



Date: 11 July 2005
 To: Fluor Hanford Inc. (technical representative)
 From: TechLaw, Inc.
 Project: BC Controlled Area Surficial Soil Characterization
 Subject: Wet Chemistry - Data Package No. WSCF20050636 (50636)

1212820

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50636 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
B1CHH6	3/18/05	Soil	C	IC anions by 300
B1CHH7	3/11/05	Soil	C	IC anions by 300
B1CHH8	3/11/05	Soil	C	IC anions by 300
B1CHC8	3/11/05	Soil	C	IC anions by 300
B1CHC9	3/18/05	Soil	C	IC anions by 300
B1CHD0	3/18/05	Soil	C	IC anions by 300
B1CHD1	3/18/05	Soil	C	IC anions by 300
B1CHD2	3/18/05	Soil	C	IC anions by 300
B1CHD3	3/18/05	Soil	C	IC anions by 300
B1CHD4	3/11/05	Soil	C	IC anions by 300
B1CHD5	3/11/05	Soil	C	IC anions by 300*
B1CHH3	3/11/05	Soil	C	IC anions by 300
B1CHD6	3/11/05	Soil	C	IC anions by 300*
B1CHH4	3/11/05	Soil	C	IC anions by 300*
B1CHD7	3/11/05	Soil	C	IC anions by 300*
B1CHH5	3/11/05	Soil	C	IC anions by 300*

* - Nitrate and nitrite not validated or reported per FHI

Data validation was conducted in accordance with the FHI validation statement of work and the Sampling and Analysis Instruction for the BC Controlled Area Soil Characterization, D&D-24693, Rev. 0. Appendices 1 through 6 provide the following information as indicated below:



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- 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 IC anions.

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.

- **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 70% to 130%. 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 70% and a sample result less than the IDL are qualified "UJ". Samples with a recovery of greater than 130% or less than 70% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a recovery greater than 130% 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 70% to 130% for LCS analysis. Samples with a recovery of less than 50% are rejected and flagged "UR". Samples with a recovery of 50% to 69% and a sample recovery below the IDL are qualified "UJ". Samples with a recovery of greater than 130% or less than 70% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a recovery greater than 130% 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 30%, 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.

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Field Duplicate

No field duplicates were submitted for analysis.

- **Analytical Detection Levels**

Reported analytical detection levels are compared against the required quantitation limits (RQLs) to ensure that laboratory detection levels meet the required criteria. All undetected chloride results exceeded the RQL. Under the FHI statement of work, no qualification is required. All other results met the RQL.

- **Completeness**

Data package No. 50636 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 undetected chloride results exceeded the RQL. Under the FHI statement of work, no qualification is required.

REFERENCES

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

D&D-24693, Rev. 0, *Sampling and Analysis Instruction for the BC Controlled Area Soil Characterization*.

Appendix 1
Glossary of Data Reporting Qualifiers

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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

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WET CHEMISTRY DATA QUALIFICATION SUMMARY*

SDG: 50636	REVIEWER: TLI	PROJECT: BC Controlled Area Surficial Soil Characterization	PAGE <u>1</u> OF <u>1</u>
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

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Project: FLUOR-HANFORD																							
Laboratory: WSCF																							
Case		SDG: WSCF20050636																					
Sample Number		B1CHH6		B1CHH7		B1CHH8		B1CHC8		B1CHC9		B1CHD0		B1CHD1		B1CHD2		B1CHD3		B1CHD4			
Remarks																							
Sample Date		3/18/05		3/11/05		3/11/05		3/11/05		3/18/05		3/18/05		3/18/05		3/18/05		3/18/05		3/11/05			
Wet Chemistry		PQL	Result	Q	Result	Q																	
Fluoride		5	<1.13	U	<1.15	U																	
Chloride		2	<2.55	U	<2.60	U	<2.60	U	<2.60	U	3.12		<2.60	U	<2.60	U	<2.60	U	<2.60	U	<2.60	U	
Sulfate		5	<4.90	U	<5.00	U	<5.00	U	<5.00	U	10.5		<5.00	U	18.5		<5.00	U	<5.00	U	<5.00	U	
		B1CHD5		B1CHH3		B1CHD6		B1CHH4		B1CHD7		B1CHH5											
		3/11/05		3/11/05		3/11/05		3/11/05		3/11/05		3/11/05											
Wet Chemistry			Result	Q																			
Fluoride		5	<1.15	U																			
Chloride		2	<2.60	U																			
Sulfate		5	<5.00	U	38.0		<5.00	U	<5.00	U	<5.00	U	<5.00	U									

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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: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Inorganic													
W050001016	B1CHH6	GRP	TRENT	TS	Total solids	SOIL	LA-519-412		96.0	%	1.00	0.0	04/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	16984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.13	mg/kg	48.00	1.1	03/28/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	16887-00-6	Chloride	SOIL	LA-533-410	U	< 2.55	mg/kg	48.00	2.5	03/28/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 4.90	mg/kg	48.00	4.9	03/28/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7439-96-6	Manganese	SOIL	LA-505-411		324	mg/kg	97.24	0.087	03/30/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411		6.23	mg/kg	97.24	0.087	03/30/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.53	mg/kg	97.24	2.5	03/30/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412		8.46	mg/kg	1.04	0.10	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412		82.4	mg/kg	1.04	4.2	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412		0.266	mg/kg	1.04	0.10	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.123	mg/kg	1.04	0.10	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		7.20	mg/kg	1.04	4.2	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412		7.21	mg/kg	1.04	0.010	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412		9.66	mg/kg	1.04	2.1	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-62-2	Vanadium	SOIL	LA-505-412		41.9	mg/kg	1.04	0.21	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-66-6	Zinc	SOIL	LA-505-412		36.5	mg/kg	1.04	4.2	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		4.43	mg/kg	1.04	0.21	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7439-97-6	Mercury	SOIL	LA-505-412		0.106	mg/kg	1.04	0.10	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412		0.363	mg/kg	1.04	0.31	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412		0.443	mg/kg	1.04	0.10	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412		2.10	mg/kg	1.04	0.42	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.416	mg/kg	1.04	0.42	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412		0.179	mg/kg	1.04	0.010	05/15/05 03/18/05 03/22/05
W050001016	B1CHH6	GRP	TRENT	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05 03/18/05 03/22/05

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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001030	B1CHH7	TS	Total solids	SOIL	LA-519-412		98.9	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001030	B1CHH7	16984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/11/05	03/22/05
W050001030	B1CHH7	18887-00-6	Chloride	SOIL	LA-533-410	U	< 2.80	mg/kg	50.00	2.8	03/28/05	03/11/05	03/22/05
W050001030	B1CHH7	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/28/05	03/11/05	03/22/05
W050001030	B1CHH7	7439-96-5	Manganese	SOIL	LA-505-411		574	mg/kg	87.45	0.097	03/30/05	03/11/05	03/22/05
W050001030	B1CHH7	7439-93-2	Lithium	SOIL	LA-505-411		5.37	mg/kg	87.45	0.097	03/30/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.53	mg/kg	87.45	2.5	03/30/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-02-0	Nickel	SOIL	LA-505-412		8.74	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-36-0	Antimony	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-39-3	Barium	SOIL	LA-505-412		89.1	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-41-7	Beryllium	SOIL	LA-505-412		0.246	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-43-9	Cadmium	SOIL	LA-505-412		0.173	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-47-3	Chromium	SOIL	LA-505-412		7.17	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-48-4	Cobalt	SOIL	LA-505-412		7.51	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-50-8	Copper	SOIL	LA-505-412		10.9	mg/kg	1.05	2.1	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-82-2	Vanadium	SOIL	LA-505-412		50.0	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-88-6	Zinc	SOIL	LA-505-412		41.9	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7439-92-1	Lead	SOIL	LA-505-412		3.78	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7439-97-8	Mercury	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7439-98-7	Molybdenum	SOIL	LA-505-412		0.588	mg/kg	1.05	0.32	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-81-1	Uranium	SOIL	LA-505-412		0.377	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-38-2	Arsenic	SOIL	LA-505-412		1.78	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.420	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-28-0	Thallium	SOIL	LA-505-412		0.372	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	TS	Total solids	SOIL	LA-519-412		97.0	%	1.00	0.0	04/15/05	03/11/05	03/22/05

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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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001031	B1CHH8	18984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/11/05	03/22/05
W050001031	B1CHH8	18887-00-8	Chloride	SOIL	LA-533-410	U	< 2.60	mg/kg	50.00	2.6	03/28/05	03/11/05	03/22/05
W050001031	B1CHH8	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/28/05	03/11/05	03/22/05
W050001031	B1CHH8	7439-86-5	Manganese	SOIL	LA-505-411		986	mg/kg	99.84	0.10	03/30/05	03/11/05	03/22/05
W050001031	B1CHH8	7438-93-2	Lithium	SOIL	LA-505-411		6.87	mg/kg	99.84	0.10	03/30/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.59	mg/kg	99.84	2.6	03/30/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-02-0	Nickel	SOIL	LA-505-412		8.50	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-38-0	Antimony	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-39-3	Barium	SOIL	LA-505-412		79.7	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-41-7	Beryllium	SOIL	LA-505-412		0.262	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-43-9	Cadmium	SOIL	LA-505-412		0.152	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-47-3	Chromium	SOIL	LA-505-412		7.03	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-48-4	Cobalt	SOIL	LA-505-412		7.46	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-50-8	Copper	SOIL	LA-505-412		10.7	mg/kg	1.04	2.1	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-82-2	Vanadium	SOIL	LA-505-412		49.2	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-66-6	Zinc	SOIL	LA-505-412		40.1	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7439-92-1	Lead	SOIL	LA-505-412		3.98	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7439-97-6	Mercury	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7439-98-7	Molybdenum	SOIL	LA-505-412		0.693	mg/kg	1.04	0.31	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-81-1	Uranium	SOIL	LA-505-412		0.387	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-38-2	Arsenic	SOIL	LA-505-412		2.39	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.416	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-28-0	Thallium	SOIL	LA-505-412		0.275	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	TS	Total solids	SOIL	LA-519-412		84.9	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001032	B1CHC8	18984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/11/05	03/22/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001032	B1CHC8	16887-00-8	Chloride	SOIL	LA-533-410	U	< 2.60	mg/kg	50.00	2.6	03/28/05	03/11/05	03/22/05
W050001032	B1CHC8	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/28/05	03/11/05	03/22/05
W050001032	B1CHC8	7438-98-5	Manganese	SOIL	LA-505-411		3.86	mg/kg	97.50	0.098	03/30/05	03/11/05	03/22/05
W050001092	B1CHC8	7439-93-2	Lithium	SOIL	LA-505-411		6.17	mg/kg	97.50	0.098	03/30/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.54	mg/kg	97.50	2.5	03/30/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-02-0	Nickel	SOIL	LA-505-412		8.44	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-38-0	Antimony	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-39-3	Barium	SOIL	LA-505-412		77.8	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-41-7	Beryllium	SOIL	LA-505-412		0.273	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-43-9	Cadmium	SOIL	LA-505-412		0.155	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-47-3	Chromium	SOIL	LA-505-412		7.73	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-48-4	Cobalt	SOIL	LA-505-412		7.66	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-50-8	Copper	SOIL	LA-505-412		9.51	mg/kg	1.05	2.1	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-62-2	Vanadium	SOIL	LA-505-412		51.0	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-68-6	Zinc	SOIL	LA-505-412		42.4	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7439-92-1	Lead	SOIL	LA-505-412		3.86	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7439-97-6	Mercury	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7438-98-7	Molybdenum	SOIL	LA-505-412		0.406	mg/kg	1.05	0.32	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-61-1	Uranium	SOIL	LA-505-412		0.687	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-38-2	Arsenic	SOIL	LA-505-412		1.41	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.420	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-28-0	Thallium	SOIL	LA-505-412		0.217	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001032	B1CHC8	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001033	B1CHC9	TS	Total solids	SOIL	LA-519-412		94.4	%	1.00	0.0	04/15/05	03/18/05	03/22/05
W050001033	B1CHC9	18984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/18/05	03/22/05
W050001033	B1CHC9	18887-00-8	Chloride	SOIL	LA-533-410	U	< 2.60	mg/kg	50.00	2.6	03/28/05	03/18/05	03/22/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001033	B1CHC9	GRP TRENT	14808-79-8 Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/28/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7439-98-5 Manganese	SOIL	LA-505-411		4.34	mg/kg	89.34	0.099	03/30/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7439-93-2 Lithium	SOIL	LA-505-411		6.96	mg/kg	89.34	0.099	03/30/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-42-8 Boron	SOIL	LA-505-411	U	< 2.56	mg/kg	89.34	2.8	03/30/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-02-0 Nickel	SOIL	LA-505-412		9.87	mg/kg	1.00	0.10	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-22-4 Silver	SOIL	LA-505-412	U	< 0.100	mg/kg	1.00	0.10	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-38-0 Antimony	SOIL	LA-505-412	U	< 1.00	mg/kg	1.00	1.0	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-39-3 Barium	SOIL	LA-505-412		97.8	mg/kg	1.00	4.0	06/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-41-7 Beryllium	SOIL	LA-505-412		0.319	mg/kg	1.00	0.10	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-43-9 Cadmium	SOIL	LA-505-412		0.153	mg/kg	1.00	0.10	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-47-3 Chromium	SOIL	LA-505-412		6.94	mg/kg	1.00	4.0	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-48-4 Cobalt	SOIL	LA-505-412		9.99	mg/kg	1.00	0.010	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-50-8 Copper	SOIL	LA-505-412		13.7	mg/kg	1.00	2.0	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-62-2 Vanadium	SOIL	LA-505-412		58.1	mg/kg	1.00	0.20	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-68-6 Zinc	SOIL	LA-505-412		45.9	mg/kg	1.00	4.0	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7439-92-1 Lead	SOIL	LA-505-412		5.14	mg/kg	1.00	0.20	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7439-97-6 Mercury	SOIL	LA-505-412	U	< 0.100	mg/kg	1.00	0.10	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7439-98-7 Molybdenum	SOIL	LA-505-412		0.391	mg/kg	1.00	0.30	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-61-1 Uranium	SOIL	LA-505-412		0.883	mg/kg	1.00	0.10	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-38-2 Arsenic	SOIL	LA-505-412		2.86	mg/kg	1.00	0.40	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7782-49-2 Selenium	SOIL	LA-505-412	U	< 0.400	mg/kg	1.00	0.40	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-28-0 Thallium	SOIL	LA-505-412		0.158	mg/kg	1.00	0.010	05/15/05	03/18/05	03/22/05
W050001033	B1CHC9	GRP TRENT	7440-31-5 Tin	SOIL	LA-505-412	U	< 1.00	mg/kg	1.00	1.0	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	TS Total solids	SOIL	LA-519-412		94.5	%	1.00	0.0	04/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	16984-48-8 Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	16887-00-6 Chloride	SOIL	LA-533-410	B	3.12	mg/kg	50.00	2.6	03/28/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	14808-79-8 Sulfate	SOIL	LA-533-410	B	10.5	mg/kg	50.00	5.0	03/28/05	03/18/05	03/22/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001034	B1CHD0	GRP TRENT	7439-98-5	Manganese	SOIL	LA-505-411	407	mg/kg	96.34	0.086	03/30/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7439-93-2	Lithium	SOIL	LA-505-411	7.37	mg/kg	96.34	0.096	03/30/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-42-8	Boron	SOIL	LA-505-411	< 2.50	mg/kg	96.34	0.096	03/30/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-02-0	Nickel	SOIL	LA-505-412	9.57	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-22-4	Silver	SOIL	LA-505-412	< 0.105	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-38-0	Antimony	SOIL	LA-505-412	< 1.05	mg/kg	1.05	1.0	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-39-3	Barium	SOIL	LA-505-412	108	mg/kg	1.05	4.2	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	0.327	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.113	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412	7.92	mg/kg	1.05	4.2	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-48-4	Cobalt	SOIL	LA-505-412	8.97	mg/kg	1.05	0.010	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-50-8	Copper	SOIL	LA-505-412	12.6	mg/kg	1.05	2.1	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-82-2	Vanadium	SOIL	LA-505-412	48.6	mg/kg	1.05	0.21	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-66-6	Zinc	SOIL	LA-505-412	43.9	mg/kg	1.05	4.2	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412	5.22	mg/kg	1.05	0.21	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7439-97-8	Mercury	SOIL	LA-505-412	< 0.105	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412	< 0.315	mg/kg	1.05	0.32	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-81-1	Uranium	SOIL	LA-505-412	0.414	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	2.98	mg/kg	1.05	0.42	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7782-49-2	Selenium	SOIL	LA-505-412	< 0.420	mg/kg	1.05	0.42	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-28-0	Thallium	SOIL	LA-505-412	0.155	mg/kg	1.05	0.010	05/15/05	03/18/05	03/22/05
W050001034	B1CHD0	GRP TRENT	7440-31-5	Tin	SOIL	LA-505-412	< 1.05	mg/kg	1.05	1.0	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	TS	Total solids	SOIL	LA-519-412	95.4	%	1.00	0.0	04/15/05	03/18/05	03/22/05
W050001035	B1CHQ1	GRP TRENT	18984-48-8	Fluoride	SOIL	LA-533-410	< 1.15	mg/kg	50.00	1.2	03/28/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	18887-00-6	Chloride	SOIL	LA-533-410	< 2.80	mg/kg	50.00	2.8	03/28/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	< 5.00	mg/kg	50.00	5.0	03/28/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7439-98-5	Manganese	SOIL	LA-505-411	312	mg/kg	96.34	0.086	03/30/05	03/18/05	03/22/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001035	B1CHD1	GRP TRENT	7439-83-2	Lithium	SOIL	LA-505-411	7.51	mg/kg	98.48	0.088	03/30/05	03/18/05	03/22/05
W050001036	B1CHD1	GRP TRENT	7440-42-8	Boron	SOIL	LA-505-411 U	< 2.58	mg/kg	98.48	2.8	03/30/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-02-0	Nickel	SOIL	LA-505-412	8.89	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-22-4	Silver	SOIL	LA-505-412 U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-38-0	Antimony	SOIL	LA-505-412 U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-39-3	Barium	SOIL	LA-505-412	77.8	mg/kg	1.03	4.1	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	0.243	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-43-9	Cadmium	SOIL	LA-505-412 U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412	8.14	mg/kg	1.03	4.1	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-48-4	Cobalt	SOIL	LA-505-412	5.88	mg/kg	1.03	0.010	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-60-8	Copper	SOIL	LA-505-412	9.20	mg/kg	1.03	2.1	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-82-2	Vanadium	SOIL	LA-505-412	38.7	mg/kg	1.03	0.21	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-68-8	Zinc	SOIL	LA-505-412	34.1	mg/kg	1.03	4.1	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412	3.63	mg/kg	1.03	0.21	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7439-97-6	Mercury	SOIL	LA-505-412 U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412 U	< 0.309	mg/kg	1.03	0.31	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-81-1	Uranium	SOIL	LA-505-412	0.358	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	2.24	mg/kg	1.03	0.41	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7782-49-2	Selenium	SOIL	LA-505-412 U	< 0.412	mg/kg	1.03	0.41	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP TRENT	7440-28-0	Thallium	SOIL	LA-505-412	0.138	mg/kg	1.03	0.010	05/15/05	03/18/05	03/22/05
W050001036	B1CHD1	GRP TRENT	7440-31-5	Tin	SOIL	LA-505-412 U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/18/05	03/22/05
W050001038	B1CHD2	GRP TRENT	TS	Total solids	SOIL	LA-519-412	85.8	%	1.00	0.0	04/15/05	03/18/05	03/22/05
W050001038	B1CHD2	GRP TRENT	18984-48-8	Fluoride	SOIL	LA-533-410 U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/18/05	03/22/05
W050001038	B1CHD2	GRP TRENT	18887-00-6	Chloride	SOIL	LA-533-410 U	< 2.60	mg/kg	50.00	2.8	03/28/05	03/18/05	03/22/05
W050001038	B1CHD2	GRP TRENT	14808-79-8	Sulfate	SOIL	LA-533-410 B	18.5	mg/kg	50.00	5.0	03/28/05	03/18/05	03/22/05
W050001038	B1CHD2	GRP TRENT	7439-89-5	Manganese	SOIL	LA-505-411	377	mg/kg	99.11	0.999	03/30/05	03/18/05	03/22/05
W050001038	B1CHD2	GRP TRENT	7439-83-2	Lithium	SOIL	LA-505-411	6.10	mg/kg	99.11	0.999	03/30/05	03/18/05	03/22/05

