	0.000	20.000	
SURR	2-Fluorophenol	367-12-4	1393.5	95.500	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1486.9	102.000	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-60-0	1252.4	85.900	% Recov	05/10/05	64.000	111.000	
SURR	Phenol-d5	4165-62-2	954.36	65.400	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	1072.8	73.600	% Recov	05/10/05	24.000	122.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
SURR	Terphenyl-d14 (7Cl)	98904-43-9	1496.8	103.000	% Recov	05/10/05	35.000	150.000	

Lab ID: W050001287
BATCH QC ASSOCIATED WITH SAMPLE

SURR	2-Fluorophenol	367-12-4	1405.8	95.800	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1415.3	96.500	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-60-0	1176.1	80.200	% Recov	05/10/05	64.000	111.000	
SURR	Phenol-d5	4165-62-2	864.41	58.900	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	1226.0	83.600	% Recov	05/10/05	24.000	122.000	
SURR	Terphenyl-d14 (7Cl)	98904-43-9	1468.1	100.000	% Recov	05/10/05	35.000	150.000	

Lab ID: W050001288
BATCH QC ASSOCIATED WITH SAMPLE

SURR	2-Fluorophenol	367-12-4	1332.8	94.600	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1393.5	98.900	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-60-0	1073.8	76.200	% Recov	05/10/05	64.000	111.000	
SURR	Phenol-d5	4165-62-2	637.44	45.200	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	1098.2	77.900	% Recov	05/10/05	24.000	122.000	
SURR	Terphenyl-d14 (7Cl)	98904-43-9	1362.6	96.700	% Recov	05/10/05	35.000	150.000	

Lab ID: W050001289
BATCH QC ASSOCIATED WITH SAMPLE

SURR	2-Fluorophenol	367-12-4	1244.0	89.800	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1239.6	89.500	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-60-0	975.61	70.400	% Recov	05/10/05	64.000	111.000	
SURR	Phenol-d5	4165-62-2	873.12	63.000	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	961.72	69.400	% Recov	05/10/05	24.000	122.000	
SURR	Terphenyl-d14 (7Cl)	98904-43-9	1285.8	92.800	% Recov	05/10/05	35.000	150.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001290									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	2-Fluorophenol	367-12-4	1105.4	80.500	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1186.8	86.500	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-60-0	938.21	68.400	% Recov	05/10/05	64.000	111.000	
SURR	Phenol-d5	4165-62-2	768.40	56.000	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	813.53	59.300	% Recov	05/10/05	24.000	122.000	
SURR	Terphenyl-d14 (7Cl)	98904-43-9	1207.7	88.000	% Recov	05/10/05	35.000	150.000	
Lab ID: W050001291									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	2-Fluorophenol	367-12-4	1438.4	105.000	% Recov	05/10/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	1355.9	98.900	% Recov	05/10/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-60-0	1104.7	80.600	% Recov	05/10/05	64.000	111.000	
SURR	Phenol-d5	4165-62-2	1125.3	82.100	% Recov	05/10/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	1117.2	81.500	% Recov	05/10/05	24.000	122.000	
SURR	Terphenyl-d14 (7Cl)	98904-43-9	1406.4	103.000	% Recov	05/10/05	35.000	150.000	
BATCH QC									
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 180	n/a	ug/Kg	05/10/05			U
BLANK	1,4-Dichlorobenzene	106-46-7	< 270	n/a	ug/Kg	05/10/05			U
BLANK	2,4-Dinitrotoluene	121-14-2	< 110	n/a	ug/Kg	05/10/05			U
BLANK	2-Fluorophenol	367-12-4	1354.7	102.000	% Recov	05/10/05	42.000	105.000	
BLANK	Acenaphthene	83-32-9	< 140	n/a	ug/Kg	05/10/05			U
BLANK	4-Chloro-3-methylphenol	59-50-7	< 93	n/a	ug/Kg	05/10/05			U
BLANK	2-Chlorophenol	95-57-8	< 150	n/a	ug/Kg	05/10/05			U
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 150	n/a	ug/Kg	05/10/05			U
BLANK	2-Fluorobiphenyl	321-60-8	1394.4	105.000	% Recov	05/10/05	56.000	122.000	
BLANK	Phenol	108-95-2	< 140	n/a	ug/Kg	05/10/05			U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F04-015
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Nitrobenzene-d5	4165-60-0	1321.9	99.100	% Recov	05/10/05	64.000	111.000	
BLANK	4-Nitrophenol	100-02-7	< 170	n/a	ug/Kg	05/10/05			U
BLANK	Pentachlorophenol	87-86-5	< 150	n/a	ug/Kg	05/10/05			U
BLANK	Phenol-d5	4165-62-2	929.22	69.700	% Recov	05/10/05	54.000	120.000	
BLANK	Pyrene	129-00-0	< 160	n/a	ug/Kg	05/10/05			U
BLANK	Tributyl phosphate	126-73-8	< 140	n/a	ug/Kg	05/10/05			U
BLANK	2,4,6-Tribromophenol	118-79-6	906.74	68.000	% Recov	05/10/05	24.000	122.000	
BLANK	Terphenyl-d14 (7Cl)	98904-43-9	1285.5	96.400	% Recov	05/10/05	35.000	150.000	
LCS	1,2,4-Trichlorobenzene	120-82-1	1236.8	92.800	% Recov	05/10/05	46.000	107.000	
LCS	1,4-Dichlorobenzene	106-46-7	1232.0	92.400	% Recov	05/10/05	42.000	111.000	
LCS	2,4-Dinitrotoluene	121-14-2	1130.4	84.800	% Recov	05/10/05	59.000	106.000	
LCS	2-Fluorophenol	367-12-4	1302.0	97.700	% Recov	05/10/05	50.000	110.000	
LCS	Acenaphthene	83-32-9	1299.5	97.500	% Recov	05/10/05	61.000	116.000	
LCS	4-Chloro-3-methylphenol	59-50-7	1329.6	66.500	% Recov	05/10/05	61.000	106.000	
LCS	2-Chlorophenol	95-57-8	1594.8	79.700	% Recov	05/10/05	66.000	106.000	
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	1042.6	78.200	% Recov	05/10/05	71.000	114.000	
LCS	2-Fluorobiphenyl	321-60-8	1347.7	101.000	% Recov	05/10/05	58.000	109.000	
LCS	Phenol	108-95-2	1251.8	62.600	% Recov	05/10/05	67.000	105.000	*
LCS	Nitrobenzene-d5	4165-60-0	1056.2	79.200	% Recov	05/10/05	60.000	118.000	
LCS	4-Nitrophenol	100-02-7	1393.7	69.700	% Recov	05/10/05	32.000	118.000	
LCS	Pentachlorophenol	87-86-5	1190.9	59.500	% Recov	05/10/05	62.000	114.000	*
LCS	Phenol-d5	4165-62-2	828.50	62.100	% Recov	05/10/05	59.000	116.000	
LCS	Pyrene	129-00-0	1248.4	93.600	% Recov	05/10/05	66.000	118.000	
LCS	2,4,6-Tribromophenol	118-79-6	1021.1	76.600	% Recov	05/10/05	60.000	120.000	
LCS	Terphenyl-d14 (7Cl)	98904-43-9	1305.0	97.900	% Recov	05/10/05	60.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001285									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	ortho-Terphenyl Surr	84-15-1	27954	110.000	% Recov	05/12/05	70.000	130.000	
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	141570	112.000	% Recov	05/12/05	75.000	125.000	
MSD	ortho-Terphenyl Surr	84-15-1	26282	103.000	% Recov	05/12/05	70.000	130.000	
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	135570	107.000	% Recov	05/12/05	75.000	125.000	
SPK-RPD	ortho-Terphenyl Surr	84-15-1	103.000	6.573	RPD	05/12/05	0.000	20.000	
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	107.000	4.566	RPD	05/12/05	0.000	20.000	
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	25058	92.100	% Recov	05/12/05	70.000	130.000	
Lab ID: W050001287									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	21872	79.400	% Recov	05/12/05	70.000	130.000	
Lab ID: W050001288									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	24784	93.600	% Recov	05/12/05	70.000	130.000	
Lab ID: W050001289									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	24773	95.500	% Recov	05/12/05	70.000	130.000	
Lab ID: W050001290									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	21531	83.600	% Recov	05/12/05	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte		CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001291										
BATCH QC ASSOCIATED WITH SAMPLE										
SURR	ortho-Terphenyl	Surr	84-15-1	23674	92.100	% Recov	05/12/05	70.000	130.000	
BATCH QC										
BLANK	Kerosene		TPHKEROSENE	< 3800	n/a	ug/Kg	05/12/05			U
BLANK	ortho-Terphenyl	Surr	84-15-1	23166	92.700	% Recov	05/12/05	70.000	130.000	
BLANK	Total Pet. Hydrocarbons Diesel		TPHDIESEL	< 3800	n/a	ug/Kg	05/12/05			U
LCS	Kerosene		TPHKEROSENE	107760	86.200	% Recov	05/12/05	70.000	130.000	
LCS	ortho-Terphenyl	Surr	84-15-1	23237	92.900	% Recov	05/12/05	70.000	130.000	