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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
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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014; F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001036	B1CHD2	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.58	mg/kg	99.11	2.6	03/30/05 03/18/05 03/22/06
W050001036	B1CHD2	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412	U	8.18	mg/kg	1.03	0.10	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.103	mg/kg	1.03	0.10	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 1.03	mg/kg	1.03	1.0	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412	U	69.4	mg/kg	1.03	4.1	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	U	0.245	mg/kg	1.03	0.10	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	U	0.109	mg/kg	1.03	0.10	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412	U	7.84	mg/kg	1.03	4.1	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412	U	6.84	mg/kg	1.03	0.010	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412	U	8.37	mg/kg	1.03	2.1	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-62-2	Vanadium	SOIL	LA-505-412	U	44.5	mg/kg	1.03	0.21	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-66-6	Zinc	SOIL	LA-505-412	U	41.4	mg/kg	1.03	4.1	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412	U	3.72	mg/kg	1.03	0.21	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7439-97-6	Mercury	SOIL	LA-505-412	U	< 0.103	mg/kg	1.03	0.10	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412	U	< 0.309	mg/kg	1.03	0.31	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-81-1	Uranium	SOIL	LA-505-412	U	0.340	mg/kg	1.03	0.10	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	U	1.57	mg/kg	1.03	0.41	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.412	mg/kg	1.03	0.41	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412	U	0.118	mg/kg	1.03	0.010	05/15/05 03/18/05 03/22/05
W050001036	B1CHD2	GRP	TRENT	7440-51-5	Tin	SOIL	LA-505-412	U	< 1.03	mg/kg	1.03	1.0	05/15/05 03/18/05 03/22/05
W050001037	B1CHD3	GRP	TRENT	TS	Total solids	SOIL	LA-519-412		94.7	%	1.00	0.0	04/15/05 03/18/05 03/22/05
W050001037	B1CHD3	GRP	TRENT	16884-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05 03/18/05 03/22/05
W050001037	B1CHD3	GRP	TRENT	16887-00-6	Chloride	SOIL	LA-533-410	U	< 2.60	mg/kg	50.00	2.6	03/28/05 03/18/05 03/22/05
W050001037	B1CHD3	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/28/05 03/18/05 03/22/05
W050001037	B1CHD3	GRP	TRENT	7439-90-5	Manganese	SOIL	LA-505-411	U	991	mg/kg	96.66	0.097	03/30/05 03/18/05 03/22/05
W050001037	B1CHD3	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411	U	7.33	mg/kg	96.66	0.097	03/30/05 03/18/05 03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.51	mg/kg	96.66	2.5	03/30/05 03/18/05 03/22/05

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MDL = Minimum Detection Limit
RQ = Result Qualifier

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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive		
W050001037	B1CHD3	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412	10.1	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412	95.0	mg/kg	1.05	4.2	05/16/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	0.288	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.141	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412	7.40	mg/kg	1.05	4.2	05/15/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412	8.84	mg/kg	1.05	0.010	05/15/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412	11.6	mg/kg	1.05	2.1	05/15/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7440-62-2	Vanadium	SOIL	LA-505-412	50.4	mg/kg	1.05	0.21	05/16/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7440-66-6	Zinc	SOIL	LA-505-412	40.8	mg/kg	1.05	4.2	05/15/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7439-82-1	Lead	SOIL	LA-505-412	4.19	mg/kg	1.05	0.21	05/15/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7439-97-6	Mercury	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412	U	< 0.315	mg/kg	1.05	0.32	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412	0.442	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	2.86	mg/kg	1.05	0.42	05/15/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.420	mg/kg	1.05	0.42	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412	0.135	mg/kg	1.05	0.010	05/15/05	03/18/05	03/22/05	
W050001037	B1CHD3	GRP	TRENT	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/18/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	TS	Total solids	SOIL	LA-519-412	93.5	%	1.00	0.0	04/15/05	03/11/05	03/22/05	
W050001038	B1CHD4	GRP	TRENT	16984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	16887-00-6	Chloride	SOIL	LA-533-410	U	< 2.60	mg/kg	50.00	2.6	03/29/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/29/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	7439-98-5	Manganese	SOIL	LA-505-411	89.0	mg/kg	95.62	0.096	03/30/05	03/11/05	03/22/05	
W050001038	B1CHD4	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411	6.78	mg/kg	95.62	0.096	03/30/05	03/11/05	03/22/05	
W050001038	B1CHD4	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.49	mg/kg	95.62	2.5	03/30/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412	9.52	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05	

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014; F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001038	B1CHD4	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.103	mg/kg	1.03	0.10	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 1.03	mg/kg	1.03	1.0	06/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412		90.8	mg/kg	1.03	4.1	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412		0.310	mg/kg	1.03	0.10	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.118	mg/kg	1.03	0.10	06/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		8.07	mg/kg	1.03	4.1	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412		10.1	mg/kg	1.03	0.010	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412		11.8	mg/kg	1.03	2.1	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-62-2	Vanadium	SOIL	LA-505-412		47.8	mg/kg	1.03	0.21	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-66-6	Zinc	SOIL	LA-505-412		42.2	mg/kg	1.03	4.1	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		4.85	mg/kg	1.03	0.21	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7439-97-6	Mercury	SOIL	LA-505-412	U	< 0.103	mg/kg	1.03	0.10	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412	U	< 0.309	mg/kg	1.03	0.31	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-81-1	Uranium	SOIL	LA-505-412		0.690	mg/kg	1.03	0.10	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412		2.44	mg/kg	1.03	0.41	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.412	mg/kg	1.03	0.41	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412		0.130	mg/kg	1.03	0.010	05/15/05 03/11/05 03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.03	mg/kg	1.03	1.0	05/15/05 03/11/05 03/22/05
W050001039	B1CHD5	GRP	TRENT	TS	Total solids	SOIL	LA-519-412		95.8	%	1.00	0.0	04/15/05 03/11/05 03/22/05
W050001039	B1CHD5	GRP	TRENT	18984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/29/05 03/11/05 03/22/05
W050001039	B1CHD5	GRP	TRENT	18887-00-6	Chloride	SOIL	LA-533-410	U	< 2.80	mg/kg	50.00	2.8	03/29/05 03/11/05 03/22/05
W050001039	B1CHD5	GRP	TRENT	NO2-N	Nitrogen in Nitrite	SOIL	LA-533-410	U	< 0.956	mg/kg	50.00	0.95	03/29/05 03/11/05 03/22/05
W050001039	B1CHD5	GRP	TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410		7.38	mg/kg	50.00	0.66	03/29/05 03/11/05 03/22/05
W050001039	B1CHD5	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/29/05 03/11/05 03/22/05
W050001039	B1CHD5	GRP	TRENT	7439-98-5	Manganese	SOIL	LA-505-411		436	mg/kg	98.91	0.099	03/30/05 03/11/05 03/22/05
W050001039	B1CHD5	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411		8.34	mg/kg	98.91	0.099	03/30/05 03/11/05 03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.57	mg/kg	98.91	2.6	03/30/05 03/11/05 03/22/05

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MDL = Minimum Detection Limit
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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
W050001039	B1CHD5	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412	8.43	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412 U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-38-0	Antimony	SOIL	LA-505-412 U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412	77.4	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	0.268	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.120	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412	8.42	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412	7.01	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412	9.74	mg/kg	1.05	2.1	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-82-2	Vanadium	SOIL	LA-505-412	46.6	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-68-6	Zinc	SOIL	LA-505-412	45.9	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412	4.53	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7439-97-8	Mercury	SOIL	LA-505-412 U	< 0.165	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412	0.324	mg/kg	1.05	0.32	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412	0.549	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	1.82	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412 U	< 0.420	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412	0.105	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-31-5	Tin	SOIL	LA-505-412 U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	TS	Total solids	SOIL	LA-519-412	98.2	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	18984-48-8	Fluoride	SOIL	LA-533-410 U	< 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	18887-00-6	Chloride	SOIL	LA-533-410 U	< 2.60	mg/kg	50.00	2.6	03/29/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	NO2-N	Nitrogen in Nitrite	SOIL	LA-533-410 U	< 0.0350	mg/kg	5.00	0.035	03/29/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410 B	0.407	mg/kg	5.00	0.065	03/29/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	38.0	mg/kg	50.00	5.0	03/29/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	7439-96-5	Manganese	SOIL	LA-505-411	896	mg/kg	99.40	0.099	05/30/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411	5.12	mg/kg	99.40	0.099	05/30/05	03/11/05	03/22/05

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014; F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
W050001040	B1CHH3	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	<	2.58	mg/kg	99.40	2.6	03/30/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412			7.28	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412	U	<	0.105	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-38-0	Antimony	SOIL	LA-505-412	U	<	1.05	mg/kg	1.05	1.0	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412			74.6	mg/kg	1.05	4.2	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412			0.234	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	U	<	0.105	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412			5.48	mg/kg	1.05	4.2	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412			7.18	mg/kg	1.05	0.010	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412			9.31	mg/kg	1.05	2.1	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-82-2	Vanadium	SOIL	LA-505-412			46.5	mg/kg	1.05	0.21	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-86-6	Zinc	SOIL	LA-505-412			36.8	mg/kg	1.05	4.2	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7439-82-1	Lead	SOIL	LA-505-412			3.50	mg/kg	1.05	0.21	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7439-97-6	Mercury	SOIL	LA-505-412	U	<	0.105	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412	U	<	0.315	mg/kg	1.05	0.32	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412			0.444	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412			1.84	mg/kg	1.05	0.42	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	<	0.420	mg/kg	1.05	0.42	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412			0.0862	mg/kg	1.05	0.010	05/15/05 03/11/05 03/22/05
W050001040	B1CHH3	GRP	TRENT	7440-31-5	Tin	SOIL	LA-505-412	U	<	1.05	mg/kg	1.05	1.0	05/15/05 03/11/05 03/22/05
W050001041	B1CHD6	GRP	TRENT	TS	Total solids	SOIL	LA-519-412			96.5	%	1.00	0.0	04/15/05 03/11/05 03/22/05
W050001041	B1CHD6	GRP	TRENT	16984-48-8	Fluoride	SOIL	LA-533-410	U	<	1.18	mg/kg	50.00	1.2	03/29/05 03/11/05 03/22/05
W050001041	B1CHD6	GRP	TRENT	16887-00-8	Chloride	SOIL	LA-533-410	U	<	2.80	mg/kg	50.00	2.8	03/29/05 03/11/05 03/22/05
W050001041	B1CHD6	GRP	TRENT	NO2-N	Nitrogen in Nitrate	SOIL	LA-533-410	U	<	0.850	mg/kg	50.00	0.85	03/29/05 03/11/05 03/22/05
W050001041	B1CHD6	GRP	TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410	B		2.79	mg/kg	50.00	0.85	03/29/05 03/11/05 03/22/05
W050001041	B1CHD6	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	U	<	5.00	mg/kg	50.00	5.0	03/29/05 03/11/05 03/22/05
W050001041	B1CHD6	GRP	TRENT	7439-96-8	Manganese	SOIL	LA-505-411			428	mg/kg	35.75	0.886	03/29/05 03/11/05 03/22/05

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001041	B1CHD8	GRP TRENT	7439-93-2	Lithium	SOIL	LA-505-411	5.47	mg/kg	95.75	0.098	03/30/06	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-42-8	Boron	SOIL	LA-505-411 U	< 2.49	mg/kg	95.75	2.5	03/30/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-02-0	Nickel	SOIL	LA-505-412	7.58	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-22-4	Silver	SOIL	LA-505-412 U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-38-0	Antimony	SOIL	LA-505-412 U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-99-3	Barium	SOIL	LA-505-412	74.0	mg/kg	1.03	4.1	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	0.261	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.113	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412	6.22	mg/kg	1.03	4.1	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-48-4	Cobalt	SOIL	LA-505-412	7.66	mg/kg	1.03	0.010	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-50-8	Copper	SOIL	LA-505-412	9.48	mg/kg	1.03	2.1	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-62-2	Vanadium	SOIL	LA-505-412	46.5	mg/kg	1.03	0.21	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-68-6	Zinc	SOIL	LA-505-412	41.2	mg/kg	1.03	4.1	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412	3.50	mg/kg	1.03	0.21	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7439-97-8	Mercury	SOIL	LA-505-412 U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412 U	< 0.309	mg/kg	1.03	0.31	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-61-1	Uranium	SOIL	LA-505-412	0.403	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	0.881	mg/kg	1.03	0.41	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7782-49-2	Selenium	SOIL	LA-505-412 U	< 0.412	mg/kg	1.03	0.41	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-28-0	Thallium	SOIL	LA-505-412	0.0952	mg/kg	1.03	0.010	05/15/05	03/11/05	03/22/05
W050001041	B1CHD8	GRP TRENT	7440-31-5	Tin	SOIL	LA-505-412 U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	TS	Total solids	SOIL	LA-519-412	98.3	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	16984-48-8	Fluoride	SOIL	LA-533-410 U	< 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	16887-00-6	Chloride	SOIL	LA-533-410 U	< 2.60	mg/kg	50.00	2.6	03/29/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	NO2-N	Nitrogen in Nitrate	SOIL	LA-533-410 U	< 0.050	mg/kg	50.00	0.05	03/29/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410 U	< 0.050	mg/kg	50.00	0.05	03/29/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	14808-79-8	Sulfate	SOIL	LA-533-410 U	< 5.00	mg/kg	50.00	5.0	03/29/05	03/11/05	03/22/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001042	B1CHH4	GRP TRENT	7439-98-6	Manganese	SOIL	LA-505-411	334	mg/kg	99.78	0.10	03/30/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7439-93-2	Lithium	SOIL	LA-505-411	5.00	mg/kg	99.78	0.10	03/30/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-42-8	Boron	SOIL	LA-505-411	U < 2.59	mg/kg	99.78	2.6	03/30/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-02-0	Nickel	SOIL	LA-505-412	9.77	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-22-4	Silver	SOIL	LA-505-412	U < 0.102	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-38-0	Antimony	SOIL	LA-505-412	U < 1.02	mg/kg	1.02	1.0	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-39-3	Barium	SOIL	LA-505-412	66.2	mg/kg	1.02	4.1	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	0.216	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-43-8	Cadmium	SOIL	LA-505-412	U < 0.102	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412	5.84	mg/kg	1.02	4.1	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-48-4	Cobalt	SOIL	LA-505-412	7.12	mg/kg	1.02	0.010	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-50-8	Copper	SOIL	LA-505-412	9.88	mg/kg	1.02	2.0	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-82-2	Vanadium	SOIL	LA-505-412	41.3	mg/kg	1.02	0.20	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-66-6	Zinc	SOIL	LA-505-412	38.5	mg/kg	1.02	4.1	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412	3.51	mg/kg	1.02	0.20	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7439-97-6	Mercury	SOIL	LA-505-412	U < 0.102	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412	U < 0.308	mg/kg	1.02	0.31	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-81-1	Uranium	SOIL	LA-505-412	0.391	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	1.72	mg/kg	1.02	0.41	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U < 0.408	mg/kg	1.02	0.41	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-28-0	Thallium	SOIL	LA-505-412	0.0791	mg/kg	1.02	0.010	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-31-5	Tin	SOIL	LA-505-412	U < 1.02	mg/kg	1.02	1.0	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP TRENT	TS	Total solids	SOIL	LA-519-412	95.0	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP TRENT	16984-48-8	Fluoride	SOIL	LA-533-410	U < 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP TRENT	16887-00-6	Chloride	SOIL	LA-533-410	U < 2.80	mg/kg	50.00	2.6	03/29/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP TRENT	NO2-N	Nitrogen in Nitrite	SOIL	LA-533-410	U < 0.950	mg/kg	50.00	0.95	03/29/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410	U < 1.05	mg/kg	50.00	0.85	03/29/05	03/11/05	03/22/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001043	B1CHD7	14806-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/29/05	03/11/05	03/22/05
W050001043	B1CHD7	7439-98-5	Manganese	SOIL	LA-505-411		389	mg/kg	96.64	0.097	03/30/05	03/11/05	03/22/05
W050001043	B1CHD7	7439-93-2	Lithium	SOIL	LA-505-411		6.10	mg/kg	96.64	0.097	03/30/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.51	mg/kg	96.64	2.5	03/30/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-02-0	Nickel	SOIL	LA-505-412		8.12	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-36-0	Antimony	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-39-3	Barium	SOIL	LA-505-412		94.2	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-41-7	Beryllium	SOIL	LA-505-412		0.268	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-43-9	Cadmium	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-47-3	Chromium	SOIL	LA-505-412		7.49	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-48-4	Cobalt	SOIL	LA-505-412		7.40	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-50-8	Copper	SOIL	LA-505-412		9.55	mg/kg	1.04	2.1	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-82-2	Vanadium	SOIL	LA-505-412		45.1	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-86-8	Zinc	SOIL	LA-505-412		41.2	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7439-92-1	Lead	SOIL	LA-505-412		3.90	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7439-97-6	Mercury	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7439-98-7	Molybdenum	SOIL	LA-505-412	U	< 0.312	mg/kg	1.04	0.31	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-81-1	Uranium	SOIL	LA-505-412		0.365	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-38-2	Arsenic	SOIL	LA-505-412		1.89	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.416	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-28-0	Thallium	SOIL	LA-505-412		0.108	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	TS	Total solids	SOIL	LA-519-412		97.8	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001044	B1CHH5	16984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001044	B1CHH5	16887-00-6	Chloride	SOIL	LA-533-410	U	< 2.60	mg/kg	50.00	2.6	03/29/05	03/11/05	03/22/05
W050001044	B1CHH5	NO2-N	Nitrogen in Nitrite	SOIL	LA-533-410	U	< 0.950	mg/kg	50.00	0.95	03/29/05	03/11/05	03/22/05

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

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6/15/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive		
W050001044	B1CHH5	GRP	TRENT	N03-N	Nitrogen in Nitrate	SOIL	LA-533-410	B	1.05	mg/kg	50.00	0.05	03/29/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	14808-78-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/29/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7439-98-5	Manganese	SOIL	LA-505-411		349	mg/kg	97.37	0.097	03/30/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411		6.24	mg/kg	97.37	0.097	03/30/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.53	mg/kg	97.37	2.5	03/30/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412		8.64	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412		0.148	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-38-0	Antimony	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	06/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412		81.8	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412		0.340	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.209	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		6.79	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412		7.41	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412		11.0	mg/kg	1.04	2.1	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-62-2	Vanadium	SOIL	LA-505-412		46.0	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-68-6	Zinc	SOIL	LA-505-412		37.9	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		4.96	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7439-97-6	Mercury	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412		0.378	mg/kg	1.04	0.31	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-81-1	Uranium	SOIL	LA-505-412		0.491	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412		1.73	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.416	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412		0.198	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/11/05	03/22/05

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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
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Handwritten date: 6/15/05

Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	WSCF20050636 Rev. 3
Sample Matrix	Soil
Sample Visual	N/A
SAF Number	F05-014
Data Deliverable	Summary Report

Introduction

Sixteen (16) BC Controlled Area - Soil Characterization samples (B1CHH6, B1CHH7, B1CHH8, B1CHC8, B1CHC9, B1CHD0, B1CHD1, B1CHD2, B1CHD3, B1CHD4, B1CHD5, B1CHH3, B1CHD6, B1CHH4, B1CHD7 and B1CHH5) were received at the WSCF Laboratory on March 22, 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. Analytical work was performed with no deviations to the approved method.
- ICP-AES Metals by EPA Method 6010B. 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.

Organic

- PCBs by EPA Method 8082B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (GEA [Cs-137 only], Strontium-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

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Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analysis were not met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GRP Letter of Instruction. See pages 25 through 27 for QC details.

Analytical Note:

- Preparation Date: 28-mar-2005
- Nitrate and nitrite (EPA Method 300.0) analytical results were amended to this data package.

All QC controls are within the established limits.

ICP-AES Metals (Boron, Lithium and Manganese) – 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 GRP Letter of Instruction. See page 28 for QC details. Analytical Notes:

- Preparation Date: 30-mar-2005
- The analytes detected in the associated preparation Blank sample were evaluated and there was no significant affect on the sample results.
- Manganese – The Matrix Spike Duplicate QC recovery and Spike Relative Percent Difference exceeded established laboratory limits. Since all of the other QC controls were within the established limits, the sample results were not flagged.

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 GRP Letter of Instruction. See pages 29 through 32 for QC details. Analytical Notes:

- Preparation Date: 15-mar-2005.
- The analytes detected in the associated preparation Blank sample were evaluated and there was no significant affect on the sample results.
- Silver and Antimony – The Laboratory Control Sample recoveries were within manufacturer's limits.
- Selenium - The Laboratory Control Sample recovery was biased low, however the Matrix Spike and the Matrix Spike Duplicate QC samples were acceptable and the data was not flagged.
- Samples B1CHD5 (W050001039), B1CHH3 (W050001040), B1CHD6 (W050001041), B1CHD7 (W050001043) and B1CHH5 (W050001044) were re-analyzed at lower

dilutions per customer request. Re-analysis resulted in meeting all of the method detection limits.

All other QC controls are within the established limits.

Percent Solids – analyzed for organic moisture correction.

Organic Comments

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

PCBs – 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 GRP Letter of Instruction. See pages 39 through 42 for QC details. Analytical Note:

- Preparation Date: 23-mar-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19411 (SDG# 20050622, SAF# F03-025).
- Although the tetrachloro-m-xylene (TCX) surrogate recovery (sample B1CHD2) was low (48%), it was determined that there was no affect on the Aroclor sample results. Results were below detection limit and U flagged.

All other QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 44 through 45 for QC details. Analytical Note:

- Strontium-85 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample ID	Isotope	Tracer Recovery (Percent)
<u>Strontium-85</u>			
BLANK		Sr-85	106.2
LCS		Sr-85	100.4
B1CHD5	W050001039	Sr-85	96.1
DUPLICATE	W050001039	Sr-85	100.0
B1CHH3	W050001040	Sr-85	100.2

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D. Reyes
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Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample ID	Isotope	Tracer Recovery (Percent)
B1CHD6	W050001041	Sr-85	94.5
B1CHH4	W050001042	Sr-85	88.6
B1CHD7	W050001043	Sr-85	106.9
B1CHH5	W050001044	Sr-85	81.1

All QC controls are within the established limits.

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

John E. Trechter (John Trechter)
for Pauline Mix
 Pauline D. Mix
 WSCF Client Services

Abbreviations

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

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D. Hayes
 6/15/05

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-001	PAGE 1	OF 1	
COLLECTOR HUGHES, KD /GENT/		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ			PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION BC Controlled Area - Random B6		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014			AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 TIE to B1CHH6	PRESERVATION		Cool 4C					
		TYPE OF CONTAINER		eG					
		NO. OF CONTAINER(S)		1					
		VOLUME		120mL					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1CHH6	SOIL	3-18-05	10:55	Y					
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Th, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;			
PMGENT/PMGENT		3/18/05 1245	MO 026 FRIG #3		3/18/05				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME				
MO026 FRIG #3		3/22/05 0610	MUNWEL/MA		3/22/05 0610				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME				
MUNWEL/MA		3/22/05 0930	Dale K. Beseke		3/22/05 0930				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	<div style="text-align: center;"> <h1>REVISED</h1> <p>R. Ryan</p> <p>6/15/05</p> </div>			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME				
LABORATORY SECTION	RECEIVED BY	TITLE			DATE/TIME				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY			DATE/TIME				

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-002	PAGE 1 OF 1		
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days	
SAMPLING LOCATION BC Controlled Area - Random AR-4		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 Tie to B1CHF1	PRESERVATION		Cool 4C					
		TYPE OF CONTAINER		ag					
		NO. OF CONTAINER(S)		1					
		VOLUME		120mL					
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1CHH7 60050001030	SOIL	3-11-05	13:40	X					
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) (Mercury) ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;			
<i>[Signature]</i>		3-11-05 15:35	MO 026 Frittz		3-11-05/15:35				
<i>[Signature]</i>		3/22/05 0610	MUEWEL		3/22/05 0610				
<i>[Signature]</i>		3/22/05 0630	<i>[Signature]</i>		3/22/05 0630				
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				

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[Signature]
6/15/05

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-003	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H
SAMPLING LOCATION BC Controlled Area - Random AR-5		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization		SAF NO. F05-014		DATA TURNAROUND 30 Days / 30 Days	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 Tie to B1CHF2	PRESERVATION		Cool 4C			
		TYPE OF CONTAINER		6G			
		NO. OF CONTAINER(S)		1			
	SPECIAL HANDLING AND/OR STORAGE		VOLUME		120ml		
		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1CHH8 <i>W050001031</i>	SOIL	3-11-05	13:45	Y			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM <i>Kevin Dubois</i>	DATE/TIME <i>3-11-05 15:05</i>	RECEIVED BY/STORED IN <i>M0026 FR.D.#3</i>	DATE/TIME <i>3-11-05/15:55</i>	(1)ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium) ICP/MS - 200.8 (Hg) (Mercury) ICP Metals - 6010B (TAL) (Manganese) ICP Metals - 6010B (Add-On) (Boron, Lithium) IC Anions - 300.0 (Chloride, Fluoride, Sulfate) PCBs - 8082;			
RELINQUISHED BY/REMOVED FROM <i>M026 FRIDGE</i>	DATE/TIME <i>3/22/05 0610</i>	RECEIVED BY/STORED IN <i>MURKEL/...</i>	DATE/TIME <i>3/22/05 0610</i>				
RELINQUISHED BY/REMOVED FROM <i>MURKEL/...</i>	DATE/TIME <i>3/22/05 0930</i>	RECEIVED BY/STORED IN <i>...</i>	DATE/TIME <i>3/22/05 0930</i>				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME			

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REVISED

6/15/05

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-004	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H DATA TURNAROUND 30 Days / 30 Days	
SAMPLING LOCATION BC Controlled Area - Random <i>AR to</i>		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 L=Liquid OS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS <i>Tie to B1CHC8</i>		PRESERVATION Cool 4C					
			TYPE OF CONTAINER g					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHC8 <i>W050100032</i>	SOIL	<i>3/11/05</i>	<i>1400</i>	<i>X</i>				
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM <i>Key: HUGHES</i>		DATE/TIME <i>3/11/05 15:35</i>	RECEIVED BY/STORED IN <i>MO 026 Frid #3</i>		DATE/TIME <i>3-11-05/15:35</i>	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;		
RELINQUISHED BY/REMOVED FROM <i>MORG FRIDGE</i>		DATE/TIME <i>3/22/05 06:10</i>	RECEIVED BY/STORED IN <i>KIDWELL</i>		DATE/TIME <i>3/22/05 06:10</i>			
RELINQUISHED BY/REMOVED FROM <i>MR WEL</i>		DATE/TIME <i>3/21/05 09:30</i>	RECEIVED BY/STORED IN <i>WEL</i>		DATE/TIME <i>3/22/05 09:30</i>			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	REVISED <i>6/15/05</i>		
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME		

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-005	PAGE 1	OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908		PROJECT COORDINATOR TRENT, SJ		PRICE CODE BH	DATA TURNAROUND
SAMPLING LOCATION BC Controlled Area - Random BI		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization				SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>	30 Days / 30 Days
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140E510		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 L=Liquids DS=Drum S=Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Tie to B1CHF4		PRESERVATION Cool 4C						
			TYPE OF CONTAINER 8G						
			NO. OF CONTAINER(S) 1						
			VOLUME 120mL						
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1CHC9 WQS 001/033	SOIL	3/18/05	0957	X					
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
<i>MUR WEL/Jan</i>		<i>3/18/05 1245</i>		<i>MOORE FRIDGE</i>		<i>3/18/05 1245</i>			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
<i>MOORE FRIDGE</i>		<i>3/22/05 0610</i>		<i>MUR WEL/Jan</i>		<i>3/22/05 0610</i>			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
<i>MUR WEL/Jan</i>		<i>3/22/05 0930</i>		<i>MOORE FRIDGE</i>		<i>3/22/05 0930</i>			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
LABORATORY SECTION		RECEIVED BY		TITLE		DATE/TIME			
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD		DISPOSED BY		DATE/TIME			

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REVISED
D. Hughes
6/15/05

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-006	PAGE 1	OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE BH	DATA TURNAROUND	
SAMPLING LOCATION BC Controlled Area - Random		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>	30 Days / 30 Days	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140E510	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 TINT to: BICHF5	PRESERVATION		Cool 4C					
		TYPE OF CONTAINER		8G					
		NO. OF CONTAINER(S)		1					
		VOLUME		120mL					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
BICHDO W050001034	SOIL	3/18/05	1010	X					
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME				
MIL WEIC		3/18/05 1245	M0026 FRIDGE 3		3/18/05 1245				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME				
MIL B FARGE 3		3/22/05 0610	MIL WEIC		3/22/05 0610				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME				
MIL WEIC		3/22/05 0930	K B O G		3/22/05 0930				
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		

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REVISED
 RL Daynes
 6/15/05

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-007	PAGE 1 OF 1		
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908		PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND
SAMPLING LOCATION BC Controlled Area - Random B3		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization				SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>	30 Days / 30 Days
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10		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 TIED TO DICHP6		PRESERVATION Cool 4C						
			TYPE OF CONTAINER g						
			NO. OF CONTAINER(S) 1						
			VOLUME 120mL						
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS					
SAMPLE NO.		MATRIX*		SAMPLE DATE		SAMPLE TIME			
B1CHD1 <i>WCS000103</i>		SOIL		3/18/05		0945		X	
CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME		(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;	
<i>M. Weiler</i>		3/18/05 1245		<i>M. Weiler</i>		3/18/05 1245			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
<i>M. Weiler</i>		3/22/05 0610		<i>M. Weiler</i>		3/22/05 0610			
RELINQUISHED BY/REMOVED FROM		DATE/TIME		RECEIVED BY/STORED IN		DATE/TIME			
<i>M. Weiler</i>		3/22/05 0930		<i>M. Weiler</i>		3/22/05 0930			
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	

REVISED
Myers
6/15/05

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-008	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H
SAMPLING LOCATION BC Controlled Area - Random		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	DATA TURNAROUND 30 Days / 30 Days	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 Lq=Liqd DS=Drum Solids L=Liqlqd O=Oil S=Soil SE=Secliment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS TIED TO BKHF7		PRESERVATION Cool 4C				
			TYPE OF CONTAINER aG				
			NO. OF CONTAINER(S) 1				
			VOLUME 120mL				
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1CHD2 W050001036	SOIL	3/18/05	1030	X			
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;			
MR WEIL/AMM	3/18/05 1245	M0026 FRIDGE 3	3/18/05 1245				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
M006 FRIDGE	3/22/05 0610	MR WEIL/AMM	3/22/05 0610				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
MR WEIL/AMM	3/22/05 0930	MR WEIL/AMM	3/22/05 0930				
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			

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REVISED
6/15/05

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-009	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days	
SAMPLING LOCATION BC Controlled Area - Random		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 U=Uquids 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		PRESERVATION	Cool 4C				
	TIED to: BICHH8		TYPE OF CONTAINER		aG			
			NO. OF CONTAINER(S)		1			
	SPECIAL HANDLING AND/OR STORAGE		VOLUME		120mL			
		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHD3 W050001037	SOIL	3/19/05	0930	X				
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;		
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		

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REVISED

Meyer
6/15/05

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-010	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H DATA TURNAROUND 30 Days / 30 Days	
SAMPLING LOCATION BC Controlled Area - Random AR-7		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 L=Liquid 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 Tie to B1CHF9		PRESERVATION Cool 4C					
			TYPE OF CONTAINER gG					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO. B1CHD4 W050001038	MATRIX* SOIL	SAMPLE DATE 3/11/05	SAMPLE TIME 1410					
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM <i>Kevin Hughes</i>		DATE/TIME 3-11-05	RECEIVED BY/STORED IN <i>MO 026 Frid #3</i>		DATE/TIME 3-11-05/15:35	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;		
RELINQUISHED BY/REMOVED FROM <i>MR WEL</i>		DATE/TIME 3/22/05 0610	RECEIVED BY/STORED IN <i>MR WEL</i>		DATE/TIME 3/22/05 0610			
RELINQUISHED BY/REMOVED FROM <i>MR WEL</i>		DATE/TIME 3/22/05 0930	RECEIVED BY/STORED IN <i>MR WEL</i>		DATE/TIME 3/22/05 0930			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
LABORATORY SECTION	RECEIVED BY	TITLE				DATE/TIME		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME		

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REVISED

6/15/05

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-012	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION BC Controlled Area - Focused A2		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140E510	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 Tie to B1CHH1		PRESERVATION Cool 4C				
			TYPE OF CONTAINER #G				
			NO. OF CONTAINER(S) 1				
			VOLUME 120mL				
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS * see Note below PDMix stabilized			
SAMPLE NO.		MATRIX*		SAMPLE DATE	SAMPLE TIME		
B1CHD6 W05200104		SOIL 1'		3/11/05	1040	✓	
B1CHH4 1042		SOIL 3'		3/11/05	1040	✓	
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM Kevin Hughes		DATE/TIME 3-11-05 15:35		RECEIVED BY/STORED IN M0026 Field #3		DATE/TIME 3-11-05/15:35	
RELINQUISHED BY/REMOVED FROM MRO PRINGS		DATE/TIME 3/22/05 06:00		RECEIVED BY/STORED IN MIRNEIL/ANNA		DATE/TIME 3/22/05 06:00	
RELINQUISHED BY/REMOVED FROM MIRNEIL/ANNA		DATE/TIME 3/22/05 09:30		RECEIVED BY/STORED IN KRISTINA		DATE/TIME 3/22/05 09:30	
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	

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SPECIAL INSTRUCTIONS
(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;

* Add Sr 90 and GBA (Cs-137) PDMix 5/11/2008
** Add Nitrate and Nitrite P.D.Mix PDMix 6/19/2008

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-011	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days	
SAMPLING LOCATION BC Controlled Area - Focused <i>A1</i>		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.	COA 119140ES10		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 <i>Tie to B1CHHO</i>		PRESERVATION Cool 4C					
			TYPE OF CONTAINER 8G					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS <i>* See Note Below P.D.Mix 5/3/2005</i>					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHD5 <i>was 0001039</i>	SOIL	3/11/05	1015	<i>x below P.D.Mix 6/1/2005</i>				
B1CHH3 <i>3 1040</i>	SOIL	3/11/05	1015	<i>y below P.D.Mix 6/1/2005</i>				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM <i>Kevin Hughes</i>	DATE/TIME <i>3-11-05 15:35</i>	RECEIVED BY/STORED IN <i>MOORE FRIDG #13</i>	DATE/TIME <i>3-11-05 15:35</i>	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082; <i>* Add Sr 90 and GEA (Cs-137) P.D.Mix 5/3/2005</i> <i>** Add Nitrate and Nitrite P.D.Mix 6/1/2005</i>				
RELINQUISHED BY/REMOVED FROM <i>KIDG FRIDG</i>	DATE/TIME <i>3/22/05 0610</i>	RECEIVED BY/STORED IN <i>MR WELT</i>	DATE/TIME <i>3/22/05 0610</i>					
RELINQUISHED BY/REMOVED FROM <i>MR WELT</i>	DATE/TIME <i>3/22/05 0930</i>	RECEIVED BY/STORED IN <i>MR WELT</i>	DATE/TIME <i>3/22/05 0930</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME <i>6/15/05</i>				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME				

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-013	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE SH
SAMPLING LOCATION BC Controlled Area - Focused A3		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	DATA TURNAROUND 30 Days / 30 Days	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140E510	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 Tie to B1CHH2		PRESERVATION Cool 4C				
			TYPE OF CONTAINER g				
			NO. OF CONTAINER(S) 1				
			VOLUME 120mL				
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS * See Note below P.D.M. 5/31/2005			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1CHD7 <i>W050001043</i>	SOIL <i>1'</i>	<i>3/11/05</i>	<i>1200</i>	<i>X</i>			
B1CHH5 <i>1044</i>	SOIL <i>3'</i>	<i>3/11/05</i>	<i>1200</i>	<i>Y</i>			
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;			
<i>Kevin Hughes</i>	<i>3/11/05</i>	<i>Moore</i>	<i>3/11/05 15:35</i>	* Add Sr90 and GBA (G-139) P.D.M. 5/31/2005			
<i>MOORE</i>	<i>3/22/05 0610</i>	<i>MURPHY</i>	<i>3/22/05 0610</i>	** Add Nitrate and Nitrite P.D.M. 6/15/2005			
<i>MURPHY</i>	<i>3/22/05 0930</i>	<i>MOORE</i>	<i>3/22/05 0930</i>				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME			

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Appendix 5
Data Validation Supporting Documentation

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GENERAL CHEMISTRY ANALYSIS DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	<u>C</u>	D	E
PROJECT:	10005 BC controlled Am		DATA PACKAGE: 50636		
VALIDATOR:	TLT	LAB:	WSCT	DATE: 7/2/05	
			SDG:	50636	
ANALYSES PERFORMED					
<u>Anions/IC</u>	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					
BICH#7	BICH#6	BICH#8	BICH#8	BICH#9	
BICH#0	BICH#1	BICH#2	BICH#3	BICH#4	
BICH#5	BICH#6	BICH#3	BICH#4	BICH#7	
BICH#5					

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

6. HOLDING TIMES (all levels)

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

Comments: _____

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: all chloride over

Appendix 6

Additional Documentation Requested by Client

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: Anions by Ion Chromatography

SAF Number: F05-014
 Sample Date: 03/18/05
 Receive Date: 03/22/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001016									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Chloride	16887-00-8	<2.60e0	n/a	RPD	03/28/05	0.000	20.000	U
DUP	Fluoride	16984-48-8	<1.15e0	n/a	RPD	03/28/05	0.000	20.000	U
DUP	Sulfate	14808-79-8	<5.00e0	n/a	RPD	03/28/05	0.000	20.000	U
MS	Chloride	16887-00-8	9.70e-01	97.000	% Recov	03/28/05	75.000	125.000	
MS	Fluoride	16984-48-8	4.46e-01	90.283	% Recov	03/28/05	75.000	125.000	
MS	Sulfate	14808-79-8	1.99e+00	99.500	% Recov	03/28/05	75.000	125.000	
MSD	Chloride	16887-00-8	9.89e-01	98.900	% Recov	03/28/05	75.000	125.000	
MSD	Fluoride	16984-48-8	4.28e-01	86.640	% Recov	03/28/05	75.000	125.000	
MSD	Sulfate	14808-79-8	1.92e+00	98.000	% Recov	03/28/05	75.000	125.000	
BATCH QC									
BLANK	Chloride	16887-00-8	<5.20e-2	n/a	mg/L	03/28/05	0.000	300.000	U
BLANK	Chloride	16887-00-8	<5.20e-2	n/a	mg/L	03/28/05	0.000	300.000	U
BLANK	Chloride	16887-00-8	<5.20e-2	n/a	mg/L	03/28/05	0.000	300.000	U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	03/28/05	0.000	300.000	U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	03/28/05	0.000	300.000	U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	03/28/05	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	03/28/05	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	03/28/05	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	03/28/05	0.000	300.000	U
LCS	Chloride	16887-00-8	1.98e+02	99.000	% Recov	03/28/05	80.000	120.000	
LCS	Chloride	16887-00-8	1.92e+02	96.000	% Recov	03/28/05	80.000	120.000	
LCS	Fluoride	16984-48-8	1.07e+02	108.409	% Recov	03/28/05	80.000	120.000	
LCS	Fluoride	16984-48-8	9.16e+01	92.705	% Recov	03/28/05	80.000	120.000	
LCS	Sulfate	14808-79-8	3.87e+02	98.992	% Recov	03/28/05	80.000	120.000	
LCS	Sulfate	14808-79-8	4.02e+02	100.762	% Recov	03/28/05	80.000	120.000	

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: Anions by Ion Chromatography

SAF Number: F05-014
 Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yld	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001044									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Chloride	18887-00-8	<2.60e0	n/a	RPD	03/29/05	0.000	20.000	U
DUP	Fluoride	16984-48-8	<1.15e0	n/a	RPD	03/29/05	0.000	20.000	U
DUP	Sulfate	14808-79-8	<5.00e0	n/a	RPD	03/29/05	0.000	20.000	U
MS	Chloride	18887-00-8	9.61e-01	98.100	% Recov	03/29/05	75.000	125.000	
MS	Fluoride	16984-48-8	4.13e-01	83.803	% Recov	03/29/05	75.000	125.000	
MS	Sulfate	14808-79-8	1.83e+00	91.500	% Recov	03/29/05	75.000	125.000	
MSD	Chloride	18887-00-8	9.74e-01	97.400	% Recov	03/29/05	75.000	125.000	
MSD	Fluoride	16984-48-8	4.17e-01	84.413	% Recov	03/29/05	75.000	125.000	
MSD	Sulfate	14808-79-8	1.90e+00	95.000	% Recov	03/29/05	75.000	125.000	
BATCH QC									
BLANK	Chloride	18887-00-8	<5.20e-2	n/a	mg/L	03/29/05	0.000	300.000	U
BLANK	Chloride	18887-00-8	<5.20e-2	n/a	mg/L	03/29/05	0.000	300.000	U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	03/29/05	0.000	300.000	U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	03/29/05	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	03/29/05	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	03/29/05	0.000	300.000	U
LCS	Chloride	18887-00-8	1.95e+02	97.500	% Recov	03/28/05	80.000	120.000	
LCS	Fluoride	16984-48-8	9.50e+01	98.251	% Recov	03/29/05	80.000	120.000	
LCS	Sulfate	14808-79-8	3.89e+02	97.484	% Recov	03/29/05	80.000	120.000	

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REVISED
R. Dyer
 6/15/05

Date: 11 July 2005
 To: Fluor Hanford Inc. (technical representative)
 From: TechLaw, Inc.
 Project: BC Controlled Area Surficial Soil Characterization
 Subject: PCB - Data Package No.WSCF20050636 (50636)



INTRODUCTION

This memo presents the results of data validation on Data Package No. 50636 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
B1CHH6	3/18/05	Soil	C	PCBs by 8082
B1CHH7	3/11/05	Soil	C	PCBs by 8082
B1CHH8	3/11/05	Soil	C	PCBs by 8082
B1CHC8	3/11/05	Soil	C	PCBs by 8082
B1CHC9	3/18/05	Soil	C	PCBs by 8082
B1CHD0	3/18/05	Soil	C	PCBs by 8082
B1CHD1	3/18/05	Soil	C	PCBs by 8082
B1CHD2	3/18/05	Soil	C	PCBs by 8082
B1CHD3	3/18/05	Soil	C	PCBs by 8082
B1CHD4	3/11/05	Soil	C	PCBs by 8082
B1CHD5	3/11/05	Soil	C	PCBs by 8082
B1CHH3	3/11/05	Soil	C	PCBs by 8082
B1CHD6	3/11/05	Soil	C	PCBs by 8082
B1CHH4	3/11/05	Soil	C	PCBs by 8082
B1CHD7	3/11/05	Soil	C	PCBs by 8082
B1CHH5	3/11/05	Soil	C	PCBs by 8082

Data validation was conducted in accordance with the FHI validation statement of work and the Sampling and Analysis Instruction for the BC Controlled Area Soil Characterization, D&D-24693, Rev. 0. 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.