000055

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: NWTPH-GX TPH Gasoline Range

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<250	n/a	RPD	05/11/05	0.000	20.000	U
MS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	4370	115.000	% Recov	05/11/05	50.000	150.000	
MSD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	3500	92.105	% Recov	05/11/05	50.000	150.000	
SPK-RPD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	92.105	22.110	RPD	05/11/05	0.000	20.000	*
BATCH QC									
BLANK	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<250	n/a	mg/L	05/11/05	0.000	300.000	U
LCS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	4000	115.942	% Recov	05/11/05	85.000	115.000	*

Date: 21 June 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: 200-MW-1 Characterization Sampling and Analysis - Soil
Subject: Volatile - Data Package No.WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	Volatile Organics by 8260B
B1C771	4/28/05	Soil	C	Volatile Organics by 8260B
B1C774	4/28/05	Soil	C	Volatile Organics by 8260B
B1C775	4/28/05	Soil	C	Volatile Organics by 8260B
B1C776	4/28/05	Soil	C	Volatile Organics by 8260B
B1C777	4/28/05	Soil	C	Volatile Organics by 8260B

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. 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. Qualified Data Summary and 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/Sample Preservation**

Analytical holding times were assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are

as follows: Soil samples must be analyzed within 14 days of the date of sample collection.

If holding times are exceeded, but not by greater than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detectable sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

All holding times were acceptable.

- **Blanks**

Method blank analyses are conducted to determine the extent of laboratory contamination introduced through sampling, sample preparation and analysis. At least one acceptable method blank analysis must be conducted for every 20 samples of a given matrix. No contaminants should be present in the method blank. Analytical results for analytes present in any sample at less than five times the concentration of that analyte found in the associated blank are qualified as non-detects and flagged "U". Common laboratory contaminants present in samples at less than ten times the concentration of that analyte found in the associated blank are qualified as non-detects. If a sample result is less than the project quantitation limit (MDL) and is less than five times (or less than ten times for laboratory contaminants) the highest associated blank result, the sample result value is raised to the MDL, qualified as undetected and flagged "U".

All method blank results were acceptable.

Field Blanks

No field blanks were submitted for analysis.

- **Accuracy**

Matrix Spike/Matrix Spike Duplicate & Blank Spike

Matrix spike/matrix spike duplicate and blank spike analyses are used to assess the analytical accuracy of the reported data. The matrix spike/matrix spike duplicate are used to assess the effect of the matrix on the ability to accurately quantify sample concentrations. Matrix spike/matrix spike duplicate analyses are performed in duplicate using the target compounds for which percent recoveries must be within 50-150%. If spike recoveries are outside control limits, detected sample results less than five times the spike concentration are qualified as estimates and flagged "J".

Undetected sample results with spike recoveries outside control limits are qualified as estimates and flagged "UJ". Sample results greater than five times the spike concentration require no qualification.

All accuracy and blank spike results were acceptable.

Surrogate Recovery

The analysis of surrogate compounds provides a measure of system performance for individual samples. Matrix-specific surrogate compound recovery control windows have been established by the laboratory program. When a surrogate compound recovery is out of the control window, all positively identified target compounds associated with the unacceptable surrogate recoveries are qualified as estimates and flagged "J". Undetected compounds with surrogate recoveries less than the lower control limit are qualified as having an estimated detection limit and flagged "UJ". Samples with surrogate recoveries less than ten percent are qualified as estimates and flagged "J" for detects, and rejected and flagged "UR" for nondetects. Undetected compounds with surrogate recoveries greater than the upper control limit require no qualification. Surrogates are not required for formaldehyde analysis.

All surrogate recovery results were acceptable.

- **Precision**

Matrix Spike/Matrix Spike Duplicate Samples

Matrix spike/matrix spike duplicate results provide matrix-specific information on the precision of the method for specific target compound classes. Precision is expressed by the relative percent difference (RPD) between the recoveries of duplicate matrix spike analyses performed on a sample. Sample results must be within RPD limits of +/- 35%. If RPD values are out of specification and the sample concentration is less than five times the spike concentration, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If RPD values are out of specification and the sample concentration is greater than five times the spike concentration, no qualification is required.

All MS/MSD RPD results were acceptable.

Field Duplicate Samples

No field duplicates were submitted for analysis.

- **Detection Limits**

Reported analytical detection levels are compared against the required target quantitation limits (RTQLs) to ensure that laboratory detection levels meet the required criteria. All analytes met the RTQL.

- **Completeness**

Data package No. 50940 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

None found.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work*, Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validator in compliance with the BHI validation SOW are as follows:

U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

Appendix 2

Summary of Data Qualification

VOLATILE ORGANIC DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE_1_OF_1_
COMMENTS: No qualifiers assigned			

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

VOLATILE ORGANIC ANALYSIS, SOIL MATRIX, (UG/KG)

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case:	SDG: WSCF20050940												
Sample Number		B1C769		B1C771		B1C774		B1C775		B1C776		B1C777	
Remarks													
Sample Date		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05	
VOA	RTQL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
1,1-Dichloroethene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Trichloroethene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Benzene	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Toluene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Chlorobenzene	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,1-Dichloroethane	10	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Ethylbenzene	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Styrene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
cis-1,3-Dichloropropene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
trans-1,3-Dichloropropene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,2-Dichloroethane	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
4-Methyl-2-pentanone		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Dibromochloromethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Tetrachloroethene		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Xylenes (total)		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,2-Dichloroethene (total)		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Carbon Tetrachloride	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
2-Hexanone		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Acetone	20	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Chloroform	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,1,1-Trichloroethane	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Bromomethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Chloromethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Chloroethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Vinyl Chloride		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Methylene Chloride	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Carbon Disulfide		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Bromoform		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
Bromodichloromethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,2-Dichloropropane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
2-Butanone		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,1,2-Trichloroethane	5	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1,1,2,2-Tetrachloroethane		<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
1-Butanol		<44.0	U	<44.0	U	<42.0	U	<42.0	U	<41.0	U	<41.0	U
trans-1,2-Dichloroethylene	1	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U
cis-1,2-Dichloroethylene	1	<2.20	U	<2.20	U	<2.10	U	<2.10	U	<2.10	U	<2.10	U

REVISED 8/2/05

Laboratory applied non-detect qualifiers "U" have been included in this table to minimize mis-interpretation of results. All other qualifiers shown were applied during validation.