Due to a surrogate recovery outside QC limits (48%), all PCB results in sample B1CHD2 were qualified as estimates and flagged "J".

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

- **Completeness**

Data Package No. 50636 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 a surrogate recovery outside QC limits (48%), all PCB results in sample B1CHD2 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.

All undetected 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.

D&D-24693, Rev. 0, *Sampling and Analysis Instruction for the BC Controlled Area Soil Characterization*.

Appendix 1
Glossary of Data Reporting Qualifiers

000006

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

000008

PCB DATA QUALIFICATION SUMMARY*

SDG: 50636	REVIEWER: TLI	PROJECT: BC Controlled Area Surficial Soil Characterization	PAGE <u>1</u> OF <u>1</u>
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
All	J	B1CHD2	Surrogate 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

000010

Project: FLUOR-HANFORD
 Laboratory: WSCF

Case: SDG: WSCF20050636

Sample Number	B1CHH6		B1CHH7		B1CHH8		B1CHC8		B1CHC9		B1CHD0		B1CHD1		B1CHD2		B1CHD3		B1CHD4		
Remarks																					
Sample Date	3/18/05		3/11/05		3/11/05		3/11/05		3/18/05		3/18/05		3/18/05		3/18/05		3/18/05		3/11/05		
Analysis Date	3/24/05		3/24/05		3/24/05		3/24/05		3/24/05		3/24/05		3/24/05		3/24/05		3/24/05		3/28/05		
PCB	PQL	Result	Q	Result	Q																
Aroclor-1016	16.5	<52.0	U	<51.0	U	<50.0	U	<52.0	U	<52.0	U	<51.0	U	<51.0	U	<52.0	UJ	<52.0	U	<53.0	U
Aroclor-1221	16.5	<100	U	<100	UJ	<100	U	<110	U												
Aroclor-1232	16.5	<52.0	U	<51.0	U	<50.0	U	<52.0	U	<52.0	U	<51.0	U	<51.0	U	<52.0	UJ	<52.0	U	<53.0	U
Aroclor-1242	16.5	<52.0	U	<51.0	U	<50.0	U	<52.0	U	<52.0	U	<51.0	U	<51.0	U	<52.0	UJ	<52.0	U	<53.0	U
Aroclor-1248	16.5	<52.0	U	<51.0	U	<50.0	U	<52.0	U	<52.0	U	<51.0	U	<51.0	U	<52.0	UJ	<52.0	U	<53.0	U
Aroclor-1254	16.5	<52.0	U	<51.0	U	<50.0	U	<52.0	U	<52.0	U	<51.0	U	<51.0	U	<52.0	UJ	<52.0	U	<53.0	U
Aroclor-1260	16.5	<52.0	U	<51.0	U	<50.0	U	<52.0	U	<52.0	U	<51.0	U	<51.0	U	<52.0	UJ	<52.0	U	<53.0	U
Aroclor-1262	16.5	<52.0	U	<51.0	U	<50.0	U	<52.0	U	<52.0	U	<51.0	U	<51.0	U	<52.0	UJ	<52.0	U	<53.0	U
Aroclor-1268	16.5	<52.0	U	<51.0	U	<50.0	U	<52.0	U	<52.0	U	<51.0	U	<51.0	U	<52.0	UJ	<52.0	U	<53.0	U
Sample Number	B1CHD5		B1CHH3		B1CHD6		B1CHH4		B1CHD7		B1CHH5										
Remarks																					
Sample Date	3/11/05		3/11/05		3/11/05		3/11/05		3/11/05		3/11/05										
Analysis Date	3/28/05		3/28/05		3/28/05		3/28/05		3/28/05		3/28/05										
PCB	PQL	Result	Q																		
Aroclor-1016	16.5	<51.0	U	<51.0	U	<51.0	U	<51.0	U	<52.0	U	<51.0	U								
Aroclor-1221	16.5	<100	U																		
Aroclor-1232	16.5	<51.0	U	<51.0	U	<51.0	U	<51.0	U	<52.0	U	<51.0	U								
Aroclor-1242	16.5	<51.0	U	<51.0	U	<51.0	U	<51.0	U	<52.0	U	<51.0	U								
Aroclor-1248	16.5	<51.0	U	<51.0	U	<51.0	U	<51.0	U	<52.0	U	<51.0	U								
Aroclor-1254	16.5	<51.0	U	<51.0	U	<51.0	U	<51.0	U	<52.0	U	<51.0	U								
Aroclor-1260	16.5	<51.0	U	<51.0	U	<51.0	U	<51.0	U	<52.0	U	<51.0	U								
Aroclor-1262	16.5	<51.0	U	<51.0	U	<51.0	U	<51.0	U	<52.0	U	<51.0	U								
Aroclor-1268	16.5	<51.0	U	<51.0	U	<51.0	U	<51.0	U	<52.0	U	<51.0	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. NA - Not analyzed

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
Organic														
W050001016	B1CHH6	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001016	B1CHH6	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427 U	< 100	ug/kg	1.00	1.0e+02	03/24/05	03/18/05	03/22/05
W050001016	B1CHH6	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001016	B1CHH6	GRP	TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001016	B1CHH6	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001016	B1CHH6	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001016	B1CHH6	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001016	B1CHH6	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001016	B1CHH6	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/24/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427 U	< 100	ug/kg	1.00	1.0e+02	03/24/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/24/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/24/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/24/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/24/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/24/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/24/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/24/05	03/11/05	03/22/05
W050001031	B1CHH8	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427 U	< 50.0	ug/kg	1.00	50	03/24/05	03/11/05	03/22/05
W050001031	B1CHH8	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427 U	< 100	ug/kg	1.00	1.0e+02	03/24/05	03/11/05	03/22/05
W050001031	B1CHH8	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427 U	< 50.0	ug/kg	1.00	50	03/24/05	03/11/05	03/22/05
W050001031	B1CHH8	GRP	TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 50.0	ug/kg	1.00	50	03/24/05	03/11/05	03/22/05
W050001031	B1CHH8	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427 U	< 50.0	ug/kg	1.00	50	03/24/05	03/11/05	03/22/05
W050001031	B1CHH8	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427 U	< 50.0	ug/kg	1.00	50	03/24/05	03/11/05	03/22/05
W050001031	B1CHH8	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427 U	< 50.0	ug/kg	1.00	50	03/24/05	03/11/05	03/22/05
W050001031	B1CHH8	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427 U	< 50.0	ug/kg	1.00	50	03/24/05	03/11/05	03/22/05

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

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Groundwater Remediation Program

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6/15/05

Handwritten: ✓
7/10/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF		Result	Unit	DF	MDL	Analyze Sample Receive	
					Method	RQ						
W050001031	B1CHH8	GRP TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 50.0	ug/kg	1.00	50	03/24/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	03/24/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/11/05 03/22/05
W050001033	B1CHC9	GRP TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/18/05 03/22/05
W050001033	B1CHC9	GRP TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	03/24/05 03/18/05 03/22/05
W050001033	B1CHC9	GRP TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/18/05 03/22/05
W050001033	B1CHC9	GRP TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/18/05 03/22/05
W050001033	B1CHC9	GRP TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/18/05 03/22/05
W050001033	B1CHC9	GRP TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/18/05 03/22/05
W050001033	B1CHC9	GRP TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/18/05 03/22/05
W050001033	B1CHC9	GRP TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/18/05 03/22/05
W050001033	B1CHC9	GRP TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/24/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/24/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	03/24/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/24/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/24/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/24/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/24/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/24/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/24/05 03/18/05 03/22/05

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

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7/10/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF		Result	Unit	DF	MDL	Analyze	Sample	Receive			
					Method	RQ										
W050001034	B1CHD0	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/24/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/24/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	<	100	ug/kg	1.00	1.0e+02	03/24/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/24/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/24/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/24/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/24/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	11086-82-5	Aroclor-1260	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/24/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/24/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/24/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	<	100	ug/kg	1.00	1.0e+02	03/24/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	11086-82-5	Aroclor-1260	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	<	100	ug/kg	1.00	1.0e+02	03/24/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	11086-82-5	Aroclor-1260	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05

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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

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Groundwater Remediation Program

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7/16/05
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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF		Result	Unit	DF	MDL	Analyze Sample Receive		
					Method	RQ							
W050001037	B1CHD3	GRP TRENT	11100-14-4	Aroclor-1288	SOIL	LA-523-427 U	< 52.0	ug/kg	1.00	52	03/24/05	03/18/05	03/22/05
W050001038	B1CHD4	GRP TRENT	12874-11-2	Aroclor-1016	SOIL	LA-523-427 U	< 53.0	ug/kg	1.00	53	03/28/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427 U	< 110	ug/kg	1.00	1.1e+02	03/28/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427 U	< 53.0	ug/kg	1.00	53	03/28/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 53.0	ug/kg	1.00	53	03/28/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	12872-29-8	Aroclor-1248	SOIL	LA-523-427 U	< 53.0	ug/kg	1.00	53	03/28/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427 U	< 53.0	ug/kg	1.00	53	03/28/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427 U	< 63.0	ug/kg	1.00	53	03/28/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427 U	< 53.0	ug/kg	1.00	53	03/28/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427 U	< 53.0	ug/kg	1.00	53	03/28/05	03/11/05	03/22/05
W050001038	B1CHD5	GRP TRENT	12874-11-2	Aroclor-1016	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427 U	< 100	ug/kg	1.00	1.0e+02	03/28/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	12872-29-8	Aroclor-1248	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427 U	< 61.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	12874-11-2	Aroclor-1016	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427 U	< 100	ug/kg	1.00	1.0e+02	03/28/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	53489-21-9	Aroclor-1242	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	12872-29-8	Aroclor-1248	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427 U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05

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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF		Result	Unit	DF	MDL	Analyze Sample Receive		
							Method	RQ							
W050001040	B1CHH3	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	03/28/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	03/28/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/28/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	03/28/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/28/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/28/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/28/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/28/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/28/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 52.0	ug/kg	1.00	52	03/28/05	03/11/05	03/22/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

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

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

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WSCF ANALYTICAL RESULTS REPORT

Attention:
Project:

Steve Trent
F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF		Result	Unit	DF	MDL	Analyze Sample Receive					
					Method	RQ										
W050001043	B1CHD7	GRP	TRENT	11100-14-4	Aroclor-1288	SOIL	LA-523-427	U	<	52.0	ug/kg	1.00	52	03/28/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	12874-11-2	Aroclor-1018	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	<	100	ug/kg	1.00	1.0e+02	03/28/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	11141-18-5	Aroclor-1232	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	12872-29-8	Aroclor-1248	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	11097-89-1	Aroclor-1254	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	11098-82-5	Aroclor-1260	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	<	51.0	ug/kg	1.00	51	03/28/05	03/11/05	03/22/05

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MDL=Minimum Detection Limit
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DF=Dilution Factor

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

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Sample Delivery Group	WSCF20050636 Rev. 3
Sample Matrix	Soil
Sample Visual	N/A
SAF Number	F05-014
Data Deliverable	Summary Report

Introduction

Sixteen (16) BC Controlled Area - Soil Characterization samples (B1CHH6, B1CHH7, B1CHH8, B1CHC8, B1CHC9, B1CHD0, B1CHD1, B1CHD2, B1CHD3, B1CHD4, B1CHD5, B1CHH3, B1CHD6, B1CHH4, B1CHD7 and B1CHH5) were received at the WSCF Laboratory on March 22, 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. Analytical work was performed with no deviations to the approved method.
- ICP-AES Metals by EPA Method 6010B. 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.

Organic

- PCBs by EPA Method 8082B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (GEA [Cs-137 only], Strontium-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

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Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analysis were not met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GRP Letter of Instruction. See pages 25 through 27 for QC details.

Analytical Note:

- Preparation Date: 28-mar-2005
- Nitrate and nitrite (EPA Method 300.0) analytical results were amended to this data package.

All QC controls are within the established limits.

ICP-AES Metals (Boron, Lithium and Manganese) – 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 GRP Letter of Instruction. See page 28 for QC details. Analytical Notes:

- Preparation Date: 30-mar-2005
- The analytes detected in the associated preparation Blank sample were evaluated and there was no significant affect on the sample results.
- Manganese – The Matrix Spike Duplicate QC recovery and Spike Relative Percent Difference exceeded established laboratory limits. Since all of the other QC controls were within the established limits, the sample results were not flagged.

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 GRP Letter of Instruction. See pages 29 through 32 for QC details. Analytical Notes:

- Preparation Date: 15-mar-2005.
- The analytes detected in the associated preparation Blank sample were evaluated and there was no significant affect on the sample results.
- Silver and Antimony – The Laboratory Control Sample recoveries were within manufacturer's limits.
- Selenium - The Laboratory Control Sample recovery was biased low, however the Matrix Spike and the Matrix Spike Duplicate QC samples were acceptable and the data was not flagged.
- Samples B1CHD5 (W050001039), B1CHH3 (W050001040), B1CHD6 (W050001041), B1CHD7 (W050001043) and B1CHH5 (W050001044) were re-analyzed at lower

dilutions per customer request. Re-analysis resulted in meeting all of the method detection limits.

All other QC controls are within the established limits.

Percent Solids – analyzed for organic moisture correction.

Organic Comments

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

PCBs – 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 GRP Letter of Instruction. See pages 39 through 42 for QC details. Analytical Note:

- Preparation Date: 23-mar-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19411 (SDG# 20050622, SAF# F03-025).
- Although the tetrachloro-m-xylene (TCX) surrogate recovery (sample B1CHD2) was low (48%), it was determined that there was no affect on the Aroclor sample results. Results were below detection limit and U flagged.

All other QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 44 through 45 for QC details. Analytical Note:

- Strontium-85 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample ID	Isotope	Tracer Recovery (Percent)
<u>Strontium-85</u>			
BLANK		Sr-85	106.2
LCS		Sr-85	100.4
B1CHD5	W050001039	Sr-85	96.1
DUPLICATE	W050001039	Sr-85	100.0
B1CHH3	W050001040	Sr-85	100.2

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D. Russo
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Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample ID	Isotope	Tracer Recovery (Percent)
B1CHD6	W050001041	Sr-85	94.5
B1CHH4	W050001042	Sr-85	88.6
B1CHD7	W050001043	Sr-85	106.9
B1CHH5	W050001044	Sr-85	81.1

All QC controls are within the established limits.

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

John E. Trochter (John Trochter)
for Pauline Mix
 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

REVISED
D. Davis

6/15/05

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-001	PAGE 1	OF 1
COLLECTOR HUGHES, KD /GENT/	COMPANY CONTACT BAUER, RG	TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days			
SAMPLING LOCATION BC Controlled Area - Random B6	PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization	SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>					
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119140ES10	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 TIE to BICHFO	PRESERVATION Cool 4C	TYPE OF CONTAINER #G	NO. OF CONTAINER(S) 1	VOLUME 120ml	SPECIAL HANDLING AND/OR STORAGE		
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHH6 W050001016	SOIL	3-18-05	10:55	Y				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM PM GENT / P M Bauer	DATE/TIME 3/18/05 1245	RECEIVED BY/STORED IN MO 026 FRIG #3	DATE/TIME 3/18/05	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Th, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;				
RELINQUISHED BY/REMOVED FROM MO 026 FRIG #3	DATE/TIME 3/22/05 0610	RECEIVED BY/STORED IN MUNWEL/PA	DATE/TIME 3/22/05 0610					
RELINQUISHED BY/REMOVED FROM MUNWEL/PA	DATE/TIME 3/24/05 0930	RECEIVED BY/STORED IN D. J. K. B. B. B.	DATE/TIME 3/22/05 0930					
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				

04/20/05 20050636

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Floor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-002	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ			PRICE CODE 8H DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION BC Controlled Area - Random AR-4		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 Tie to B1CHF1		PRESERVATION Cool 4C					
			TYPE OF CONTAINER aG					
			NO. OF CONTAINER(S) 1					
			VOLUME 120ml					
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHH7 <i>W050001030</i>	SOIL	3-11-05	13:40	<i>X</i>				
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Cad, - Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;		
<i>John A. Keightley</i>		<i>3-11-05</i>	<i>M0026 Fritz</i>		<i>3-11-05/15:35</i>			
<i>NOB/FITAC</i>		<i>3/22/05 0610</i>	<i>MR WEL</i>		<i>3/22/05 0610</i>			
<i>MR WEL</i>		<i>3/22/05 0630</i>	<i>BAU</i>		<i>3/22/05 0630</i>			
<i>MR WEL</i>		<i>3/22/05 0630</i>	<i>BAU</i>		<i>3/22/05 0630</i>			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
LABORATORY SECTION		RECEIVED BY			TITLE	DATE/TIME		
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD			DISPOSED BY	DATE/TIME		

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6/15/05

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-003	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H DATA TURNAROUND 30 Days / 30 Days	
SAMPLING LOCATION BC Controlled Area - Random AR-5		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 Tie to B1CHF2	PRESERVATION	Cool 4C					
		TYPE OF CONTAINER	9G					
		NO. OF CONTAINER(S)	1					
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS					
VOLUME	120mL							
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHH8 <i>W050001021</i>	SOIL	3-11-05	13:45	Y				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium) ICP/MS - 200.8 (Hg) (Mercury) ICP Metals - 6010B (TAL) (Manganese) ICP Metals - 6010B (Add-On) (Boron, Lithium) IC Anions - 300.0 (Chloride, Fluoride, Sulfate) PCBs - 8082;				
<i>Quindones</i>	<i>3-11-05 15:05</i>	<i>M0026 FRID #3</i>	<i>3-11-05/15:05</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
<i>NOVA FRIDGE</i>	<i>3/22/05 0610</i>	<i>MR WEIL</i>	<i>3/22/05 0610</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
<i>MR WEIL</i>	<i>3/22/05 0930</i>	<i>MR BAUER</i>	<i>3/22/05 0830</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	<div style="text-align: center;"> REVISED <i>Wagner</i> 6/15/05 </div>				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME				

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-004	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	
SAMPLING LOCATION BC Controlled Area - Random <i>AR-50</i>		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	DATA TURNAROUND 30 Days / 30 Days	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140E510	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 Uq=Uqs 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 <i>Tie to B1CHFB</i>		PRESERVATION Cool 4C					
			TYPE OF CONTAINER 8G					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHCB <i>W050100032</i>	SOIL	<i>3/11/05</i>	<i>1400</i>	<i>X</i>				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Th, Uranium) ICP/MS - 200.8 (Hg) (Mercury) ICP Metals - 6010B (TAL) (Manganese) ICP Metals - 6010B (Add-On) (Boron, Lithium) IC Anions - 300.0 (Chloride, Fluoride, Sulfate) PCBs - 8082;				
<i>Kevin Hughes</i>	<i>3/11-05 15:35</i>	<i>MO 026 Frid #3</i>	<i>3-11-05 15:35</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
<i>MOG BRIDGE 3</i>	<i>3/22/05 0610</i>	<i>MURKEL</i>	<i>3/22/05 0610</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
<i>MURKEL</i>	<i>3/22/05 0930</i>	<i>MURKEL</i>	<i>3/22/05 0930</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME				

REVISED
RL Hughes
6/15/05

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-005	PAGE 1 OF 1		
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND	
SAMPLING LOCATION BC Controlled Area - Random B1		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	30 Days / 30 Days		
ICE CHEST NO.		FIELD LOGBOOK NO.	COA 119140ES10		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 Tie to BICHF4	PRESERVATION	Cool 4C						
		TYPE OF CONTAINER	g						
		NO. OF CONTAINER(S)	1						
		VOLUME	120ml						
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1CHC8 105-0001033	SOIL	3/18/05	0957	X					
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;					
MIR WEIC/NAME	3/18/05 1245	M0026 FRIDGE	3/18/05 1245						
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME						
M0026 FRIDGE	3/22/05 0610	MIR WEIC/NAME	3/22/05 0610						
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME						
MIR WEIC/NAME	3/22/05 0930	W. B. ...	3/22/05 0930						
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	<div style="text-align: center;"> REVISED <i>6/15/05</i> </div>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME						
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME						
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME						
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME					
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME					

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-006	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND
SAMPLING LOCATION BC Controlled Area - Random		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	30 Days / 30 Days	
ICE CHEST NO. B4		FIELD LOGBOOK NO.		COA 119140ES10	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 Lq=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		PRESERVATION	Cool 4C				
	TINT to: BICHH5		TYPE OF CONTAINER		ag			
			NO. OF CONTAINER(S)		1			
			VOLUME		120ml			
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHDO	W050001034 SOIL	3/18/05	1010	X				
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	(1)ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium) ICP/MS - 200.8 (Hg) (Mercury) ICP Metals - 6010B (TAL) (Manganese) ICP Metals - 6010B (Add-On) (Boron, Lithium) IC Anions - 300.0 (Chloride, Fluoride, Sulfate) PCBs - 8082;		
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	REVISED RL 6/15/05		
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		

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-007	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	
SAMPLING LOCATION BC Controlled Area - Random B3		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 TIED TO BICHP6		PRESERVATION Cool 4C					
			TYPE OF CONTAINER aG					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
BICHD1 <i>W050001035</i>	SOIL	<i>3/18/05</i>	<i>0945</i>	<i>X</i>				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM <i>MR WEIL</i>	DATE/TIME <i>3/18/05 1245</i>	RECEIVED BY/STORED IN <i>MOORE FRIDGE 3</i>	DATE/TIME <i>3/18/05 1245</i>	(1)ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium) ICP/MS - 200.8 (Hg) (Mercury) ICP Metals - 6010B (TAL) (Manganese) ICP Metals - 6010B (Add-On) (Boron, Lithium) IC Anions - 300.0 (Chloride, Fluoride, Sulfate) PCBs - 8082;				
RELINQUISHED BY/REMOVED FROM <i>MOORE FRIDGE</i>	DATE/TIME <i>3/22/05 0610</i>	RECEIVED BY/STORED IN <i>MR WEIL</i>	DATE/TIME <i>3/22/05 0610</i>					
RELINQUISHED BY/REMOVED FROM <i>MR WEIL</i>	DATE/TIME <i>3/22/05 0930</i>	RECEIVED BY/STORED IN <i>MR WEIL</i>	DATE/TIME <i>3/22/05 0930</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	<div style="text-align: center;"> REVISED <i>6/15/05</i> </div>				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME				

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-008	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	
SAMPLING LOCATION BC Controlled Area - Random		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization		SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>	DATA TURNAROUND 30 Days / 30 Days	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 TIED TO BKHF7		PRESERVATION Cool 4C					
			TYPE OF CONTAINER nG					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHD2 W050001036	SOIL	3/18/05	1030	X				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM MR WEIL/STW	DATE/TIME 3/18/05 1245	RECEIVED BY/STORED IN M0026 FRIDGE	DATE/TIME 3/18/05 1245	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;				
RELINQUISHED BY/REMOVED FROM M026 FRIDGE	DATE/TIME 3/22/05 0610	RECEIVED BY/STORED IN MR WEIL/STW	DATE/TIME 3/22/05 0610					
RELINQUISHED BY/REMOVED FROM MR WEIL/STW	DATE/TIME 3/22/05 0930	RECEIVED BY/STORED IN M026 FRIDGE	DATE/TIME 3/22/05 0930					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME				

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-009	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H
SAMPLING LOCATION BC Controlled Area - Random		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 L=Liquid DS=Drum S=Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS		PRESERVATION		Cool AC		
	TIED to: BICHD3		TYPE OF CONTAINER		eG		
			NO. OF CONTAINER(S)		1		
	SPECIAL HANDLING AND/OR STORAGE		VOLUME		120mL		
		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
BICHD3 W050001037	SOIL	3/19/05	0930	X			
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;			
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			

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-010	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days	
SAMPLING LOCATION BC Controlled Area - Random AR-7		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.	COA 119140ES10		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 L=Liquid 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 Tie to B1CHF9		PRESERVATION Cool 4C					
			TYPE OF CONTAINER eG					
			NO. OF CONTAINER(S) 1					
			VOLUME 120ml					
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHD4 W050001038	SOIL	3/11/05	1410	X				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM <i>Kevin Hughes</i>	DATE/TIME 3-11-05	RECEIVED BY/STORED IN <i>MO 026 Field #3</i>	DATE/TIME 3-11-05/15:35	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;				
RELINQUISHED BY/REMOVED FROM <i>MR. WELLS</i>	DATE/TIME 3/22/05 0610	RECEIVED BY/STORED IN <i>MR. WELLS</i>	DATE/TIME 3/22/05 0610					
RELINQUISHED BY/REMOVED FROM <i>MR. WELLS</i>	DATE/TIME 3/22/05 0930	RECEIVED BY/STORED IN <i>MR. WELLS</i>	DATE/TIME 3/22/05 0930					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME				

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-012	PAGE 1	OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND
SAMPLING LOCATION BC Controlled Area - Focused A2		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>	30 Days / 30 Days
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 Tie to BICHH1		PRESERVATION Cool 4C					
			TYPE OF CONTAINER #G					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS * see Nbk Below PD mix 5/11/2005				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
BICHD6 <i>(no 5000104)</i>	SOIL	3/11/05	1040					
BICHH4 1042	SOIL	3/11/05	1040					
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM <i>Kevin Hughes 3/11/05 15:35</i>		RECEIVED BY/STORED IN <i>MOORE Field #3 / 3/11/05 15:35</i>			(1)ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium) ICP/MS - 200.8 (Hg) (Mercury) ICP Metals - 6010B (TAL) (Manganese) ICP Metals - 6010B (Add-On) (Boron, Lithium) IC Anions - 300.0 (Chloride, Fluoride, Sulfate) PCBs - 8082; * Add Sr 90 and GSA (G-137) PD mix 5/11/2005 ** Add Nitrate and Nitrite P.D. mix PD 6/19/2005			
RELINQUISHED BY/REMOVED FROM <i>MOORE PRINGS 3/22/05 06:00</i>		RECEIVED BY/STORED IN <i>MIRNELY 3/22/05 06:00</i>						
RELINQUISHED BY/REMOVED FROM <i>MIRNELY 3/22/05 09:30</i>		RECEIVED BY/STORED IN <i>PRINGS 3/22/05 09:30</i>						
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN						
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN						
RELINQUISHED BY/REMOVED FROM		RECEIVED BY/STORED IN						
LABORATORY SECTION	RECEIVED BY	TITLE			DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY			DATE/TIME			

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-011	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H
SAMPLING LOCATION BC Controlled Area - Focused A1		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	DATA TURNAROUND 30 Days / 30 Days
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 Tie to BICHHO		PRESERVATION Cool 4C	TYPE OF CONTAINER ag	NO. OF CONTAINER(S) 1	VOLUME 120mL	SPECIAL HANDLING AND/OR STORAGE
		SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS <i>* See Note Below P.D.Mix 5/31/2005</i>			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1CHD5 <i>W05001039</i>	SOIL	3/1/05	1015	<i>Y below P.D.Mix 6/1/2005</i>			
B1CHH3 <i>3' 1040</i>	SOIL	3/1/05	1015	<i>Y below P.D.Mix 6/1/2005</i>			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1)ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium) ICP/MS - 200.8 (Hg) (Mercury) ICP Metals - 6010B (TAL) (Manganese) ICP Metals - 6010B (Add-On) (Boron, Lithium) IC Anions - 300.0 (Chloride, Fluoride, Sulfate) PCBs - 8082; <i>* Add Sr 90 and GBA (Cs-137) P.D.Mix 5/31/2005</i> <i>** Add Nitrate and Nitrite P.D.Mix 6/1/2005</i>			
<i>Kenn Nix</i>	<i>3-1-05 15:35</i>	<i>MOORE FRIDGE #13</i>	<i>3-1-05/15:35</i>				
<i>MOORE FRIDGE</i>	<i>3/2/05 0610</i>	<i>MARKER</i>	<i>3/2/05 0640</i>				
<i>MARKER</i>	<i>3/2/05 0930</i>	<i>BOB</i>	<i>3/2/05 0930</i>				
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME			

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-013	PAGE 1	OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND
SAMPLING LOCATION BC Controlled Area - Focused A3		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>	30 Days / 30 Days
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140E510	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 Tie to B1CHH2		PRESERVATION Cool 4C					
			TYPE OF CONTAINER #G					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS * See Note Below P.D.M. 5/31/2005					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHD7 W050001043	SOIL 1'	3/11/05	1200	X				
B1CHH5 1044	SOIL 3'	3/11/05	1200	Y				
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM Kevin Hughes	DATE/TIME 3/11/05	RECEIVED BY/STORED IN MOORE	DATE/TIME 3/11/05 15:35	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) (Mercury) ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082; * Add Sr90 and GBA (G-157) P.D.M. 5/31/2005 ** Add Nitrate and Nitrite P.D.M. 6/15/2005				
RELINQUISHED BY/REMOVED FROM MOORE	DATE/TIME 3/22/05 0610	RECEIVED BY/STORED IN MURIEL	DATE/TIME 3/22/05 0610					
RELINQUISHED BY/REMOVED FROM MURIEL	DATE/TIME 3/22/05 0930	RECEIVED BY/STORED IN MOORE	DATE/TIME 3/22/05 0930					
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 6/15/05				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME				

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Appendix 5

Data Validation Supporting Documentation

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PCB DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: <i>Be controlled area</i>			DATA PACKAGE: <i>50636</i>		
VALIDATOR: <i>TLI</i>		LAB: <i>WSEF</i>		DATE: <i>7/2/05</i>	
			SDG: <i>50636</i>		
ANALYSES PERFORMED					
SW-846 8081	SW-846 8081 (TCLP)	SW-846 8082	SW-846 8081 (TCLP)		
SAMPLES/MATRIX					
<i>BICHH6</i>	<i>BICHH7</i>	<i>BICHH8</i>	<i>BICHH8</i>	<i>BICHH9</i>	
<i>BICHD0</i>	<i>BICHD1</i>	<i>BICHD2</i>	<i>BICHD3</i>	<i>BICHD4</i>	
<i>BICHD5</i>	<i>BICHH3</i>	<i>BICHD6</i>	<i>BICHH4</i>	<i>BICHD7</i>	
<i>BICHH5</i>					
					<i>Site 1</i>

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: [Signature] D2 - surr low J all

no PAs

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 on

9. SAMPLE CLEANUP (Levels D and E)

Fluorilicil ® (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: _____

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: PCBs complete list

SAF Number: F05-014
 Sample Date: 03/18/05
 Receive Date: 03/18/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001015									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Aroclor-1260	11098-82-5	1004.3	98.700	% Recov	03/28/05	75.000	125.000	
MS	Decachlorobiphenyl	2051-24-3	951.74	93.500	% Recov	03/28/05	50.000	150.000	
MS	Tetrachloro-m-xylene	877-09-8	938.16	92.200	% Recov	03/28/05	50.000	150.000	
MSD	Aroclor-1260	11098-82-5	1094.1	108.000	% Recov	03/28/05	75.000	125.000	
MSD	Decachlorobiphenyl	2051-24-3	1030.0	102.000	% Recov	03/28/05	50.000	150.000	
MSD	Tetrachloro-m-xylene	877-09-8	996.01	98.500	% Recov	03/28/05	50.000	150.000	
SPK-RPD	Aroclor-1260	11098-82-5	108.000	8.999	RPD	03/28/05	0.000	25.000	
SPK-RPD	Decachlorobiphenyl	2051-24-3	102.000	8.896	RPD	03/28/05	0.000	20.000	
SPK-RPD	Tetrachloro-m-xylene	877-09-8	98.500	8.607	RPD	03/28/05	0.000	20.000	
Lab ID: W050001016									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1071.2	104.000	% Recov	03/24/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1070.9	103.000	% Recov	03/24/05	50.000	150.000	
Lab ID: W050001030									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1055.7	104.000	% Recov	03/24/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1018.7	100.000	% Recov	03/24/05	50.000	150.000	
Lab ID: W050001031									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1023.7	101.000	% Recov	03/24/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1007.4	99.800	% Recov	03/24/05	50.000	150.000	

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REVISED
RT Dwyer
 6/15/05

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: PCBs complete list

SAF Number: F05-014
 Sample Date: 03/11/05
 Receive Date: 03/22/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001032 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1092.5	104.000	% Recov	03/24/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1065.0	102.000	% Recov	03/24/05	50.000	150.000	
Lab ID: W050001033 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1077.5	103.000	% Recov	03/24/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-08-8	1014.2	98.700	% Recov	03/24/05	50.000	150.000	
Lab ID: W050001034 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1058.0	103.000	% Recov	03/24/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1053.5	103.000	% Recov	03/24/05	50.000	150.000	
Lab ID: W050001035 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1041.8	102.000	% Recov	03/24/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	823.27	80.300	% Recov	03/24/05	50.000	150.000	
Lab ID: W050001036 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1078.2	103.000	% Recov	03/24/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	600.34	48.100	% Recov	03/24/05	50.000	150.000	
Lab ID: W050001037 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1105.6	106.000	% Recov	03/24/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1067.5	102.000	% Recov	03/24/05	50.000	150.000	

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REVISED
R. Dwyer
 6/15/05

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: PCBs complete list

SAF Number: F05-014
 Sample Date: 03/18/05
 Receive Date: 03/22/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001038 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1045.8	99.000	% Recov	03/28/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1087.1	103.000	% Recov	03/28/05	50.000	150.000	
Lab ID: W050001039 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1018.4	99.600	% Recov	03/28/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1043.2	102.000	% Recov	03/28/05	50.000	150.000	
Lab ID: W050001040 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1003.8	98.900	% Recov	03/28/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1033.3	102.000	% Recov	03/28/05	50.000	150.000	
Lab ID: W050001041 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1015.8	99.300	% Recov	03/28/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1033.0	101.000	% Recov	03/28/05	50.000	150.000	
Lab ID: W050001042 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	875.43	86.500	% Recov	03/28/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	927.48	81.600	% Recov	03/28/05	50.000	150.000	
Lab ID: W050001043 BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1046.2	101.000	% Recov	03/28/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1092.2	105.000	% Recov	03/28/05	50.000	150.000	

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REVISED
R. Reyes
 6/15/05

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: PCBs complete list

SAF Number: F05-014
 Sample Date: 03/11/05
 Receive Date: 03/22/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001044									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1021.1	101.000	% Recov	03/28/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1031.8	102.000	% Recov	03/28/05	50.000	150.000	
BATCH QC									
BLANK	Aroclor-1018	12674-11-2	< 50	n/a	UGKG	03/24/05			U
BLANK	Aroclor-1221	11104-28-2	< 100	n/a	ug/Kg	03/24/05			U
BLANK	Aroclor-1232	11141-18-5	< 50	n/a	ug/Kg	03/24/05			U
BLANK	Aroclor-1242	63489-21-9	< 50	n/a	ug/Kg	03/24/05			U
BLANK	Aroclor-1248	12672-29-6	< 50	n/a	ug/Kg	03/24/05			U
BLANK	Aroclor-1254	11097-69-1	< 50	n/a	ug/Kg	03/24/05			U
BLANK	Aroclor-1260	11098-82-5	< 50	n/a	ug/Kg	03/24/05			U
BLANK	Aroclor-1262	37324-23-5	< 50	n/a	ug/Kg	03/24/05			U
BLANK	Aroclor-1268	11100-14-4	< 50	n/a	ug/Kg	03/24/05			U
BLANK	Decachlorobiphenyl	2051-24-3	1005.2	101.000	% Recov	03/24/05	50.000	150.000	
BLANK	Tetrachloro-m-xylene	877-09-8	1028.2	103.000	% Recov	03/24/05	50.000	150.000	
LCS	Aroclor-1260	11098-82-5	1088.1	109.000	% Recov	03/24/05	70.000	130.000	
LCS	Decachlorobiphenyl	2051-24-3	1021.9	102.000	% Recov	03/24/05	50.000	150.000	
LCS	Tetrachloro-m-xylene	877-09-8	985.13	98.500	% Recov	03/24/05	50.000	150.000	

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REVISED
Revised
 6/15/05



Date: 11 July 2005
To: Fluor Hanford Inc. (technical representative)
From: TechLaw, Inc.
Project: BC Controlled Area Surficial Soil Characterization
Subject: Radiochemistry - Data Package No. WSCF20050636 (50636)

INTRODUCTION

This memo presents the results of data validation on Data Package No. 50636 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
B1CHD5	3/11/05	Soil	C	See note 1
B1CHH3	3/11/05	Soil	C	See note 1
B1CHD6	3/11/05	Soil	C	See note 1
B1CHH4	3/11/05	Soil	C	See note 1
B1CHD7	3/11/05	Soil	C	See note 1
B1CHH5	3/11/05	Soil	C	See note 1

1- Strontium-90 and gamma spectroscopy (cesium-137).

Data validation was conducted in accordance with the FHI validation statement of work and the Sampling and Analysis Instruction for the BC Controlled Area Soil Characterization, D&D-24693, Rev. 0. 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

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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.

All 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 a radiochemical tracer yield of 106%, the strontium-90 result in sample B1CHD7 was qualified as an estimate and flagged "J".

000002

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 than 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 quantitation 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. 50636 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.

000003

MINOR DEFICIENCIES

Due to a radiochemical tracer yield of 106%, the strontium-90 result in sample B1CHD7 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.

D&D-24693, Rev. 0, *Sampling and Analysis Instruction for the BC Controlled Area Soil Characterization*.

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

000007

RADIOCHEMISTRY DATA QUALIFICATION SUMMARY*

SDG: 50636	REVIEWER: TLI	PROJECT: BC Controlled Area Surficial Soil Characterization	PAGE <u>1</u> OF <u>1</u>
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Strontium-90	J	B1CHD7 B1CHD7	Tracer yield

Sal 9/14/05

* - 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

000009

Project: FLUOR-HANFORD														
Laboratory: WSCF														
Case		SDG: WSCF20050940												
Sample Number		B1CHD5		B1CHH3		B1CHD6		B1CHH4		B1CHD7		B1CHH5		
Remarks														
Sample Date		3/11/05		3/11/05		3/11/05		3/11/05		3/11/05		3/11/05		
Radiochemistry		RTQI	Result	Q	Result	Q								
Cesium-137		0.1	893		113		12.1		1.52		3.10		6.28	
Strontium-89/90		1	1600		200		170		6.40		5.00	J	19.0	

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: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
Radiochemistry														
W050001039	B1CHD5	GRP	TRENT	10046-97-3	Cesium-137	SOIL	LA-508-481	893	pCi/g	1.00	1.0	05/19/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481	+ - 1.5e+02	pCi/g	1.00	0.0	05/19/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	1.60e+03	pCi/g	1.00	0.30	05/27/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415	+ - 2.4e+02	pCi/g	1.00	0.0	05/27/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481	113	pCi/g	1.00	0.35	05/23/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481	+ - 15	pCi/g	1.00	0.0	05/23/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	200	pCi/g	1.00	0.30	05/27/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415	+ - 30	pCi/g	1.00	0.0	05/27/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	10046-97-3	Cesium-137	SOIL	LA-508-481	12.1	pCi/g	1.00	0.21	06/24/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481	+ - 1.7	pCi/g	1.00	0.0	05/24/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	170	pCi/g	1.00	0.30	05/27/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415	+ - 26	pCi/g	1.00	0.0	05/27/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	10046-97-3	Cesium-137	SOIL	LA-508-481	1.52	pCi/g	1.00	0.18	05/23/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481	+ - 0.33	pCi/g	1.00	0.0	05/23/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	6.40	pCi/g	1.00	0.30	05/27/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415	+ - 2.0	pCi/g	1.00	0.0	05/27/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	10046-97-3	Cesium-137	SOIL	LA-508-481	3.10	pCi/g	1.00	0.23	06/23/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481	+ - 0.52	pCi/g	1.00	0.0	05/23/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	5.00	pCi/g	1.00	0.20	05/27/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415	+ - 1.0	pCi/g	1.00	0.0	05/27/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481	6.28	pCi/g	1.00	0.20	05/23/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481	+ - 0.92	pCi/g	1.00	0.0	05/23/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415	19.0	pCi/g	1.00	0.30	06/27/05	03/11/05	03/22/05
W050001044	B1CHH5	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415	+ - 2.8	pCi/g	1.00	0.0	06/27/05	03/11/05	03/22/05

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

Nickolas
REVISED
Davies
6/15/05

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

000012

Sample Delivery Group	WSCF20050636 Rev. 3
Sample Matrix	Soil
Sample Visual	N/A
SAF Number	F05-014
Data Deliverable	Summary Report

Introduction

Sixteen (16) BC Controlled Area - Soil Characterization samples (B1CHH6, B1CHH7, B1CHH8, B1CHC8, B1CHC9, B1CHD0, B1CHD1, B1CHD2, B1CHD3, B1CHD4, B1CHD5, B1CHH3, B1CHD6, B1CHH4, B1CHD7 and B1CHH5) were received at the WSCF Laboratory on March 22, 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. Analytical work was performed with no deviations to the approved method.
- ICP-AES Metals by EPA Method 6010B. 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.