010000

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Organic															
W050001286	B1C769	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 110	ug/kg	1.00	1.1e+02	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 54.0	ug/kg	1.00	54	05/13/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 290	ug/kg	1.00	2.9e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 200	ug/kg	1.00	2.0e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 120	ug/kg	1.00	1.2e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but >= the IDL/MDL (Inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001286	B1C769	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05

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Report WGPP/ver. 1.1
Groundwater Remediation Program

JR 6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001286	B1C769	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 44.0	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 110	ug/kg	1.00	1.1e+02	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 55.0	ug/kg	1.00	55	05/13/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 290	ug/kg	1.00	2.9e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 200	ug/kg	1.00	2.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 120	ug/kg	1.00	1.2e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 170	ug/kg	1.00	1.7e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05

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Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
~~W050001287~~	~~B1C771~~	~~GRP~~	~~TRENT~~	~~95-57-8~~	~~2-Chlorophenol~~	~~SOIL~~	~~LA-523-456~~	~~U~~	~~< 170~~	~~ug/kg~~	~~1.00~~	~~1.7e+02~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
~~W050001287~~	~~B1C771~~	~~GRP~~	~~TRENT~~	~~126-73-8~~	~~Tributyl phosphate~~	~~SOIL~~	~~LA-523-456~~	~~U~~	~~< 180~~	~~ug/kg~~	~~1.00~~	~~4.0e+02~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001287	B1C771	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05

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Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001287	B1C771 GRP TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771 GRP TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771 GRP TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771 GRP TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771 GRP TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771 GRP TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771 GRP TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771 GRP TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771 GRP TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 44.0	ug/kg	1.00	44	05/10/05	04/28/05	04/28/05
W050001287	B1C771 GRP TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
W050001287	B1C771 GRP TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.20	ug/kg	1.00	2.2	05/10/05	04/28/05	04/28/05
~~W050001287~~	~~B1C771 GRP TRENT~~	~~TPHDIESEL~~	~~Total Pet. Hydrocarbons Diesel~~	~~SOIL~~	~~NWTPH~~	~~U~~	~~< 4.10e+03~~	~~ug/kg~~	~~1.00~~	~~4.1e+03~~	~~05/12/05~~	~~04/28/05~~	~~04/28/05~~
W050001287	B1C771 GRP TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.10e+03	ug/kg	1.00	4.1e+03	05/12/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	05/13/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 280	ug/kg	1.00	2.8e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774 GRP TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05

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6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001288	B1C774	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 990	ug/kg	1.00	99	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001288	B1C774	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
~~W050001288~~	~~B1C774~~	~~GRP~~	~~TRENT~~	~~TPHDIESEL~~	~~Total Pet. Hydrocarbons Diesel~~	~~SOIL~~	~~NWTPH~~	~~U~~	~~< 4.00e+03~~	~~ug/kg~~	~~1.00~~	~~4.0e+03~~	~~05/12/05~~	~~04/28/05~~	~~04/28/05~~
W050001288	B1C774	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 4.00e+03	ug/kg	1.00	4.0e+03	05/12/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05

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RQ=Result Qualifier

DF=Dilution Factor
* - indicates results that have NOT been validated; + - indicates more than six qualifier symbols

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C775	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 280	ug/kg	1.00	2.8e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 97.0	ug/kg	1.00	97	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

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Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C775	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 42.0	ug/kg	1.00	42	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
~~W050001289~~	~~B1C775~~	~~GRP~~	~~TRENT~~	~~TPHDIESEL~~	~~Total Pet. Hydrocarbons Diesel~~	~~SOIL~~	~~NWTPH~~	~~U~~	~~< 3.90e+03~~	~~ug/kg~~	~~1.00~~	~~3.9e+03~~	~~05/12/05~~	~~04/28/05~~	~~04/28/05~~
W050001289	B1C775	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-[illegible]	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-[illegible]27	U	< 51.0	ug/kg	1.00	51	05/13/05	~~04/28/05~~	~~04/28/05~~

MDL=Minimum Detection Limit B - The analyte < the RDL but >= the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C776	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	<	100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	<	180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	<	270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	<	140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	<	190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	<	110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	<	96.0	ug/kg	1.00	96	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	<	140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	<	160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	<	150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	<	2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

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RQ=Result Qualifier

DF=Dilution Factor
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Report WGPP/ver. 1.1
Groundwater Remediation Program

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C776	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 41.0	ug/kg	1.00	41	05/10/05	04/28/05	04/28/05

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Report WGPP/ver. 1.1
Groundwater Remediation Program

R 6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001290	B1C776	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
~~W050001290~~	~~B1C776~~	~~GRP~~	~~TRENT~~	~~TPHDIESEL~~	~~Total Pet. Hydrocarbons Diesel~~	~~SOIL~~	~~NWTPH~~	~~U~~	~~< 3.90e+03~~	~~ug/kg~~	~~1.00~~	~~3.9e+03~~	~~05/12/05~~	~~04/28/05~~	~~04/28/05~~
W050001290	B1C776	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	05/12/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	05/11/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	05/13/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 270	ug/kg	1.00	2.7e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 110	ug/kg	1.00	1.1e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 96.0	ug/kg	1.00	96	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 140	ug/kg	1.00	1.4e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 160	ug/kg	1.00	1.6e+02	05/10/05	04/28/05	04/28/05
~~W050001291~~	~~B1C777~~	~~GRP~~	~~TRENT~~	~~126-73-8~~	~~Tributyl phosphate~~	~~SOIL~~	~~LA-523-456~~	~~U~~	~~< 160~~	~~ug/kg~~	~~1.00~~	~~1.6e+02~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001291	B1C777	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

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RQ=Result Qualifier

DF=Dilution Factor
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R 6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001291	B1C777	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

Report WGPP/ver. 1.1
Groundwater Remediation Program

R 6/20/05

000023

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001291	B1C777	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	71-36-3	1 Butanol	SOIL	LA-523-455	U	< 41.0	ug/kg	1.00	41	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	05/10/05	04/28/05	04/28/05
~~W050001291~~	~~B1C777~~	~~GRP~~	~~TRENT~~	~~TPHDIESEL~~	~~Total Pet. Hydrocarbons Diesel~~	~~SOIL~~	~~NWTPH~~	~~U~~	~~< 3.90e+03~~	~~ug/kg~~	~~1.00~~	~~3.9e+03~~	~~05/12/05~~	~~04/28/05~~	~~04/28/05~~
~~W050001291~~	~~B1C777~~	~~GRP~~	~~TRENT~~	~~TPHKEROSENE~~	~~Kerosene~~	~~SOIL~~	~~NWTPH~~	~~U~~	~~< 3.90e+03~~	~~ug/kg~~	~~1.00~~	~~3.9e+03~~	~~05/12/05~~	~~04/28/05~~	~~04/28/05~~

U/20/05

U/20/05

MDL=Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	**WSCF20050940**
Sample Matrix	**Soil**
Sample Visual	**N/A**
SAF Number	**F04-015**
Data Deliverable	**Summary Report**

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) 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 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.

- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.

- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.

- Sulfate – The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals – The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids – Analyzed for organic results correction.

pH – All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Urananium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)

[illegible] Number	[illegible]	[illegible]	[illegible] (pCi/g-dry)	[illegible]
Uranium-234/ Uranium-235				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
Plutonium-238				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americiam-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
[illegible]	[illegible]	[illegible]	[illegible]
Americium-243			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
Plutonium-242			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
[illegible]	[illegible]	[illegible]	[illegible] (Percent)
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
Strontium-85			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
Uranium-232			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample	[illegible]	[illegible]
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

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.

Pauline D. Mix
WSCF Client Services

Abbreviations
Hg – mercury
IC – ion chromatography
ICP – inductively coupled plasma
ICP/AES – ICP/atomic emission spectroscopy
ICP/MS – ICP/mass spectrometry
Total U – total uranium
AT/TB – total alpha/total beta
AEA – Alpha Energy Analysis
WTPH-G – Total Hydrocarbons-Gasoline
Am – americium
Cm - curium
Pu – plutonium
Np – neptunium
GEA – gamma energy analysis
H3 – Tritium
Sr – Strontium 89, 90
WTPH-D – Total Hydrocarbons-Diesel
TSS – Total Suspended Solids

5/30/05

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-124	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock — TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: BN — DATA TURNAROUND: 45 Days / ~~45 Days~~ 15 4-28-05
SAMPLING LOCATION: 216-T-13; 10-11 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO.: F04-015	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO. — COA: 119144ES10	METHOD OF SHIPMENT: Government Vehicle	
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

200.50940

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C769 W05200128	SOIL	4/28/5	0930

CHAIN OF POSSESSION — SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
TSAPE/ [signature] 4-28-05	14:45	TA PRAZMA [signature] 4-28-05	14:45

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

0000033

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-124	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/08

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;

(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}

(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}

(4)Semi-VOA – 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}

(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 – Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-125	PAGE 1 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N AIR QUALITY ☐	DATA TURNAROUND 45 Days / ~~15 Days~~
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015		
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C771	SOIL	4/28/5	0930	\	\	\	\	\	\				

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPAR/ [signature] 4-28-05	14:45	TA FRAZIER [signature]	4/28/05 14:45
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000035

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-125	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N AIR QUALITY ☐	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015		
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

PMG 2/14/05

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.
(1)IC Anions - 300.0 (~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite,~~ Phosphorous in phosphate, Sulfate) ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, ~~Copper, Silver~~) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene,~~ trans-1,2-Dichloroethylene)
(4)Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-818(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-137	PAGE 1 OF 1
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Clearlock	TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N
SAMPLING LOCATION: 216-T-13; 12-13 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO.: F04-015	AIR QUALITY: ☐
ICE CHEST NO.	FIELD LOGBOOK NO.	COA: 119144ES10	METHOD OF SHIPMENT: Government Vehicle	DATA TURNAROUND: 45 Days / ~~45 Days~~
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C780

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C774	SOIL	4-27-05	0955	X	X	X	X	X	X				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JS Pope/ [illegible]	4-28-05 1445	Victor Brown [illegible]	4/28/05 14:45

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-137	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;

(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}

(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}

(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}

(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

000038

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F04-015-138

COLLECTOR	Pope/Pfister/Tyra/Wiberg
SAMPLING LOCATION	216-T-13; 14-15 ft
ICE CHEST NO.	
SHIPPED TO	Waste Sampling & Characterization
COMPANY CONTACT	CS Cearlock
TELEPHONE NO.	372-9638
PROJECT COORDINATOR	TRENT, SJ
PROJECT DESIGNATION	200-MW-1 Characterization Sampling and Analysis - Soil
SAF NO.	F04-015
PRICE CODE	8N
AIR QUALITY	☐
DATA TURNAROUND	45 Days / ~~45 Days~~ 9-26-04
FIELD LOGBOOK NO.	
CDA	119144E510
METHOD OF SHIPMENT	Government Vehicle
OFFSITE PROPERTY NO.	N/A
BILL OF LADING/AIR BILL NO.	N/A

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C781

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGa*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C775	SOIL	4-28-05	1015	X	X	X	X	X	X				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	4-28-05 1445	Victor Bines [signature]	4/28/05 1445
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000039

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-138	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 14-15 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

000040

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-139	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock	TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N
SAMPLING LOCATION: 216-T-13; 19-20 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO.: F04-015	AIR QUALITY: ☐
ICE CHEST NO.	FIELD LOGBOOK NO.	COA: 119144ES10	METHOD OF SHIPMENT: Government Vehicle	DATA TURNAROUND: 45 Days / ~~45 Days~~ 4-26-05
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C782

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C776	SOIL	4-28-05	1300	X	X	X	X	X	X				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPOPE/ [signature]	4-28-05 1445	Victor Bias [signature]	4/28/05 1445

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000041

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-139	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 19-20 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;

(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}

(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}

(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}

(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F04-015-140 PAGE 1 OF 2

COLLECTOR
Pope/Pfister/Tyra/Wiberg

SAMPLING LOCATION
216-T-13; 24-25 ft

ICE CHEST NO.

COMPANY CONTACT
CS Cearlock

TELEPHONE NO.
372-9638

PROJECT DESIGNATION
200-MW-1 Characterization Sampling and Analysis - Soil

FIELD LOGBOOK NO.
COA
119144ES10

PROJECT COORDINATOR
TRENT, SJ

SAF NO.
F04-015

METHOD OF SHIPMENT
Government Vehicle

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / ~~45 Days~~ 45 Days

SHIPPED TO
Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C783

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C777	SOIL	4-28-05	1330	X	X	X	X	X	X				

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Pope / [signature]	4-28-05 1445	Victor Bins / [signature]	4/28/05 1445
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION RECEIVED BY | TITLE | DATE/TIME

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

A-6003-618(03/03)

000043

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-140	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 24-25 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.

(1)IC Anions - 300.0 (Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate) ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, ~~Copper, Silver~~) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~; trans-1,2-Dichloroethylene)
(4)Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Appendix 5

Data Validation Supporting Documentation

GC/MS ORGANIC DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 200-MW-1			DATA PACKAGE: S0940		
VALIDATOR: TLI		LAB: WSCF		DATE: 6/18/05	
			SDG: S0940		
ANALYSES PERFORMED					
SW-846 8260		SW-846 8260 (TCLP)	SW-846 8270		SW-846 8270 (TCLP)
SAMPLES/MATRIX					
B1C769	B1C771	B1C774	B1C775		
B1C776	B1C777				
					Soil

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

Technical verification documentation present? ..... Yes (No) N/A

Comments:

2. INSTRUMENT TUNING AND CALIBRATION (Levels D and E)

GC/MS tuning/performance check acceptable? ..... Yes No (N/A)

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)

Comments:

GC/MS ORGANIC 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: NO FB

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

Surrogates/system monitoring compounds analyzed? ..... Yes No N/A

Surrogate/system monitoring compound 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? (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: NO PAS

GC/MS ORGANIC DATA VALIDATION CHECKLIST

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

MS/MSD samples analyzed? ..... Yes No N/A

MS/MSD RPD values 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: _____

6. SYSTEM PERFORMANCE (Levels D and E)

Internal standards analyzed? ..... Yes No N/A

Iinternal standard areas acceptable? ..... Yes No N/A

Internal standard retention times 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: _____

7. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A

Sample holding times acceptable? ..... Yes No N/A

Comments: _____

GC/MS ORGANIC 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
Laboratory properly identified and coded all TIC? (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:

9. SAMPLE CLEANUP (Levels D and E)

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

SDG Number: WSCF20050940
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F04-015
Sample Date: 04/27/05
Receive Date:04/27/05