Organic

- PCBs by EPA Method 8082B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (GEA [Cs-137 only], Strontium-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

REVISED
D. Dwyer
6/15/05

Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analysis were not met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GRP Letter of Instruction. See pages 25 through 27 for QC details.

Analytical Note:

- Preparation Date: 28-mar-2005
- Nitrate and nitrite (EPA Method 300.0) analytical results were amended to this data package.

All QC controls are within the established limits.

ICP-AES Metals (Boron, Lithium and Manganese) – 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 GRP Letter of Instruction. See page 28 for QC details. Analytical Notes:

- Preparation Date: 30-mar-2005
- The analytes detected in the associated preparation Blank sample were evaluated and there was no significant affect on the sample results.
- Manganese – The Matrix Spike Duplicate QC recovery and Spike Relative Percent Difference exceeded established laboratory limits. Since all of the other QC controls were within the established limits, the sample results were not flagged.

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 GRP Letter of Instruction. See pages 29 through 32 for QC details. Analytical Notes:

- Preparation Date: 15-mar-2005.
- The analytes detected in the associated preparation Blank sample were evaluated and there was no significant affect on the sample results.
- Silver and Antimony – The Laboratory Control Sample recoveries were within manufacturer's limits.
- Selenium - The Laboratory Control Sample recovery was biased low, however the Matrix Spike and the Matrix Spike Duplicate QC samples were acceptable and the data was not flagged.
- Samples B1CHD5 (W050001039), B1CHH3 (W050001040), B1CHD6 (W050001041), B1CHD7 (W050001043) and B1CHH5 (W050001044) were re-analyzed at lower

dilutions per customer request. Re-analysis resulted in meeting all of the method detection limits.

All other QC controls are within the established limits.

Percent Solids – analyzed for organic moisture correction.

Organic Comments

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

PCBs – 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 GRP Letter of Instruction. See pages 39 through 42 for QC details. Analytical Note:

- Preparation Date: 23-mar-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19411 (SDG# 20050622, SAF# F03-025).
- Although the tetrachloro-m-xylene (TCX) surrogate recovery (sample B1CHD2) was low (48%), it was determined that there was no affect on the Aroclor sample results. Results were below detection limit and U flagged.

All other QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 44 through 45 for QC details. Analytical Note:

- Strontium-85 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample ID	Isotope	Tracer Recovery (Percent)
<u>Strontium-85</u>			
BLANK		Sr-85	106.2
LCS		Sr-85	100.4
B1CHD5	W050001039	Sr-85	96.1
DUPLICATE	W050001039	Sr-85	100.0
B1CHH3	W050001040	Sr-85	100.2

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REVISED
D. H. H. H.
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Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample ID	Isotope	Tracer Recovery (Percent)
B1CHD6	W050001041	Sr-85	94.5
B1CHH4	W050001042	Sr-85	88.6
B1CHD7	W050001043	Sr-85	106.9
B1CHH5	W050001044	Sr-85	81.1

All QC controls are within the established limits.

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

John E. Trechter (John Trechter)
for Pauline Mix
 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

REVISED
Pauline

6/15/05

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-012	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG	TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION BC Controlled Area - Focused A2		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization		SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.	COA 119140ES10	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 W1=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Tie to B1CHH1	PRESERVATION Cool 4C	TYPE OF CONTAINER NG	NO. OF CONTAINER(S) 1	VOLUME 120mL		
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS * see note below PDMX stored					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1CHD6	SOIL 1'	3/11/05	1040				
B1CHH4	SOIL 3'	3/11/05	1040				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium) ICP/MS - 200.8 (Hg) (Mercury) ICP Metals - 6010B (TAL) (Manganese) ICP Metals - 6010B (Add-On) (Boron, Lithium) IC Anions - 300.0 (Chloride, Fluoride, Sulfate) PCBs - 8082; * Add Sr 90 and GBA (G-137) PDMX 5/11/2005 ** Add Nitrate and Nitrite P.D.Mix 6/19/2005			
Kevin Hughes	3/11/05 15:35	Monab Field H3	3/11/05 15:35				
MRO FRINGS	3/22/05 0610	MIRNEIL/TRENT	3/22/05 0610				
MIRNEIL/TRENT	3/22/05 0930	KR... / ...	3/22/05 0930				
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME			

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-011	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H DATA TURNAROUND 30 Days / 30 Days	
SAMPLING LOCATION BC Controlled Area - Focused A1		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 D5=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Tie to BICHHO		PRESERVATION Cool 4C					
			TYPE OF CONTAINER AG					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS * See Note Below P.D. Min 5/31/2005					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
BICHD5 W05001039	SOIL	3/11/05	1015	Y below P.D. Min 6/1/2005				
BICHH3 3' 1040	SOIL	3/11/05	1015	Y				
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM Kevin Hughes	DATE/TIME 3/11/05	RECEIVED BY/STORED IN MOORE	DATE/TIME 3/11/05	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082; * Add Sr 90 and GEA (Cs-137) P.D. Min 5/31/2005 ** Add Nitrate and Nitrite P.D. Min 6/1/2005				
RELINQUISHED BY/REMOVED FROM MOORE	DATE/TIME 3/22/05	RECEIVED BY/STORED IN MOORE	DATE/TIME 3/22/05					
RELINQUISHED BY/REMOVED FROM MR. WEL	DATE/TIME 3/22/05	RECEIVED BY/STORED IN MR. WEL	DATE/TIME 3/22/05					
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 6/15/05				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME				

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-013	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND
SAMPLING LOCATION BC Controlled Area - Focused A3		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>		30 Days / 30 Days
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 Tie to B1CHH2		PRESERVATION Cool 4C					
			TYPE OF CONTAINER 8G					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS * See Note below P.D.M. 5/31/2005				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHD7 <i>W050001043</i>	SOIL 1'	3/11/05	1200	X				
B1CHH5 <i>1044</i>	SOIL 3'	3/11/05	1200	Y				
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;				
<i>Kevin Hughes</i>	<i>3/11/05 15:35</i>	<i>MOORE, Fridge #3</i>	<i>3/11/05 15:35</i>					
<i>MOORE, Fridge #3</i>	<i>3/22/05 06:10</i>	<i>MR WELLS</i>	<i>3/22/05 06:10</i>					
<i>MR WELLS</i>	<i>3/22/05 09:30</i>	<i>MR WELLS</i>	<i>3/22/05 09:30</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME				

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REVISED
6/15/05

* Add Sr-90 and GRA (G-137) P.D.M. 5/31/2005
** Add Nitrate and Nitrite P.D.M. 6/10/2005

Appendix 5
Data Validation Supporting Documentation

000020

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: NO FR

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: _____

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: BICHO7 - 10620 - J

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

000027

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: Gamma Energy Analysis-grd H2O

SAF Number: F05-014
 Sample Date: 03/11/05
 Receive Date: 03/22/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001039									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Cesium-137	10045-97-3	8.96e+02	0.335	RPD	05/19/05	0.000	20.000	
BATCH QC									
BLANK	Cesium-137	10045-97-3	U-4.9e-2	n/a	pCi/g	05/24/05	-10.000	1000.000	
LCS	Cesium-137	10045-97-3	3.94e+03	110.056	% Recov	05/23/05	80.000	120.000	

000028

REVISED
R. Reyes
 6/15/05

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: Strontium 89/90

SAF Number: F05-014
 Sample Date: 03/11/05
 Receive Date: 03/22/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001039									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Strontium-89/90	SR-RAD	1.4e+03	13.333	RPD	05/27/05	0.000	20.000	
BATCH QC									
BLANK	Strontium-89/90	10098-97-2	-1.2E-01	-0.120	pCi/g	05/27/05	-10.000	300.000	
LCS	Strontium-89/90	10098-97-2	63.8	89.733	% Recov	05/27/05	80,000	120.000	

000029

REVISED
Reyes
 6/15/05

Christian, Bruce

From: Vanni, Matthew [Matthew_Vanni@RL.gov]
To: Christian, Bruce
Cc: Trent, Stephen J; Lynch, Sherry A
Subject: FH Validation Report Revisions (WSCF20050636)
Attachments:  [Validation Rev.pdf\(957KB\)](#)

Sent: Tue 8/16/2005 8:41 AM

FROM: Matt Vanni, Sample Data Management
TO: Bruce Christian
DATE: August, 2005
SUBJECT: FH WSCF20050636 Validation Report Revisions

Attached are pages from a validation report (WSCF20050636) you have prepared for FH. Per a requested change found on the RCR provided by Rich Weiss, all sample numbers typed as "BI" need to be changed to "B1." I have included a list of the sections and specific pages that are affected by this review comment below.

Also, there is a revision that needs to be made to the Data Summary Table for the *Inorganics* portion of the report. For sample B1CHH8, the result for *Thallium* is shown to be 0.276, but laboratory results report a value of 0.275. Sample Data Management would like a corrected summary table sent back.

If you have any questions or my comments don't make sense, feel free to either call or email me. I am in the office until 4:30 daily.

Thank you,

Matt Vanni

Phone: 372-9510
 Email: Matthew_Vanni@rl.gov

Section Page w/in Section

Radiochemistry 1 & 8

PCB 1 & 9

Wet Chemistry 1

Inorganics 1

<<Validation Rev.pdf>>

Date: 11 July 2005
 To: Fluor Hanford Inc. (technical representative)
 From: TechLaw, Inc.
 Project: BC Controlled Area Surficial Soil Characterization
 Subject: Inorganics - Data Package No. WSCF20050636 (50636)



INTRODUCTION

This memo presents the results of data validation on Data Package No. 50636 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
B1CHH6	3/18/05	Soil	C	See note 1
B1CHH7	3/11/05	Soil	C	See note 1
B1CHH8	3/11/05	Soil	C	See note 1
B1CHC8	3/11/05	Soil	C	See note 1
B1CHC9	3/18/05	Soil	C	See note 1
B1CHD0	3/18/05	Soil	C	See note 1
B1CHD1	3/18/05	Soil	C	See note 1
B1CHD2	3/18/05	Soil	C	See note 1
B1CHD3	3/18/05	Soil	C	See note 1
B1CHD4	3/11/05	Soil	C	See note 1
B1CHD5	3/11/05	Soil	C	See note 1
B1CHH3	3/11/05	Soil	C	See note 1
B1CHD6	3/11/05	Soil	C	See note 1
B1CHH4	3/11/05	Soil	C	See note 1
B1CHD7	3/11/05	Soil	C	See note 1
B1CHH5	3/11/05	Soil	C	See note 1

1 - ICP/MS metals by 200.8 and ICP metals by 6010B (boron, manganese and lithium)

Data validation was conducted in accordance with the FHI validation statement of work and the Sampling and Analysis Instruction for the BC Controlled Area Soil Characterization, D&D-24693, Rev. 0. Appendices 1 through 6 provide the following information as indicated below:

000001

- 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**

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.

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.

000002

- **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 70% to 130%. 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 69% and a sample result less than the IDL are qualified "UJ". Samples with a spike recovery of greater than 130% or less than 69% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a spike recovery greater than 130% and a sample result less than the IDL, no qualification is required.

Due to an MSD recovery outside QC limits (137%), all detected manganese results were qualified as estimates and flagged "J".

All other 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 70% to 130% for LCS analysis. Samples with a recovery of less than 50% are rejected and flagged "UR". Samples with a recovery of 50% to 69% and a sample recovery below the IDL are qualified "UJ". Samples with a recovery of greater than 130% or less than 70% and a sample result greater than the IDL are qualified as estimates and flagged "J". Finally, for samples with a recovery greater than 130% 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 +/- 30%, no qualification is required. If either activity

000003

(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 quantitation limits (RTQLs) to ensure that laboratory detection levels meet the required criteria. All undetected boron and mercury results exceeded the RTQL. Under the FHI statement of work, no qualification is required. All other results met the analyte specific RTQL.

- **Completeness**

Data package No. 50636 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 MSD recovery outside QC limits (137%), all detected manganese 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.

All undetected boron and mercury results exceeded the RTQL. Under the FHI statement of work, no qualification is required.

000004

REFERENCES

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

D&D-24693, Rev. 0, *Sampling and Analysis Instruction for the BC Controlled Area Soil Characterization*.

Appendix 1

Glossary of Data Reporting Qualifiers

000006

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).

000007

Appendix 2

Summary of Data Qualification

000008

METALS DATA QUALIFICATION SUMMARY*

SDG: 50636	REVIEWER: TLI	PROJECT: BC Controlled Area Surficial Soil Characterization	PAGE <u>1</u> OF <u>1</u>
COMMENTS:			
COMPOUND	QUALIFIER	SAMPLES AFFECTED	REASON
Manganese	J	All detects	MSD 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

000010

Project: FLUOR HANFORD																					
Laboratory: WSCF																					
Case		SDG: WSCF20050636																			
Sample Number		B1CHH6	B1CHH7	B1CHH8	B1CHC8	B1CHC9	B1CHD0	B1CHD1	B1CHD2	B1CHD3	B1CHD4										
Remarks																					
Sample Date		3/18/05	3/11/05	3/11/05	3/11/05	3/18/05	3/18/05	3/18/05	3/18/05	3/18/05	3/11/05										
Inorganics	RQL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q						
Manganese	1.5	324	J	374	J	366	J	380	J	434	J	407	J	312	J	377	J	391	J	390	J
Lithium	3	6.23		5.37		5.87		6.17		6.96		7.37		7.51		6.10		7.33		6.78	
Boron	2	<2.53	U	<2.53	U	<2.59	U	<2.54	U	<2.58	U	<2.50	U	<2.56	U	<2.58	U	<2.51	U	<2.49	U
Nickel	4	8.46		8.74		8.50		8.44		9.87		9.57		8.69		8.18		10.1		9.52	
Silver	2	<0.104	U	<0.105	U	<0.104	U	<0.105	U	<0.100	U	<0.105	U	<0.103	U	<0.103	U	<0.105	U	<0.103	U
Antimony	5	<1.04	U	<1.05	U	<1.04	U	<1.05	U	<1.00	U	<1.05	U	<1.03	U	<1.03	U	<1.05	U	<1.03	U
Barium	1	82.4		69.1		79.7		77.6		97.8		108		77.8		69.4		95.0		90.6	
Beryllium	0.5	0.266		0.246		0.262		0.273		0.319		0.327		0.243		0.245		0.288		0.310	
Cadmium	0.8	0.123		0.173		0.152		0.155		0.153		0.113		<0.103	U	0.109		0.141		0.119	
Chromium	1	7.20		7.17		7.03		7.73		6.94		7.92		8.14		7.64		7.40		8.07	
Cobalt	2	7.21		7.51		7.46		7.66		9.99		8.97		5.86		6.64		8.64		10.1	
Copper	2.5	9.66		10.9		10.7		9.51		13.7		12.6		9.20		8.37		11.6		11.6	
Vanadium	3	41.9		50.0		49.2		51.0		58.1		48.6		36.7		44.5		50.4		47.6	
Zinc	2	36.5		41.9		40.1		42.4		45.9		43.9		34.1		41.4		40.8		42.2	
Lead	10	4.43		3.78		3.98		3.85		5.14		5.22		3.63		3.72		4.19		4.85	
Mercury	0.05	0.106		<0.105	U	<0.104	U	<0.105	U	<0.100	U	<0.105	U	<0.103	U	<0.103	U	<0.105	U	<0.103	U
Molybdenum	2	0.363		0.586		0.693		0.406		0.391		<0.315	U	<0.309	U	<0.309	U	<0.315	U	<0.309	U
Uranium	1	0.443		0.377		0.387		0.687		0.863		0.414		0.356		0.340		0.442		0.690	
Arsenic	10	2.10		1.76		2.39		1.41		2.86		2.98		2.24		1.57		2.86		2.44	
Selenium	10	<0.416	U	<0.420	U	<0.416	U	<0.420	U	<0.400	U	<0.420	U	<0.412	U	<0.412	U	<0.420	U	<0.412	U
Thallium	1	0.179		0.372		0.275		0.217		0.158		0.155		0.136		0.118		0.135		0.130	
Tin	10	<1.04	U	<1.05	U	<1.04	U	<1.05	U	<1.00	U	<1.05	U	<1.03	U	<1.03	U	<1.05	U	<1.03	U

000011
9/14/05

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.

Project: FLUOR HANFORD																				
Laboratory: WSCF																				
Case		SDG: WSCF20050636																		
Sample Number		B1CHD5		B1CHH3		B1CHD6		B1CHH4		B1CHD7		B1CHH5								
Remarks																				
Sample Date		3/11/05		3/11/05		3/11/05		3/11/05		3/11/05		3/11/05								
Inorganics	RQL	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result	Q	Result
Manganese	1.5	430	J	338	J	429	J	334	J	389	J	349	J							
Lithium	3	6.34		5.12		5.47		5.00		6.10		6.24								
Boron	2	<2.57	U	<2.58	U	<2.49	U	<2.59	U	<2.51	U	<2.53	U							
Nickel	4	8.43		7.28		7.58		9.77		8.12		8.64								
Silver	2	<0.105	U	<0.105	U	<0.103	U	<0.102	U	<0.104	U	0.148								
Antimony	5	<1.05	U	<1.05	U	<1.03	U	<1.02	U	<1.04	U	<1.04	U							
Barium	1	77.4		74.6		74.0		66.2		94.2		81.8								
Beryllium	0.5	0.268		0.234		0.261		0.216		0.268		0.340								
Cadmium	0.8	0.120		<0.105	U	0.113		<0.102	U	<0.104	U	0.209								
Chromium	1	8.42		5.46		6.22		5.84		7.49		6.79								
Cobalt	2	7.01		7.16		7.66		7.12		7.40		7.41								
Copper	2.5	9.74		9.31		8.48		9.66		9.55		11.0								
Vanadium	3	46.6		46.5		46.5		41.3		45.1		46.0								
Zinc	2	45.9		36.8		41.2		36.5		41.2		37.9								
Lead	10	4.53		3.50		3.50		3.51		3.90		4.06								
Mercury	0.05	<0.105	U	<0.105	U	<0.103	U	<0.102	U	<0.104	U	<0.104	U							
Molybdenum	2	0.324		<0.315	U	<0.309	U	<0.306	U	<0.312	U	0.378								
Uranium	1	0.549		0.444		0.403		0.391		0.365		0.491								
Arsenic	10	1.82		1.84		0.881		1.72		1.69		1.73								
Selenium	10	<0.420	U	<0.420	U	<0.412	U	<0.408	U	<0.416	U	<0.416	U							
Thallium	1	0.105		0.0862		0.0952		0.0791		0.108		0.198								
Tin	10	<1.05	U	<1.05	U	<1.03	U	<1.02	U	<1.04	U	<1.04	U							

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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: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive		
Inorganic															
W050001016	B1CHH6	GRP	TRENT	TS	Total solids	SOIL	LA-519-412	96.0	%	1.00	0.0	04/18/05	03/18/05	03/22/05	
W050001016	B1CHH6	GRP	TRENT	16984-48-8	Fluoride	U	< 1.13	mg/kg	49.00	1.1	03/28/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	16887-00-8	Chloride	U	< 2.55	mg/kg	48.00	2.5	03/28/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 4.90	mg/kg	49.00	4.9	03/28/05	03/18/05	03/22/05
W050001016	B1CHH6	GRP	TRENT	7439-98-5	Manganese	J	324	mg/kg	97.24	0.097	03/30/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7439-93-2	Lithium		6.23	mg/kg	97.24	0.097	03/30/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-42-8	Boron	U	< 2.53	mg/kg	97.24	2.5	03/30/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-02-0	Nickel		8.46	mg/kg	1.04	0.10	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-22-4	Silver	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-38-0	Antimony	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-39-3	Barium		82.4	mg/kg	1.04	4.2	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-41-7	Beryllium		0.266	mg/kg	1.04	0.10	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-43-9	Cadmium		0.123	mg/kg	1.04	0.10	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-47-3	Chromium		7.20	mg/kg	1.04	4.2	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-48-4	Cobalt		7.21	mg/kg	1.04	0.010	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-50-8	Copper		9.66	mg/kg	1.04	2.1	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-62-2	Vanadium		41.9	mg/kg	1.04	0.21	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-68-8	Zinc		36.5	mg/kg	1.04	4.2	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7439-92-1	Lead		4.43	mg/kg	1.04	0.21	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7439-97-8	Mercury		0.106	mg/kg	1.04	0.10	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7439-98-7	Molybdenum		0.363	mg/kg	1.04	0.31	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-61-1	Uranium		0.443	mg/kg	1.04	0.10	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-38-2	Arsenic		2.10	mg/kg	1.04	0.42	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7782-49-2	Selenium	U	< 0.416	mg/kg	1.04	0.42	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-28-0	Thallium		0.179	mg/kg	1.04	0.010	05/15/05	03/18/05	03/22/05		
W050001016	B1CHH6	GRP	TRENT	7440-31-5	Tin	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/18/05	03/22/05		