Lab ID: W050001268
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	1,1-Dichloroethene	75-35-4	23.340	93.400	% Recov	05/10/05	63.000	117.000	
MS	Benzene	71-43-2	25.340	101.000	% Recov	05/10/05	75.000	129.000	
MS	4-Bromofluorobenzene	460-00-4	48.770	97.500	% Recov	05/10/05	84.000	116.000	
MS	Chlorobenzene	108-90-7	24.630	98.500	% Recov	05/10/05	79.000	119.000	
MS	1,2-Dichloroethane-d4	17060-07-0	52.300	105.000	% Recov	05/10/05	82.000	136.000	
MS	Toluene-d8	2037-26-5	53.450	107.000	% Recov	05/10/05	89.000	119.000	
MS	Toluene	108-88-3	26.190	105.000	% Recov	05/10/05	76.000	120.000	
MS	Trichloroethene	79-01-6	24.920	99.700	% Recov	05/10/05	73.000	123.000	
MSD	1,1-Dichloroethene	75-35-4	21.940	87.800	% Recov	05/10/05	63.000	117.000	
MSD	Benzene	71-43-2	23.480	93.900	% Recov	05/10/05	75.000	129.000	
MSD	4-Bromofluorobenzene	460-00-4	48.240	96.500	% Recov	05/10/05	84.000	116.000	
MSD	Chlorobenzene	108-90-7	24.140	96.600	% Recov	05/10/05	79.000	119.000	
MSD	1,2-Dichloroethene-d4	17060-07-0	51.910	104.000	% Recov	05/10/05	82.000	136.000	
MSD	Toluene-d8	2037-26-5	52.830	106.000	% Recov	05/10/05	89.000	119.000	
MSD	Toluene	108-88-3	24.480	97.900	% Recov	05/10/05	76.000	120.000	
MSD	Trichloroethene	79-01-6	23.040	92.200	% Recov	05/10/05	73.000	123.000	
SPK-RPD	1,1-Dichloroethene	75-35-4	87.800	6.181	RPD	05/10/05	0.000	25.000	
SPK-RPD	Benzene	71-43-2	93.900	7.286	RPD	05/10/05	0.000	25.000	
SPK-RPD	4-Bromofluorobenzene	460-00-4	96.500	1.031	RPD	05/10/05	0.000	25.000	
SPK-RPD	Chlorobenzene	108-90-7	96.600	1.948	RPD	05/10/05	0.000	25.000	
SPK-RPD	1,2-Dichloroethane-d4	17060-07-0	104.000	0.957	RPD	05/10/05	0.000	25.000	
SPK-RPD	Toluene-d8	2037-26-5	106.000	0.939	RPD	05/10/05	0.000	25.000	
SPK-RPD	Toluene	108-88-3	97.900	6.999	RPD	05/10/05	0.000	25.000	
SPK-RPD	Trichloroethene	79-01-6	92.200	7.817	RPD	05/10/05	0.000	25.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001286									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	48.730	97.500	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	53.330	107.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	53.320	107.000	% Recov	05/10/05	80.000	126.000	
Lab ID: W050001287									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	49.190	98.400	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	52.100	104.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	53.320	107.000	% Recov	05/10/05	80.000	126.000	
Lab ID: W050001288									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	50.020	100.000	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	52.960	106.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	53.860	108.000	% Recov	05/10/05	80.000	126.000	
Lab ID: W050001289									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	50.500	101.000	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	54.080	108.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	53.450	107.000	% Recov	05/10/05	80.000	126.000	
Lab ID: W050001290									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	50.140	100.000	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	53.120	106.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	53.160	106.000	% Recov	05/10/05	80.000	126.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001291									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	49.660	99.300	% Recov	05/10/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	52.310	105.000	% Recov	05/10/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	54.410	109.000	% Recov	05/10/05	80.000	126.000	
BATCH QC									
BLANK	1,1-Dichloroethane	75-34-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,1,1-Trichloroethane	71-55-6	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,1,2-Trichloroethane	79-00-5	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,1-Dichloroethene	75-35-4	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,2-Dichloroethane	107-06-2	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1-Butanol	71-36-3	< 40	n/a	ug/Kg	05/10/05			U
BLANK	2-Hexanone	591-78-6	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	4-Methyl-2-Pentanone	108-10-1	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Acetone	67-64-1	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Bromodichloromethane	75-27-4	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Benzene	71-43-2	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	4-Bromofluorobenzene	460-00-4	100.20	100.000	% Recov	05/10/05	71.000	125.000	
BLANK	Bromoform	75-25-2	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Carbon disulfide	75-15-0	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Carbon tetrachloride	56-23-5	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Dibromochloromethane	124-48-1	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Chloroform	67-66-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Chlorobenzene	108-90-7	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 2.0	n/a	ug/Kg	05/10/05			U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F04-015
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Chloroethane	75-00-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,2-Dichloroethane-d4	17060-07-0	102.00	102.000	% Recov	05/10/05	80.000	134.000	
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	1,2-Dichloropropane	78-87-5	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Ethylbenzene	100-41-4	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Bromomethane	74-83-9	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Chloromethane	74-87-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	2-Butanone	78-93-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Methylenechloride	75-09-2	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Tetrachloroethene	127-18-4	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Styrene	100-42-5	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Xylenes (total)	1330-20-7	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Toluene-d8	2037-26-5	108.20	108.000	% Recov	05/10/05	80.000	126.000	
BLANK	Toluene	108-88-3	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Trichloroethene	79-01-6	< 2.0	n/a	ug/Kg	05/10/05			U
BLANK	Vinyl chloride	75-01-4	< 2.0	n/a	ug/Kg	05/10/05			U
LCS	1,1-Dichloroethene	75-35-4	23.520	94.100	% Recov	05/11/05	70.000	130.000	
LCS	Benzene	71-43-2	27.060	108.000	% Recov	05/11/05	70.000	130.000	
LCS	4-Bromofluorobenzene	460-00-4	51.260	103.000	% Recov	05/11/05	71.000	125.000	
LCS	Chlorobenzene	108-90-7	26.280	105.000	% Recov	05/11/05	70.000	130.000	
LCS	1,2-Dichloroethane-d4	17060-07-0	53.270	107.000	% Recov	05/11/05	80.000	134.000	
LCS	Toluene-d8	2037-26-5	54.640	109.000	% Recov	05/11/05	80.000	126.000	
LCS	Toluene	108-88-3	25.940	104.000	% Recov	05/11/05	70.000	130.000	
LCS	Trichloroethene	79-01-6	27.160	109.000	% Recov	05/11/05	70.000	130.000	

Date: 20 June 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: 200-MW-1 Characterization Sampling and Analysis - Soil
Subject: Wet Chemistry - Data Package No. WSCF20050940 (50940)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50940 prepared by WSCF Analytical Laboratories (WSCF). A list of samples validated along with the analyses reported and the method of analysis is provided in the following table.

Sample ID	Sample	Media	Validation	Analysis
B1C769	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*
B1C771	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*
B1C774	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*
B1C775	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*
B1C776	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*
B1C777	4/28/05	Soil	C	Anions by 300.0 & pH by 9045C*

* - Phosphate not validated or reported per FHI.

Data validation was conducted in accordance with the FHI validation statement of work and the 200-MW-1 Miscellaneous Waste Group OU RI/FS Workplan, DOE/RL-2001-65 (Rev. 0), April 2002. 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. Qualified Data Summary and 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 PARAMETERS

- **Holding Times/Sample Preservation**

Analytical holding times are assessed to ascertain whether the holding time requirements were met by the laboratory. The holding time requirements are as follows: Soil samples must be analyzed within 28 days for sulfate and immediate

(24 hours) for pH.

If holding times are exceeded, but not by greater than two times the limit, all associated sample results are qualified as estimates and flagged "J" for detects and "UJ" for non-detects. If holding times are exceeded by greater than two times the limit, all associated detectable sample results are qualified as estimates and flagged "J" and all non-detects are rejected and flagged "UR".

Due to the holding time being exceeded by greater than twice the limit, all pH results were qualified as estimates and flagged "J".

All other holding times were acceptable.

- **Method Blanks**

Method Blanks

Method blank analyses are performed to determine the extent of laboratory contamination introduced through sampling, sample preparation and analysis. At least one acceptable method blank analysis must be conducted for every 20 samples. No contaminants should be present in the method blank. All blank results must fall below the contract required detection limit (CRQL) to be acceptable.

All method blank results were acceptable.

Field (Equipment) Blank

No equipment blanks were submitted for analysis.

- **Accuracy**

Matrix Spike

Matrix spike (MS) analyses are used to assess the analytical accuracy of the reported data. The matrix spike is used to assess the effect of the matrix on the ability to accurately quantify sample concentrations. Matrix spike and LCS recoveries must fall within the range of 75% to 125%. Samples with a recovery of less than 30% and a sample result below the IDL are rejected and flagged "UR". Samples with a recovery of 30% to 74% and a sample result less than the IDL are qualified "UJ". Samples with a recovery of greater than 125% or less than 75% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a recovery greater than 125% and a sample result less than the IDL, no qualification is required.

All matrix spike recovery results were acceptable.

Laboratory Control Sample

The LCS is used to monitor the overall performance of all steps in the analysis. Recoveries must fall within the range of 80% to 120% for LCS analysis. Samples with a recovery of less than 50% are rejected and flagged "UR". Samples with a recovery of 50% to 79% and a sample recovery below the IDL are qualified "UJ". Samples with a recovery of greater than 120% or less than 80% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a recovery greater than 120% and a sample result less than the IDL, no qualification is required.

All LCS results were acceptable.

- **Precision**

Laboratory Duplicate Samples

Analytical precision is expressed by the relative percent differences (RPD) between the recoveries of matrix spike duplicate (MSD) analyses performed on a sample in the analytical batch. Precision may alternatively be assessed using unspiked duplicate analyses performed on a sample in the analytical batch. If both sample and replicate activities (concentrations) are greater than five times the CRDL and the RPD is less than 35%, no qualification is required. If either activity (concentration) is less than five times the CRDL, the RPD control limit is less than or equal to two times the CRDL. If the RPD is outside the applicable control limit, associated results are qualified as estimated detects or estimated non-detects.

All other laboratory duplicate results were acceptable.