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

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Revised
6/15/05

J 7/10/05

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive		
W050001030	B1CHH7	GRP	TRENT	TS	Total solids	SOIL	LA-519-412	98.9	%	1.00	0.0	04/15/05	03/11/05	03/22/05	
W050001030	B1CHH7	GRP	TRENT	16984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	16887-00-8	Chloride	SOIL	LA-533-410	U	< 2.80	mg/kg	50.00	2.8	03/28/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	14898-79-8	Sulfate	SOIL	LA-533-410	U	< 5.80	mg/kg	50.00	5.0	03/28/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7439-98-5	Manganese	SOIL	LA-505-411	J	374	mg/kg	97.45	0.097	03/30/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411		5.37	mg/kg	97.45	0.097	03/30/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.53	mg/kg	97.45	2.5	03/30/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412		8.74	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412		89.1	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412		0.246	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.173	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		7.17	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412		7.51	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412		10.9	mg/kg	1.05	2.1	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-62-2	Vanadium	SOIL	LA-505-412		50.0	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-66-6	Zinc	SOIL	LA-505-412		41.9	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		3.78	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7439-97-8	Mercury	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412		0.586	mg/kg	1.05	0.32	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-81-1	Uranium	SOIL	LA-505-412		0.377	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412		1.78	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.420	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412		0.372	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001030	B1CHH7	GRP	TRENT	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001031	B1CHH7	GRP	TRENT	TS	Total solids	SOIL	LA-519-412	U	97.0	%	1.00	0.0	04/15/05	03/11/05	03/22/05

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

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7/10/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001031	B1CHH8	16984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/11/05	03/22/05
W050001031	B1CHH8	16887-00-8	Chloride	SOIL	LA-533-410	U	< 2.60	mg/kg	50.00	2.6	03/28/05	03/11/05	03/22/05
W050001031	B1CHH8	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/28/05	03/11/05	03/22/05
W050001031	B1CHH8	7439-86-5	Manganese	SOIL	LA-505-411	J	366	mg/kg	99.84	0.10	03/30/05	03/11/05	03/22/05
W050001031	B1CHH8	7439-93-2	Lithium	SOIL	LA-505-411		5.87	mg/kg	99.84	0.10	03/30/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.59	mg/kg	99.84	2.6	03/30/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-02-0	Nickel	SOIL	LA-505-412		8.50	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-38-0	Antimony	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-39-3	Barium	SOIL	LA-505-412		79.7	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-41-7	Beryllium	SOIL	LA-505-412		0.262	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-43-9	Cadmium	SOIL	LA-505-412		0.152	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-47-3	Chromium	SOIL	LA-505-412		7.03	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-48-4	Cobalt	SOIL	LA-505-412		7.48	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-50-8	Copper	SOIL	LA-505-412		10.7	mg/kg	1.04	2.1	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-82-2	Vanadium	SOIL	LA-505-412		49.2	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-86-8	Zinc	SOIL	LA-505-412		40.1	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7439-92-1	Lead	SOIL	LA-505-412		3.98	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7439-97-6	Mercury	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7439-98-7	Molybdenum	SOIL	LA-505-412		0.693	mg/kg	1.04	0.31	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-81-1	Uranium	SOIL	LA-505-412		0.387	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-38-2	Arsenic	SOIL	LA-505-412		2.38	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.418	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-28-0	Thallium	SOIL	LA-505-412		0.275	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001031	B1CHH8	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/11/05	03/22/05
W050001032	B1CHH8	79	Total solids	SOIL	LA-519-412		84.8	%	1.00	0.0	04/18/05	03/11/05	03/22/05
W050001032	B1CHH8	16984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/11/05	03/22/05

000015

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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001032	B1CHC8	GRP	TRENT	18887-00-0	Chloride	SOIL	LA-533-410	U	< 2.00	mg/kg	50.00	2.0	03/28/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	14866-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/28/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7439-96-5	Manganese	SOIL	LA-505-411	J	380	mg/kg	97.50	0.098	03/30/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411		6.17	mg/kg	97.50	0.098	03/30/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.54	mg/kg	97.50	2.5	03/30/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412		8.44	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412		77.8	mg/kg	1.05	4.2	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412		0.273	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.155	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		7.73	mg/kg	1.05	4.2	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412		7.66	mg/kg	1.05	0.010	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412		9.51	mg/kg	1.05	2.1	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-62-2	Vanadium	SOIL	LA-505-412		51.0	mg/kg	1.05	0.21	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-66-6	Zinc	SOIL	LA-505-412		42.4	mg/kg	1.05	4.2	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		3.85	mg/kg	1.05	0.21	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7439-97-6	Mercury	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412		0.408	mg/kg	1.05	0.32	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-81-1	Uranium	SOIL	LA-505-412		0.687	mg/kg	1.05	0.10	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412		1.41	mg/kg	1.05	0.42	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.420	mg/kg	1.05	0.42	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412		0.217	mg/kg	1.05	0.010	05/15/05 03/11/05 03/22/05
W050001032	B1CHC8	GRP	TRENT	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05 03/11/05 03/22/05
W050001033	B1CHC9	GRP	TRENT	TS	Total solids	SOIL	LA-519-412		84.4	%	1.00	0.0	04/15/05 03/18/05 03/22/05
W050001033	B1CHC9	GRP	TRENT	16984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05 03/18/05 03/22/05
W050001033	B1CHC9	GRP	TRENT	16887-00-8	Chloride	SOIL	LA-533-410	U	< 2.60	mg/kg	50.00	2.0	03/28/05 03/18/05 03/22/05

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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001033	B1GHC9	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/28/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7439-98-5	Manganese	SOIL	LA-505-411	J	434	mg/kg	99.34	0.099	03/30/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411		8.98	mg/kg	99.34	0.099	03/30/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.58	mg/kg	99.34	2.6	03/30/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412		9.87	mg/kg	1.00	0.10	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.100	mg/kg	1.00	0.10	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 1.00	mg/kg	1.00	1.0	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412		97.8	mg/kg	1.00	4.0	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412		0.319	mg/kg	1.00	0.10	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.153	mg/kg	1.00	0.10	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		8.94	mg/kg	1.00	4.0	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412		9.99	mg/kg	1.00	0.010	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412		13.7	mg/kg	1.00	2.0	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-62-2	Vanadium	SOIL	LA-505-412		58.1	mg/kg	1.00	0.20	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-68-6	Zinc	SOIL	LA-505-412		45.9	mg/kg	1.00	4.0	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		5.14	mg/kg	1.00	0.20	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7439-97-6	Mercury	SOIL	LA-505-412	U	< 0.100	mg/kg	1.00	0.10	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412		0.391	mg/kg	1.00	0.30	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412		0.883	mg/kg	1.00	0.10	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412		2.86	mg/kg	1.00	0.40	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.400	mg/kg	1.00	0.40	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412		0.158	mg/kg	1.00	0.010	05/15/05 03/18/05 03/22/05
W050001033	B1GHC9	GRP	TRENT	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.00	mg/kg	1.00	1.0	05/15/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP	TRENT	76	Total solids	SOIL	LA-519-412		94.5	%	1.00	0.0	04/15/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP	TRENT	16984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP	TRENT	16887-00-6	Chloride	SOIL	LA-533-410	B	3.12	mg/kg	50.00	2.6	03/28/05 03/18/05 03/22/05
W050001034	B1CHD0	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	B	10.5	mg/kg	50.00	5.0	03/28/05 03/18/05 03/22/05

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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001034	B1CHDO GRP TRENT	7439-98-5	Manganese	SOIL	LA-505-411	J	407	mg/kg	98.34	0.086	03/30/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7439-93-2	Lithium	SOIL	LA-505-411		7.37	mg/kg	98.34	0.086	03/30/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.50	mg/kg	98.34	2.5	03/30/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-02-0	Nickel	SOIL	LA-505-412		9.57	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-38-0	Antimony	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-39-3	Barium	SOIL	LA-505-412		108	mg/kg	1.05	4.2	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-41-7	Beryllium	SOIL	LA-505-412		0.327	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.113	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412		7.92	mg/kg	1.05	4.2	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-48-4	Cobalt	SOIL	LA-505-412		8.97	mg/kg	1.05	0.010	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-50-8	Copper	SOIL	LA-505-412		12.6	mg/kg	1.05	2.1	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-82-2	Vanadium	SOIL	LA-505-412		48.6	mg/kg	1.05	0.21	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-88-8	Zinc	SOIL	LA-505-412		43.9	mg/kg	1.05	4.2	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412		5.22	mg/kg	1.05	0.21	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7439-97-8	Mercury	SOIL	LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412	U	< 0.315	mg/kg	1.05	0.32	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-81-1	Uranium	SOIL	LA-505-412		0.414	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-38-2	Arsenic	SOIL	LA-505-412		2.98	mg/kg	1.05	0.42	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.420	mg/kg	1.05	0.42	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-28-0	Thallium	SOIL	LA-505-412		0.155	mg/kg	1.05	0.010	05/15/05	03/18/05	03/22/05
W050001034	B1CHDO GRP TRENT	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1 GRP TRENT	TS	Total solids	SOIL	LA-519-412		95.4	%	1.00	0.0	04/15/05	03/18/05	03/22/05
W050001035	B1CHD1 GRP TRENT	18984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/18/05	03/22/05
W050001035	B1CHD1 GRP TRENT	18887-00-6	Chloride	SOIL	LA-533-410	U	< 2.00	mg/kg	50.00	2.8	03/28/05	03/18/05	03/22/05
W050001035	B1CHD1 GRP TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/28/05	03/18/05	03/22/05
W050001035	B1CHD1 GRP TRENT	7439-98-5	Manganese	SOIL	LA-505-411		312	mg/kg	98.48	0.098	03/30/05	03/18/05	03/22/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive		
W050001035	B1CHD1	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411	7.51	mg/kg	98.48	0.088	03/30/05	03/18/05	03/22/05	
W050001036	B1CHD1	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.56	mg/kg	98.48	2.8	03/30/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412		8.89	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412		77.8	mg/kg	1.03	4.1	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412		0.243	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		8.14	mg/kg	1.03	4.1	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412		5.86	mg/kg	1.03	0.010	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412		9.20	mg/kg	1.03	2.1	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-82-2	Vanadium	SOIL	LA-505-412		36.7	mg/kg	1.03	0.21	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-86-8	Zinc	SOIL	LA-505-412		34.1	mg/kg	1.03	4.1	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		3.83	mg/kg	1.03	0.21	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7439-97-8	Mercury	SOIL	LA-505-412	U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412	U	< 0.309	mg/kg	1.03	0.31	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-81-1	Uranium	SOIL	LA-505-412		0.356	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412		2.24	mg/kg	1.03	0.41	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.412	mg/kg	1.03	0.41	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412		0.136	mg/kg	1.03	0.010	05/15/05	03/18/05	03/22/05
W050001035	B1CHD1	GRP	TRENT	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	76	Total solids	SOIL	LA-519-412	85.8	%	1.00	0.0	04/15/05	03/18/05	03/22/05	
W050001036	B1CHD2	GRP	TRENT	16984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	16887-00-8	Chloride	SOIL	LA-533-410	U	< 2.88	mg/kg	50.00	2.8	03/28/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	18.5	mg/kg	50.00	5.0	03/28/05	03/18/05	03/22/05	
W050001036	B1CHD2	GRP	TRENT	7439-98-5	Manganese	SOIL	LA-505-411	J	377	mg/kg	99.11	0.099	03/30/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411		6.10	mg/kg	99.11	0.099	03/30/05	03/18/05	03/22/05

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.

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

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Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001036	B1CHD2	GRP TRENT	7440-42-8	Boron	SOIL LA-505-411	U	< 2.58	mg/kg	89.11	2.6	03/30/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-02-0	Nickel	SOIL LA-505-412		8.18	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-22-4	Silver	SOIL LA-505-412	U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-36-0	Antimony	SOIL LA-505-412	U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-39-3	Barium	SOIL LA-505-412		69.4	mg/kg	1.03	4.1	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-41-7	Beryllium	SOIL LA-505-412		0.245	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-43-9	Cadmium	SOIL LA-505-412		0.109	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-47-3	Chromium	SOIL LA-505-412		7.64	mg/kg	1.03	4.1	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-48-4	Cobalt	SOIL LA-505-412		6.64	mg/kg	1.03	0.010	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-50-8	Copper	SOIL LA-505-412		8.37	mg/kg	1.03	2.1	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-62-2	Vanadium	SOIL LA-505-412		44.5	mg/kg	1.03	0.21	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-66-6	Zinc	SOIL LA-505-412		41.4	mg/kg	1.03	4.1	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7439-92-1	Lead	SOIL LA-505-412		3.72	mg/kg	1.03	0.21	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7439-97-6	Mercury	SOIL LA-505-412	U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7439-98-7	Molybdenum	SOIL LA-505-412	U	< 0.308	mg/kg	1.03	0.31	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-61-1	Uranium	SOIL LA-505-412		0.340	mg/kg	1.03	0.10	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-38-2	Arsenic	SOIL LA-505-412		1.57	mg/kg	1.03	0.41	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7782-49-2	Selenium	SOIL LA-505-412	U	< 0.412	mg/kg	1.03	0.41	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-28-0	Thallium	SOIL LA-505-412		0.118	mg/kg	1.03	0.010	05/15/05	03/18/05	03/22/05
W050001036	B1CHD2	GRP TRENT	7440-31-5	Tin	SOIL LA-505-412	U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP TRENT	TS	Total solids	SOIL LA-510-412		84.7	%	1.00	0.0	04/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP TRENT	16884-48-8	Fluoride	SOIL LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/28/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP TRENT	16887-00-6	Chloride	SOIL LA-533-410	U	< 2.60	mg/kg	50.00	2.6	03/28/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP TRENT	14809-79-9	Sulfate	SOIL LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/28/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP TRENT	7439-98-5	Manganese	SOIL LA-505-411	J	391	mg/kg	98.66	0.097	03/30/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP TRENT	7439-93-2	Lithium	SOIL LA-505-411		7.33	mg/kg	98.66	0.097	03/30/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP TRENT	7440-42-8	Boron	SOIL LA-505-411	U	< 2.51	mg/kg	98.66	2.5	03/30/05	03/18/05	03/22/05

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7/16/05

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF		Result	Unit	DF	MDL	Analyze	Sample	Receive	
					Method	RQ								
W050001037	B1CHD3	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412	10.1	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412 U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-38-0	Antimony	SOIL	LA-505-412 U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412	95.0	mg/kg	1.05	4.2	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	0.288	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.141	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412	7.40	mg/kg	1.05	4.2	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412	8.84	mg/kg	1.05	0.010	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412	11.8	mg/kg	1.05	2.1	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-62-2	Vanadium	SOIL	LA-505-412	50.4	mg/kg	1.05	0.21	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-66-6	Zinc	SOIL	LA-505-412	40.8	mg/kg	1.05	4.2	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7439-82-1	Lead	SOIL	LA-505-412	4.19	mg/kg	1.05	0.21	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7439-97-6	Mercury	SOIL	LA-505-412 U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412 U	< 0.315	mg/kg	1.05	0.32	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412	0.442	mg/kg	1.05	0.10	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	2.86	mg/kg	1.05	0.42	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412 U	< 0.420	mg/kg	1.05	0.42	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412	0.135	mg/kg	1.05	0.010	05/15/05	03/18/05	03/22/05
W050001037	B1CHD3	GRP	TRENT	7440-31-5	Tin	SOIL	LA-505-412 U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/18/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	75	Total solids	SOIL	LA-519-412	93.5	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	16984-48-8	Fluoride	SOIL	LA-533-410 U	< 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	16887-00-6	Chloride	SOIL	LA-533-410 U	< 2.80	mg/kg	50.00	2.6	03/29/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	14068-79-8	Sulfate	SOIL	LA-533-410 U	< 5.00	mg/kg	50.00	5.0	03/29/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	7439-98-5	Manganese	SOIL	LA-505-411 J	390	mg/kg	95.62	0.096	03/30/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411	6.78	mg/kg	95.62	0.096	03/30/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411 U	< 2.49	mg/kg	95.62	2.5	03/30/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412	9.52	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05

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Groundwater Remediation Program

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001038	B1CHD4	GRP TRENT	7440-22-4	Silver	SOIL	LA-505-412 U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-36-0	Antimony	SOIL	LA-505-412 U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-39-3	Barium	SOIL	LA-505-412	90.8	mg/kg	1.03	4.1	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	0.310	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.119	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412	8.07	mg/kg	1.03	4.1	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-48-4	Cobalt	SOIL	LA-505-412	10.1	mg/kg	1.03	0.010	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-50-8	Copper	SOIL	LA-505-412	11.8	mg/kg	1.03	2.1	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-62-2	Vanadium	SOIL	LA-505-412	47.8	mg/kg	1.03	0.21	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-66-8	Zinc	SOIL	LA-505-412	42.2	mg/kg	1.03	4.1	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412	4.85	mg/kg	1.03	0.21	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7439-97-6	Mercury	SOIL	LA-505-412 U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412 U	< 0.309	mg/kg	1.03	0.31	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-81-1	Uranium	SOIL	LA-505-412	0.890	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	2.44	mg/kg	1.03	0.41	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7782-49-2	Selenium	SOIL	LA-505-412 U	< 0.412	mg/kg	1.03	0.41	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-28-0	Thallium	SOIL	LA-505-412	0.130	mg/kg	1.03	0.010	05/15/05	03/11/05	03/22/05
W050001038	B1CHD4	GRP TRENT	7440-31-5	Tin	SOIL	LA-505-412 U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	TS	Total solids	SOIL	LA-519-412	95.0	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	18984-48-8	Fluoride	SOIL	LA-533-410 U	< 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	18887-00-6	Chloride	SOIL	LA-533-410 U	< 2.60	mg/kg	50.00	2.8	03/29/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	NO2-N	Nitrogen in Nitrite	SOIL	LA-533-410 U	< 0.950	mg/kg	50.00	0.95	03/29/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410	7.35	mg/kg	50.00	0.65	03/29/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	14808-79-0	Sulfate	SOIL	LA-533-410 U	< 5.00	mg/kg	50.00	5.0	03/29/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	7439-98-5	Manganese	SOIL	LA-505-411 J	430	mg/kg	98.91	0.099	03/30/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	7439-93-2	Lithium	SOIL	LA-505-411	8.34	mg/kg	98.91	0.099	03/30/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP TRENT	7440-42-8	Boron	SOIL	LA-505-411 U	< 2.57	mg/kg	98.91	2.6	03/30/05	03/11/05	03/22/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF		Result	Unit	DF	MDL	Analyze	Sample	Receive	
					Method	RQ								
W050001039	B1CHD5	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412	8.43	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412 U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-38-0	Antimony	SOIL	LA-505-412 U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412	77.4	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	0.268	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.120	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412	8.42	mg/kg	1.05	4.2	06/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-48-4	Cobalt	SOIL	LA-505-412	7.01	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412	9.74	mg/kg	1.05	2.1	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-62-2	Vanadium	SOIL	LA-505-412	46.8	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-66-6	Zinc	SOIL	LA-505-412	45.9	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412	4.53	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7439-97-8	Mercury	SOIL	LA-505-412 U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412	0.324	mg/kg	1.05	0.32	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-61-1	Uranium	SOIL	LA-505-412	0.549	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	1.82	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412 U	< 0.420	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-28-0	Thallium	SOIL	LA-505-412	0.105	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001039	B1CHD5	GRP	TRENT	7440-31-6	Tin	SOIL	LA-505-412 U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	76	Total solids	SOIL	LA-519-412	98.2	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	18984-48-8	Fluoride	SOIL	LA-533-410 U	< 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	16887-00-6	Chloride	SOIL	LA-533-410 U	< 2.60	mg/kg	50.00	2.6	03/29/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	NO2-N	Nitrogen in Nitrite	SOIL	LA-533-410 U	< 0.0950	mg/kg	5.00	0.095	03/29/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410 B	0.407	mg/kg	5.00	0.095	03/29/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	38.0	mg/kg	50.00	5.0	03/29/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	7439-96-5	Manganese	SOIL	LA-505-411 J	338	mg/kg	99.40	0.099	03/30/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP	TRENT	7439-93-2	Lithium	SOIL	LA-505-411	5.12	mg/kg	99.40	0.099	03/30/05	03/11/05	03/22/05