Field Duplicate

No field duplicates were submitted for analysis.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the required target quantitation limits (RTQLs) to ensure that laboratory detection levels meet the required criteria. All results met the RTQL.

- **Completeness**

Data package No. 50940 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

Due to the holding time being exceeded by greater than twice the limit, all pH results were qualified as estimates and flagged "J". Data flagged "J" is an estimate, but under the FHI validation SOW, the data may be usable for decision-making purposes. All other validated results are considered accurate within the standard error associated with the methods.

REFERENCES

FHI, Contract #20266, *Validation Statement of Work*, Fluor Hanford Incorporated, July 7, 2003.

DOE/RL-2001-65, Rev. 0, *200-MW-1 Miscellaneous Waste Group OUs RI/FS Work Plan*, April 2002.

Appendix 1

Glossary of Data Reporting Qualifiers

Qualifiers which may be applied by data validators in compliance with FHI validation SOW are as follows:

U - Indicates the compound or analyte was analyzed for and not detected in the sample. The value reported is the sample quantitation limit corrected for sample dilution and moisture content by the laboratory.

UJ - Indicates the compound or analyte was analyzed for and not detected in the sample. Due to a minor QC deficiency identified during the data validation, the associated quantitation limit is an estimate.

J - Indicates the compound or analyte was analyzed for and detected. Due to a minor QC deficiency identified during the data validation, the associated concentration is an estimate, but the data are usable for decision-making purposes.

BJ - Applied to inorganic analyses only. Indicates the analyte concentration was greater than the IDL but less than the CRDL and is considered an estimated value.

R - Indicates the compound or analyte was analyzed for, detected, and due to an identified major QC deficiency, the data are unusable.

UR - Indicates the compound or analyte was analyzed for and not detected in the sample. Additionally, the data is unusable due to an identified major QC deficiency.

NJ - Indicates presumptive evidence of a compound at an estimated value. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

N - Indicates presumptive evidence of a compound. The data may not be valid for some specific applications (i.e., usable for decision-making purposes).

Appendix 2

Summary of Data Qualification

WET CHEMISTRY DATA QUALIFICATION SUMMARY*

SDG: 50940	REVIEWER: TLI	PROJECT: 200-MW-1	PAGE_1_OF_1_
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
pH	J	All	Holding time

* - The Qualified Data Summary Table includes laboratory applied "U" qualifiers not specifically identified here. The laboratory applied "U" qualifiers are included to minimize misinterpretation of results contained in the table.

Appendix 3

Qualified Data Summary and Annotated Laboratory Reports

GENERAL CHEMISTRY ANALYSIS, SOIL MATRIX, (MG/KG)

Project: FLUOR-HANFORD													
Laboratory: WSCF													
Case	SDG: WSCF20050940												
Sample Number		B1C769		B1C771		B1C774		B1C775		B1C776		B1C777	
Remarks													
Sample Date		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05		4/28/05	
General Chemistry	RTQL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q
Sulfate	5	12.0		<4.90	U	16.7		18.5		7.32		25.0	
pH**		9.52	J	9.57	J	9.58	J	9.70	J	9.69	J	9.44	J

** - Units are pH units

Laboratory applied non-detect qualifiers "U" have been included in this table to minimize miss-interpretation of results. All other qualifiers shown were applied during validation.

000070

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Inorganic															
W050001286	B1C769	GRP	TRENT	TS	Total solids	SOIL	LA-519-412		91.2	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411	J	9.52	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
~~W050001286~~	~~B1C769~~	~~GRP~~	~~TRENT~~	~~PO4-P~~	~~Phosphate (P) by IC~~	~~SOIL~~	~~LA-533-410~~	~~U~~	~~< 2.70~~	~~mg/kg~~	~~50.00~~	~~2.7~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001286	B1C769	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	B	12.0	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
~~W050001286~~	~~B1C769~~	~~GRP~~	~~TRENT~~	~~7440-43-9~~	~~Cadmium~~	~~SOIL~~	~~LA-505-412~~		~~0.159~~	~~mg/kg~~	~~0.93~~	~~0.093~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001286	B1C769	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		7.26	mg/kg	0.93	3.7	05/10/05	04/28/05	04/28/05
W050001286	B1C769	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		10.9	mg/kg	0.93	0.18	05/10/05	04/28/05	04/28/05
~~W050001286~~	~~B1C769~~	~~GRP~~	~~TRENT~~	~~7440-61-1~~	~~Uranium~~	~~SOIL~~	~~LA-505-412~~		~~0.901~~	~~mg/kg~~	~~0.93~~	~~0.093~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001287	B1C771	GRP	TRENT	TS	Total solids	SOIL	LA-519-412		90.7	%	1.00	0.0	05/02/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411	J	9.57	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
~~W050001287~~	~~B1C771~~	~~GRP~~	~~TRENT~~	~~PO4-P~~	~~Phosphate (P) by IC~~	~~SOIL~~	~~LA-533-410~~	~~U~~	~~< 2.65~~	~~mg/kg~~	~~49.00~~	~~2.6~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001287	B1C771	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 4.90	mg/kg	49.00	4.9	05/10/05	04/28/05	04/28/05
~~W050001287~~	~~B1C771~~	~~GRP~~	~~TRENT~~	~~7440-43-9~~	~~Cadmium~~	~~SOIL~~	~~LA-505-412~~		~~0.245~~	~~mg/kg~~	~~0.95~~	~~0.095~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001287	B1C771	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		6.07	mg/kg	0.95	3.8	05/10/05	04/28/05	04/28/05
W050001287	B1C771	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		6.18	mg/kg	0.95	0.19	05/10/05	04/28/05	04/28/05
~~W050001287~~	~~B1C771~~	~~GRP~~	~~TRENT~~	~~7440-61-1~~	~~Uranium~~	~~SOIL~~	~~LA-505-412~~		~~1.03~~	~~mg/kg~~	~~0.95~~	~~0.095~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001288	B1C774	GRP	TRENT	TS	Total solids	SOIL	LA-519-412		94.4	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411	J	9.58	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
~~W050001288~~	~~B1C774~~	~~GRP~~	~~TRENT~~	~~PO4-P~~	~~Phosphate (P) by IC~~	~~SOIL~~	~~LA-533-410~~	~~U~~	~~< 2.70~~	~~mg/kg~~	~~50.00~~	~~2.7~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001288	B1C774	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	B	16.7	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
~~W050001288~~	~~B1C774~~	~~GRP~~	~~TRENT~~	~~7440-43-9~~	~~Cadmium~~	~~SOIL~~	~~LA-505-412~~		~~0.308~~	~~mg/kg~~	~~0.91~~	~~0.091~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001288	B1C774	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		6.92	mg/kg	0.91	3.6	05/10/05	04/28/05	04/28/05
W050001288	B1C774	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		13.4	mg/kg	0.91	0.18	05/10/05	04/28/05	04/28/05
~~W050001288~~	~~B1C774~~	~~GRP~~	~~TRENT~~	~~7440-61-1~~	~~Uranium~~	~~SOIL~~	~~LA-505-412~~		~~1.01~~	~~mg/kg~~	~~0.91~~	~~0.091~~	~~05/10/05~~	~~04/28/05~~	~~04/28/05~~
W050001289	B1C775	GRP	TRENT	TS	Total solids	SOIL	LA-519-412		96.2	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411	J	9.70	pH	1.00	0.010	05/03/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but >= the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

DF=Dilution Factor
* - indicates results that have NOT been validated; + - indicates more than six qualifier symbols

6/20/05

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-015: F04-015

Group #: WSCF20050940

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001289	B1C775	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	U	< 2.65	mg/kg	49.00	2.6	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	B	18.5	mg/kg	49.00	4.9	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.167	mg/kg	0.93	0.093	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		6.45	mg/kg	0.93	3.7	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		7.45	mg/kg	0.93	0.19	05/10/05	04/28/05	04/28/05
W050001289	B1C775	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412		0.928	mg/kg	0.93	0.093	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	TS	Total solids	SOIL	LA-519-412		97.0	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411	J	9.69	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	U	< 2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	B	7.32	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.141	mg/kg	0.89	0.089	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		4.22	mg/kg	0.89	3.6	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		0.02	mg/kg	0.89	0.18	05/10/05	04/28/05	04/28/05
W050001290	B1C776	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412		0.544	mg/kg	0.89	0.089	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	TS	Total solids	SOIL	LA-519-412		98.9	%	1.00	0.0	05/03/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411	J	9.44	pH	1.00	0.010	05/03/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	U	< 2.70	mg/kg	50.00	2.7	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	B	25.0	mg/kg	50.00	5.0	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	U	< 0.0993	mg/kg	0.99	0.099	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412	U	< 3.97	mg/kg	0.99	4.0	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		3.11	mg/kg	0.99	0.20	05/10/05	04/28/05	04/28/05
W050001291	B1C777	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412		0.459	mg/kg	0.99	0.099	05/10/05	04/28/05	04/28/05

MDL=Minimum Detection Limit B - The analyte < the RDL but > = the IDL/MDL (inorganic) U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	**WSCF20050940**
Sample Matrix	**Soil**
Sample Visual	**N/A**
SAF Number	**F04-015**
Data Deliverable	**Summary Report**

Introduction

Six (6) 200-MW-1 Characterization Sampling and Analysis – Soil/216-T-13, 10' – 11', samples (B1C769, B1C771, B1C774, B1C775, B1C776 and B1C777) were received at the WSCF Laboratory on April 28, 2005. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) 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 3.

Analytical Methodology for Requested Analyses

Inorganic

- Anions by EPA Method 300.0. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 9045C. Analytical work was performed with no deviations to the approved method.

Organic

- PCB by EPA Method 8082. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.

- TPH Diesel/Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.

- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA [Americium, Plutonium and Uranium], GEA, Sr-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analyses were not met. A Blank, Laboratory Control Sample, Duplicate, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 14 for QC details. Analytical Notes:

- Preparation Date: 09-may-2005.

- Sulfate - Sample (B1C769, B1C774, B1C775, B1C776 and B1C777) results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.

- Sulfate – The Duplicate Relative Percent Difference exceeded established laboratory limits.

All other QC controls are within the established limits.

ICP-MS Metals – The hold time for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Preparation Date: 09-may-2005.

All QC controls are within the established limits.

Percent Solids – Analyzed for organic results correction.

pH – All internal laboratory controls were within established limits. See page 16 for QC details. Analytical Note:

- Duplicate QC sample was analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

Organic Comments

- Sample results were moisture corrected and reported on a dry-weight basis.

PCB – The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 31 through 33 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 34 through 38 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Phenol-d5 – Surrogate recovery was less than established laboratory limits.
- Phenol and Pentachlorophenol – LCS recoveries were less than the established laboratory limits. Sample results were less than the method detection limit and U flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See pages 39 through 40 for QC details. Analytical Notes:

- Preparation Date: 04-may-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate were analyzed with each delivery group per GPP Letter of Instruction. See page 41 for QC details. Analytical Notes:

- Preparation Date: 11-may-2005.
- Total Petroleum Hydrocarbons, Gas – The Spike Relative Percent Difference and the Laboratory Control Sample recovery slightly exceeded. All other QC samples were within limits, sample results were U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 42 through 45 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See pages 52 through 56 for QC details. Analytical Notes:

- Americium-241, Plutonium-238 & 239/240, and Uranium-234, 235 & 238 Duplicate QC samples were analyzed on sample# B1C784 (SDG# 20050917, SAF# F04-019).
- GEA and Strontium-89/90– Duplicate QC samples were analyzed on sample# B1CY50 (SDG# 20050939, SAF# F04-019).
- Uranium-234, Urananium-235 and Plutonium-238 - Additional Batch QC Data are summarized below:

Additional Batch QC Data (Results)

[illegible] Number	[illegible]	[illegible]	[illegible]	[illegible]
Uranium-234/ Uranium-235				
BLANK		U-234	8.123E-03	
BLANK		U-235	6.651E-03	
B1C784	W050001268	U-234	3.168E-01	
DUPLICATE	W050001268	U-234	3.188E-01	0.6
B1C784	W050001268	U-235	2.675E-02	
DUPLICATE	W050001268	U-235	3.375E-02	23
Plutonium-238				
BLANK		Pu-238	-2.360E-02	
B1C784	W050001268	Pu-238	8.700E-03	

Additional Batch QC Data (Results)				
[illegible] Number	[illegible] Sample [illegible]	[illegible]	Results [illegible]	[illegible]
DUPLICATE	W050001268	Pu-238	U9.421E-03	N/A

- Americiam-243, Plutonium-242, Strontium-85 and Uranium-232 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample [illegible]	[illegible]	Tracer Recovery (Percent)
Americium-243			
BLANK		Am-243	93.6
LCS		Am-243	89.3
B1C784	W050001268	Am-243	106.7
DUPLICATE	W050001268	Am-243	87.5
B1C769	W050001286	Am-243	99.3
B1C771	W050001287	Am-243	87.3
B1C774	W050001288	Am-243	105.1
B1C775	W050001289	Am-243	84.8
B1C776	W050001290	Am-243	96.6
B1C777	W050001291	Am-243	84.9
Plutonium-242			
BLANK		Pu-242	86.2
LCS		Pu-242	94.0
B1C784	W050001268	Pu-242	84.0
DUPLICATE	W050001268	Pu-242	86.2

Radiochemical Tracer Percent Recovery			
[illegible]	[illegible]	[illegible]	[illegible] Percent
B1C769	W050001286	Pu-242	95.0
B1C771	W050001287	Pu-242	87.6
B1C774	W050001288	Pu-242	91.2
B1C775	W050001289	Pu-242	87.2
B1C776	W050001290	Pu-242	88.0
B1C777	W050001291	Pu-242	82.1
Strontium-85			
BLANK		Sr-85	83.9
LCS		Sr-85	98.2
B1CY50	W050001285	Sr-85	76.6
DUPLICATE	W050001285	Sr-85	88.3
B1C769	W050001286	Sr-85	87.4
B1C771	W050001287	Sr-85	84.6
B1C774	W050001288	Sr-85	91.4
B1C775	W050001289	Sr-85	87.2
B1C776	W050001290	Sr-85	80.7
B1C777	W050001291	Sr-85	91.9
Uranium-232			
BLANK		U-232	79.6
LCS		U-232	70.4
B1C784	W050001268	U-232	83.4
DUPLICATE	W050001268	U-232	83.9
B1C769	W050001286	U-232	90.8

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample	[illegible]	[illegible] (Percent)
B1C771	W050001287	U-232	87.2
B1C774	W050001288	U-232	95.0
B1C775	W050001289	U-232	82.1
B1C776	W050001290	U-232	93.2
B1C777	W050001291	U-232	82.1

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.

Pauline D. Mix
WSCF Client Services

Abbreviations
Hg – mercury
IC – ion chromatography
ICP – inductively coupled plasma
ICP/AES – ICP/atomic emission spectroscopy
ICP/MS – ICP/mass spectrometry
Total U – total uranium
AT/TB – total alpha/total beta
AEA – Alpha Energy Analysis
WTPH-G – Total Hydrocarbons-Gasoline
Am – americium
Cm - curium
Pu – plutonium
Np – neptunium
GEA – gamma energy analysis
H3 – Tritium
Sr – Strontium 89, 90
WTPH-D – Total Hydrocarbons-Diesel
TSS – Total Suspended Solids

5/30/05

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-124	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock — TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N — DATA TURNAROUND: 45 Days / ~~45 Days~~ 15
SAMPLING LOCATION: 216-T-13; 10-11 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO.: F04-015	AIR QUALITY ☐
ICE CHEST NO.	FIELD LOGBOOK NO. — COA: 119144E510	METHOD OF SHIPMENT: Government Vehicle	4-26-05
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

20050940

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME
B1C769 W05000128	SOIL	4/28/5	0930

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
TSPAPE/ [signature]	4-28-05 14:45	TA FRAZIER [signature]	4-28-05 14:45
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000021

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-124	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F04-015-125	PAGE 1 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N AIR QUALITY ☐
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	DATA TURNAROUND 45 Days / ~~45 Days~~ 1 Day 4-28-05
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C770

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C771	SOIL	4/28/05	0930										

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSMPH/ [signature] 4-28-05	14:45	TA FRAZIER [signature]	4/28/05 14:45
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000023

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-125	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 10-11 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

000024

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-137	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock; TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N; DATA TURNAROUND: 45 Days / ~~45 Days~~
SAMPLING LOCATION: 216-T-13; 12-13 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO.: F04-015	AIR QUALITY: ☐
ICE CHEST NO.	FIELD LOGBOOK NO.; COA: 119144E510	METHOD OF SHIPMENT: Government Vehicle	
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C780

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C774	SOIL	4-28-05	0955	X	X	X	X	X	X				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J Pope/ [illegible] 4-28-05	1445	Victor Bains [illegible]	4/28/05 14:45

SPECIAL INSTRUCTIONS: SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000025

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-137	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 12-13 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144E510	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen-in-Nitrate, Nitrogen-in-Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-138	PAGE 1 OF 2
COLLECTOR: Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT: CS Cearlock — TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N — DATA TURNAROUND: 45 Days / ~~15 Days~~
SAMPLING LOCATION: 216-T-13; 14-15 ft	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Soil	SAF NO.: F04-015	AIR QUALITY: ☐
ICE CHEST NO.	FIELD LOGBOOK NO. — COA: 119144ES10	METHOD OF SHIPMENT: Government Vehicle	
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C781

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGa*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C775	SOIL	4-28-05	1015	X	X	X	X	X	X				

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: Isaac Pfister	DATE/TIME: 4-28-05 1445	RECEIVED BY/STORED IN: Victor Barnes	DATE/TIME: 4/28/05 1445	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	

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

A-6003-618(03/03)

4-26-05

0000027

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-138	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 14-15 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene~~, trans-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-015-139	PAGE 1 OF 2

COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ
SAMPLING LOCATION 216-T-13; 19-20 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND: 45 Days / ~~45 Days~~ 4-26-05

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1C782

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None				
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P				
NO. OF CONTAINER(S)	1	1	1	3	1	1				
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C776	SOIL	4-28-05	1300	X	X	X	X	X	X				

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM JS Pope / [signature] 4-28-05	DATE/TIME 1445	RECEIVED BY/STORED IN Victor Biles [signature] 4/28/05	DATE/TIME 1445
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

000029

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-139	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE BN AIR QUALITY ☐	DATA TURNAROUND 45 Days
SAMPLING LOCATION 216-T-13; 19-20 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015		
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis. PMG 2/14/05

(1)IC Anions - 300.0 {~~Fluoride, Nitrogen-in Nitrate, Nitrogen-in Nitrite~~, Phosphorous in phosphate, Sulfate} ~~{Total Cyanide - 9010}~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Cadmium, Chromium, ~~Copper, Silver~~} ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, ~~n-Butylbenzene, trans~~-1,2-Dichloroethylene}
(4)Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-618(03/03)

000030

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F04-015-140 PAGE 1 OF 2

COLLECTOR
Pope/Pfister/Tyra/Wiberg

SAMPLING LOCATION
216-T-13; 24-25 ft

ICE CHEST NO.

COMPANY CONTACT
CS Cearlock

TELEPHONE NO.
372-9638

PROJECT DESIGNATION
200-MW-1 Characterization Sampling and Analysis - Soil

FIELD LOGBOOK NO.
COA 119144E510

PROJECT COORDINATOR
TRENT, SJ

SAF NO.
F04-015

METHOD OF SHIPMENT
Government Vehicle

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND
45 Days / ~~45 Days~~

SHIPPED TO
Waste Sampling & Characterization

OFFSITE PROPERTY NO.
N/A

BILL OF LADING/AIR BILL NO.
N/A

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1C783

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None						
TYPE OF CONTAINER	aG	aG	aG	aGs*	aG	P						
NO. OF CONTAINER(S)	1	1	1	3	1	1						
VOLUME	250mL	120mL	250mL	40mL	120mL	500mL						
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS						

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1C777	SOIL	4-28-05	1330	X	X	X	X	X	X				

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JPPE	4-28-05 1445	Victor Bins	4/28/05 1445

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(03/03)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F04-015-140	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Tyra/Wiberg	COMPANY CONTACT CS Cearlock	TELEPHONE NO. 372-9638	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION 216-T-13; 24-25 ft	PROJECT DESIGNATION 200-MW-1 Characterization Sampling and Analysis - Soil		SAF NO. F04-015	AIR QUALITY ☐	45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119144ES10	METHOD OF SHIPMENT Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from the WTPH-D analysis.

(1)IC Anions - 300.0 (Nitrite, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorous in phosphate, Sulfate) ~~Total Cyanide - 9010~~; pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) (Cadmium, Chromium, ~~Copper, Silver~~) ICP/MS - 200.8 (Add-on) (Lead, Uranium)
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) (1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene; trans-1,2-Dichloroethylene)
(4)Semi-VOA -- 8270A (Add-On) (Tributyl phosphate) TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(5)Gamma Spectroscopy (Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155) Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 -- Total Sr;

A-6003-619(03/03)

Appendix 5

Data Validation Supporting Documentation

GENERAL CHEMISTRY ANALYSIS DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: 200-MW-1			DATA PACKAGE: S0940		
VALIDATOR: TLI		LAB: WSCF		DATE: 6/18/05	
			SDG: S0940		

ANALYSES PERFORMED					
Anions/IC	TOC	TOX	TPH-418.1	Oil and Grease	Alkalinity
Ammonia	BOD/COD	Chloride	Chromium-VI	pH	NO_3/NO_2
Sulfate	TDS	TKN	Phosphate		

SAMPLES/MATRIX
B1C769 B1C771 B1C774 B1C775
B1C776 B1C777
Soil

1. DATA PACKAGE COMPLETENESS AND CASE NARRATIVE

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

Comments:

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 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: NO FB

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

Spike samples analyzed? ..... Yes No N/A

Spike recoveries acceptable? ..... Yes No N/A

Sike 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: NO PAS

GENERAL CHEMISTRY 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: Sulfate - RPD 25.6% J all 4/20/04

6. HOLDING TIMES (all levels)

Samples properly preserved? ..... Yes No N/A

Sample holding times acceptable? ..... Yes No N/A

Comments: pH >12 J all

GENERAL CHEMISTRY ANALYSIS DATA VALIDATION CHECKLIST

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:

Appendix 6

Additional Documentation Requested by Client

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: Anions by Ion Chromatography

SAF Number: F04-015
Sample Date: 04/28/05
Receive Date:04/28/05

Lab ID: W050001286

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
DUP	Phosphate (P) by IC	PO4-P	<2.65e0	n/a	RPD	05/10/05	0.000	20.000	U
DUP	Sulfate	14808-79-8	9.27e+00	25.670	RPD	05/10/05	0.000	20.000	*
MS	Phosphate (P) by IC	PO4-P	8.21e-01	84.727	% Recov	05/10/05	75.000	125.000	
MS	Sulfate	14808-79-8	1.87e+00	93.500	% Recov	05/10/05	75.000	125.000	
MSD	Phosphate (P) by IC	PO4-P	9.13e-01	94.221	% Recov	05/10/05	75.000	125.000	
MSD	Sulfate	14808-79-8	1.86e+00	93.000	% Recov	05/10/05	75.000	125.000	

BATCH QC

BLANK	Phosphate (P) by IC	PO4-P	<5.40e-2	n/a	mg/L	05/10/05	0.000	300.000	U
BLANK	Phosphate (P) by IC	PO4-P	<5.40e-2	n/a	mg/L	05/10/05	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	05/10/05	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	05/10/05	0.000	300.000	U
LCS	Phosphate (P) by IC	PO4-P	1.90e+02	98.039	% Recov	05/10/05	80.000	120.000	
LCS	Sulfate	14808-79-8	3.93e+02	98.496	% Recov	05/10/05	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050940
Matrix: SOLID
Test: pH Soil and Waste Measurement

SAF Number: F04-015
Sample Date: 04/27/05
Receive Date:04/27/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001268									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	pH Soil and Waste Measurement	PH	9.605	0.398	RPD	05/03/05	0.000	3.000	