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7/10/05

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001040	B1CHH3	GRP TRENT	7440-42-8	Boron	SOIL LA-505-411	U	< 2.58	mg/kg	99.40	2.6	03/30/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-02-0	Nickel	SOIL LA-505-412		7.28	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-22-4	Silver	SOIL LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-36-0	Antimony	SOIL LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-39-3	Barium	SOIL LA-505-412		74.6	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-41-7	Beryllium	SOIL LA-505-412		0.234	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-43-9	Cadmium	SOIL LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-47-3	Chromium	SOIL LA-505-412		5.46	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-48-4	Cobalt	SOIL LA-505-412		7.18	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-50-8	Copper	SOIL LA-505-412		9.31	mg/kg	1.05	2.1	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-82-2	Vanadium	SOIL LA-505-412		48.5	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-86-6	Zinc	SOIL LA-505-412		36.8	mg/kg	1.05	4.2	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7439-82-1	Lead	SOIL LA-505-412		3.50	mg/kg	1.05	0.21	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7439-97-6	Mercury	SOIL LA-505-412	U	< 0.105	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7439-98-7	Molybdenum	SOIL LA-505-412	U	< 0.315	mg/kg	1.05	0.32	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-81-1	Uranium	SOIL LA-505-412		0.444	mg/kg	1.05	0.10	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-38-2	Arsenic	SOIL LA-505-412		1.84	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7782-49-2	Selenium	SOIL LA-505-412	U	< 0.420	mg/kg	1.05	0.42	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-28-0	Thallium	SOIL LA-505-412		0.0862	mg/kg	1.05	0.010	05/15/05	03/11/05	03/22/05
W050001040	B1CHH3	GRP TRENT	7440-31-5	Tin	SOIL LA-505-412	U	< 1.05	mg/kg	1.05	1.0	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	TG	Total solids	SOIL LA-519-412		96.5	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	18984-48-8	Fluoride	SOIL LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	18887-00-8	Chloride	SOIL LA-533-410	U	< 2.80	mg/kg	50.00	2.6	03/29/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	NO2-N	Nitrogen in Nitrite	SOIL LA-533-410	U	< 0.850	mg/kg	50.00	0.85	03/29/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	NO3-N	Nitrogen in Nitrate	SOIL LA-533-410	B	2.73	mg/kg	50.00	0.85	03/29/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	14868-79-8	Sulfate	SOIL LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/29/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7439-96-5	Manganese	SOIL LA-505-411	J	429	mg/kg	95.75	0.096	03/30/05	03/11/05	03/22/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001041	B1CHD6	GRP TRENT	7439-93-2	Lithium	SOIL	LA-505-411	5.47	mg/kg	95.75	0.098	03/30/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-42-8	Boron	SOIL	LA-505-411 U	< 2.49	mg/kg	95.75	2.5	03/30/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-02-0	Nickel	SOIL	LA-505-412	7.58	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-22-4	Silver	SOIL	LA-505-412 U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-38-0	Antimony	SOIL	LA-505-412 U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-39-3	Barium	SOIL	LA-505-412	74.0	mg/kg	1.03	4.1	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	0.281	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	0.113	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412	6.22	mg/kg	1.03	4.1	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-48-4	Cobalt	SOIL	LA-505-412	7.66	mg/kg	1.03	0.010	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-50-8	Copper	SOIL	LA-505-412	8.48	mg/kg	1.03	2.1	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-82-2	Vanadium	SOIL	LA-505-412	46.5	mg/kg	1.03	0.21	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-66-8	Zinc	SOIL	LA-505-412	41.2	mg/kg	1.03	4.1	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7439-82-1	Lead	SOIL	LA-505-412	3.50	mg/kg	1.03	0.21	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7439-97-6	Mercury	SOIL	LA-505-412 U	< 0.103	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412 U	< 0.309	mg/kg	1.03	0.31	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-61-1	Uranium	SOIL	LA-505-412	0.403	mg/kg	1.03	0.10	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	0.881	mg/kg	1.03	0.41	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7782-49-2	Selenium	SOIL	LA-505-412 U	< 0.412	mg/kg	1.03	0.41	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-28-0	Thallium	SOIL	LA-505-412	0.0952	mg/kg	1.03	0.010	05/15/05	03/11/05	03/22/05
W050001041	B1CHD6	GRP TRENT	7440-31-5	Tin	SOIL	LA-505-412 U	< 1.03	mg/kg	1.03	1.0	05/15/05	03/11/05	03/22/05
W050001042	B1CHI4	GRP TRENT	TS	Total solids	SOIL	LA-519-412	88.3	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001042	B1CHI4	GRP TRENT	18984-48-8	Fluoride	SOIL	LA-533-410 U	< 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001042	B1CHI4	GRP TRENT	18887-00-8	Chloride	SOIL	LA-533-410 U	< 2.80	mg/kg	50.00	2.6	03/29/05	03/11/05	03/22/05
W050001042	B1CHI4	GRP TRENT	NO2-N	Nitrogen in Nitrite	SOIL	LA-533-410 U	< 0.950	mg/kg	50.00	0.95	03/29/05	03/11/05	03/22/05
W050001042	B1CHI4	GRP TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410 U	< 0.850	mg/kg	50.00	0.85	03/29/05	03/11/05	03/22/05
W050001042	B1CHI4	GRP TRENT	14868-79-8	Sulfate	SOIL	LA-533-410 U	< 5.00	mg/kg	50.00	5.0	03/29/05	03/11/05	03/22/05

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001042	B1CHH4	GRP TRENT	7439-88-5	Manganese	SOIL LA-505-411	J	334	mg/kg	99.78	0.10	03/30/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7439-93-2	Lithium	SOIL LA-505-411		5.00	mg/kg	99.78	0.10	03/30/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-42-8	Boron	SOIL LA-505-411	U	< 2.59	mg/kg	99.78	2.6	03/30/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-02-0	Nickel	SOIL LA-505-412		9.77	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-22-4	Silver	SOIL LA-505-412	U	< 0.102	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-38-0	Antimony	SOIL LA-505-412	U	< 1.02	mg/kg	1.02	1.0	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-39-3	Barium	SOIL LA-505-412		66.2	mg/kg	1.02	4.1	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-41-7	Beryllium	SOIL LA-505-412		0.218	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-43-8	Cadmium	SOIL LA-505-412	U	< 0.102	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-47-3	Chromium	SOIL LA-505-412		5.84	mg/kg	1.02	4.1	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-48-4	Cobalt	SOIL LA-505-412		7.12	mg/kg	1.02	0.010	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-50-8	Copper	SOIL LA-505-412		9.86	mg/kg	1.02	2.0	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-62-2	Vanadium	SOIL LA-505-412		41.3	mg/kg	1.02	0.20	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-66-6	Zinc	SOIL LA-505-412		36.5	mg/kg	1.02	4.1	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7439-92-1	Lead	SOIL LA-505-412		3.51	mg/kg	1.02	0.20	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7439-97-6	Mercury	SOIL LA-505-412	U	< 0.102	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7439-98-7	Molybdenum	SOIL LA-505-412	U	< 0.306	mg/kg	1.02	0.31	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-81-1	Uranium	SOIL LA-505-412		0.391	mg/kg	1.02	0.10	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-38-2	Arsenic	SOIL LA-505-412		1.72	mg/kg	1.02	0.41	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7782-49-2	Selenium	SOIL LA-505-412	U	< 0.408	mg/kg	1.02	0.41	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-28-0	Thallium	SOIL LA-505-412		0.0791	mg/kg	1.02	0.010	05/15/05	03/11/05	03/22/05
W050001042	B1CHH4	GRP TRENT	7440-31-5	Tin	SOIL LA-505-412	U	< 1.02	mg/kg	1.02	1.0	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP TRENT	TS	Total solids	SOIL LA-519-412		95.0	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP TRENT	16984-48-8	Fluoride	SOIL LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP TRENT	16887-00-6	Chloride	SOIL LA-533-410	U	< 2.60	mg/kg	50.00	2.6	03/29/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP TRENT	NO2-N	Nitrogen in Nitrite	SOIL LA-533-410	U	< 0.950	mg/kg	50.00	0.95	03/29/05	03/11/05	03/22/05
W050001043	B1CHD7	GRP TRENT	NO3-N	Nitrogen in Nitrate	SOIL LA-533-410	U	1.60	mg/kg	50.00	0.65	03/29/05	03/11/05	03/22/05

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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001043	B1CHD7	14888-79-8	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/28/05	03/11/05	03/22/05
W050001043	B1CHD7	7439-98-5	Manganese	SOIL	LA-505-411	J	389	mg/kg	96.64	0.097	03/30/05	03/11/05	03/22/05
W050001043	B1CHD7	7439-93-2	Lithium	SOIL	LA-505-411		6.10	mg/kg	96.64	0.097	03/30/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.51	mg/kg	96.64	2.5	03/30/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-02-0	Nickel	SOIL	LA-505-412		8.12	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-22-4	Silver	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-38-0	Antimony	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-39-3	Barium	SOIL	LA-505-412		94.2	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-41-7	Beryllium	SOIL	LA-505-412		0.288	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-43-9	Cadmium	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-47-3	Chromium	SOIL	LA-505-412		7.49	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-48-4	Cobalt	SOIL	LA-505-412		7.40	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-50-8	Copper	SOIL	LA-505-412		9.55	mg/kg	1.04	2.1	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-62-2	Vanadium	SOIL	LA-505-412		45.1	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-68-6	Zinc	SOIL	LA-505-412		41.2	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7439-92-1	Lead	SOIL	LA-505-412		3.90	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7439-97-8	Mercury	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7439-98-7	Molybdenum	SOIL	LA-505-412	U	< 0.312	mg/kg	1.04	0.31	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-61-1	Uranium	SOIL	LA-505-412		0.365	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-38-2	Arsenic	SOIL	LA-505-412		1.89	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.416	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-28-0	Thallium	SOIL	LA-505-412		0.108	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001043	B1CHD7	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5	TS	Total solids	SOIL	LA-510-412		97.0	%	1.00	0.0	04/15/05	03/11/05	03/22/05
W050001044	B1CHH5	18884-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	03/29/05	03/11/05	03/22/05
W050001044	B1CHH5	18887-00-8	Chloride	SOIL	LA-533-410	U	< 2.80	mg/kg	50.00	2.8	03/29/05	03/11/05	03/22/05
W050001044	B1CHH6	NO2-N	Nitrogen in Nitrite	SOIL	LA-533-410	U	< 0.950	mg/kg	50.00	0.95	03/29/05	03/11/05	03/22/05

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

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F05-014: F05-014

Group #: WSCF20050636

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050001044	B1CHH5 GRP TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410	B	1.05	mg/kg	50.00	0.65	03/29/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	14808-79-0	Sulfate	SOIL	LA-533-410	U	< 5.00	mg/kg	50.00	5.0	03/29/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7439-98-5	Manganese	SOIL	LA-505-411	J	349	mg/kg	97.37	0.097	03/30/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7439-93-2	Lithium	SOIL	LA-505-411		6.24	mg/kg	97.37	0.097	03/30/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.53	mg/kg	97.37	2.5	03/30/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-02-0	Nickel	SOIL	LA-505-412		8.64	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-22-4	Silver	SOIL	LA-505-412		0.148	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-39-3	Barium	SOIL	LA-505-412		81.8	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-41-7	Beryllium	SOIL	LA-505-412		0.340	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		0.209	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-47-3	Chromium	SOIL	LA-505-412		6.79	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-48-4	Cobalt	SOIL	LA-505-412		7.41	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-50-8	Copper	SOIL	LA-505-412		11.0	mg/kg	1.04	2.1	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-62-2	Vanadium	SOIL	LA-505-412		46.0	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-68-8	Zinc	SOIL	LA-505-412		37.9	mg/kg	1.04	4.2	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7439-92-1	Lead	SOIL	LA-505-412		4.06	mg/kg	1.04	0.21	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7439-97-8	Mercury	SOIL	LA-505-412	U	< 0.104	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7439-98-7	Molybdenum	SOIL	LA-505-412		0.378	mg/kg	1.04	0.31	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-81-1	Uranium	SOIL	LA-505-412		0.491	mg/kg	1.04	0.10	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-38-2	Arsenic	SOIL	LA-505-412		1.73	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 0.416	mg/kg	1.04	0.42	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-28-0	Thallium	SOIL	LA-505-412		0.198	mg/kg	1.04	0.010	05/15/05	03/11/05	03/22/05
W050001044	B1CHH5 GRP TRENT	7440-31-5	Tin	SOIL	LA-505-412	U	< 1.04	mg/kg	1.04	1.0	05/15/05	03/11/05	03/22/05

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

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

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Appendix 4

Laboratory Narrative and Chain-of-Custody Documentation

Sample Delivery Group	WSCF20050636 Rev. 3
Sample Matrix	Soil
Sample Visual	N/A
SAF Number	F05-014
Data Deliverable	Summary Report

Introduction

Sixteen (16) BC Controlled Area - Soil Characterization samples (B1CHH6, B1CHH7, B1CHH8, B1CHC8, B1CHC9, B1CHD0, B1CHD1, B1CHD2, B1CHD3, B1CHD4, B1CHD5, B1CHH3, B1CHD6, B1CHH4, B1CHD7 and B1CHH5) were received at the WSCF Laboratory on March 22, 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. Analytical work was performed with no deviations to the approved method.
- ICP-AES Metals by EPA Method 6010B. 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.

Organic

- PCBs by EPA Method 8082B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (GEA [Cs-137 only], Strontium-89/90) were run by internal WSCF procedures. Analytical work was performed with no deviations to the approved method.

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Inorganic Comments

Anions - The hold times for Nitrite and Nitrate analysis were not met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GRP Letter of Instruction. See pages 25 through 27 for QC details.

Analytical Note:

- Preparation Date: 28-mar-2005
- Nitrate and nitrite (EPA Method 300.0) analytical results were amended to this data package.

All QC controls are within the established limits.

ICP-AES Metals (Boron, Lithium and Manganese) – 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 GRP Letter of Instruction. See page 28 for QC details. Analytical Notes:

- Preparation Date: 30-mar-2005
- The analytes detected in the associated preparation Blank sample were evaluated and there was no significant affect on the sample results.
- Manganese – The Matrix Spike Duplicate QC recovery and Spike Relative Percent Difference exceeded established laboratory limits. Since all of the other QC controls were within the established limits, the sample results were not flagged.

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 GRP Letter of Instruction. See pages 29 through 32 for QC details. Analytical Notes:

- Preparation Date: 15-mar-2005.
- The analytes detected in the associated preparation Blank sample were evaluated and there was no significant affect on the sample results.
- Silver and Antimony – The Laboratory Control Sample recoveries were within manufacturer's limits.
- Selenium - The Laboratory Control Sample recovery was biased low, however the Matrix Spike and the Matrix Spike Duplicate QC samples were acceptable and the data was not flagged.
- Samples B1CHD5 (W050001039), B1CHH3 (W050001040), B1CHD6 (W050001041), B1CHD7 (W050001043) and B1CHH5 (W050001044) were re-analyzed at lower

dilutions per customer request. Re-analysis resulted in meeting all of the method detection limits.

All other QC controls are within the established limits.

Percent Solids – analyzed for organic moisture correction.

Organic Comments

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

PCBs – 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 GRP Letter of Instruction. See pages 39 through 42 for QC details. Analytical Note:

- Preparation Date: 23-mar-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19411 (SDG# 20050622, SAF# F03-025).
- Although the tetrachloro-m-xylene (TCX) surrogate recovery (sample B1CHD2) was low (48%), it was determined that there was no affect on the Aroclor sample results. Results were below detection limit and U flagged.

All other QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with WSCF radiochemical methods. A Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 44 through 45 for QC details. Analytical Note:

- Strontium-85 – Radiochemical Tracer Recovery Data are summarized below:

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample ID	Isotope	Tracer Recovery (Percent)
<u>Strontium-85</u>			
BLANK		Sr-85	106.2
LCS		Sr-85	100.4
B1CHD5	W050001039	Sr-85	96.1
DUPLICATE	W050001039	Sr-85	100.0
B1CHH3	W050001040	Sr-85	100.2

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Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample ID	Isotope	Tracer Recovery (Percent)
B1CHD6	W050001041	Sr-85	94.5
B1CHH4	W050001042	Sr-85	88.6
B1CHD7	W050001043	Sr-85	106.9
B1CHH5	W050001044	Sr-85	81.1

All QC controls are within the established limits.

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

John E. Trechter (John Trechter)
for Pauline Mix
 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

REVISED
D. Myers
 6/15/05

Floor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-001	PAGE 1	OF 1	
COLLECTOR HUGHES, KD <i>GENT</i>		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ			PRICE CODE 8H	
SAMPLING LOCATION BC Controlled Area - Random <i>B6</i>		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	DATA TURNAROUND 30 Days / 30 Days			
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 <i>TIE to B1CHH6</i>	PRESERVATION		Cool 4C					
		TYPE OF CONTAINER		9G					
		NO. OF CONTAINER(S)		1					
		VOLUME		120mL					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1CHH6	SOIL	3-18-05	10:55	<i>Y</i>					
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;			
<i>PM GENT / R M...</i>		3/18/05 1245	<i>MO 026 FRIG #3</i>		3/18/05				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME				
<i>MO 026 FRIG #3</i>		3/22/05 0610	<i>UNWEIL</i>		3/22/05 0610				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME				
<i>MARKEL</i>		3/21/05 0930	<i>...</i>		3/21/05 0930				
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	<div style="text-align: center;"> <h1>REVISED</h1> <p><i>R. Dyer</i></p> <p>6/15/05</p> </div>			
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				

04/20/05 20050636

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-002	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION BC Controlled Area - Random AR-4		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140E510	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 Tie to B1CHF1		PRESERVATION Cool 4C					
			TYPE OF CONTAINER aG					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHH7 <i>4050001030</i>	SOIL	3-11-05	13:40	X				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM <i>John A. Hughes</i>		DATE/TIME <i>3-11-05 15:35</i>	RECEIVED BY/STORED IN <i>M0026 Fritzb</i>		DATE/TIME <i>3-11-05/15:35</i>			
RELINQUISHED BY/REMOVED FROM <i>M0026 Fritzb</i>		DATE/TIME <i>3/22/05 0610</i>	RECEIVED BY/STORED IN <i>MURWELL</i>		DATE/TIME <i>3/22/05 0610</i>			
RELINQUISHED BY/REMOVED FROM <i>MURWELL</i>		DATE/TIME <i>3/22/05 0630</i>	RECEIVED BY/STORED IN <i>KBAL</i>		DATE/TIME <i>03/22/05 0630</i>			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME			
LABORATORY SECTION		RECEIVED BY			TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD			DISPOSED BY		DATE/TIME	

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6/15/05

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-003	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H
SAMPLING LOCATION BC Controlled Area - Random AR-5		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	DATA TURNAROUND 30 Days / 30 Days	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Tie to B1CHF2		PRESERVATION Cool 4C				
			TYPE OF CONTAINER 6G				
			NO. OF CONTAINER(S) 1				
			VOLUME 120ml				
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1CHH8 <i>(W05000102)</i>	SOIL	3-11-05	13:45	Y			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1) ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium) ICP/MS - 200.8 (Hg) (Mercury) ICP Metals - 6010B (TAL) (Manganese) ICP Metals - 6010B (Add-On) (Boron, Lithium) IC Anions - 300.0 (Chloride, Fluoride, Sulfate) PCBs - 8082;			
<i>Kevin Hughes</i>	<i>3-11-05 15:05</i>	<i>M0026 FR. 2. #3</i>	<i>3-11-05/15:55</i>				
<i>M026 FRIDGE</i>	<i>3/22/05 0610</i>	<i>MR. KEVIN HUGHES</i>	<i>3/22/05 0610</i>				
<i>MR. KEVIN HUGHES</i>	<i>3/22/05 0930</i>	<i>MR. KEVIN HUGHES</i>	<i>3/22/05 0930</i>				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	REVISED <i>Rayner</i> <i>6/15/05</i>			
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME			

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-004	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H
SAMPLING LOCATION BC Controlled Area - Random <i>AR-50</i>		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	DATA TURNAROUND 30 Days / 30 Days
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140E510	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 <i>Tie to B1CHCF3</i>		PRESERVATION Cool 4C				
			TYPE OF CONTAINER aG				
			NO. OF CONTAINER(S) 1				
			VOLUME 120mL				
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1CHCB <i>WAS 0100032</i>	SOIL	<i>3/11/05</i>	<i>1400</i>	<i>X</i>			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM <i>REV. HUGHES</i>	DATE/TIME <i>3/11-05 15:35</i>	RECEIVED BY/STORED IN <i>MO 026 Frid #3</i>	DATE/TIME <i>3-11-05/15:35</i>	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Th, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 (Chloride, Fluoride, Sulfate) PCBs - 8082;			
RELINQUISHED BY/REMOVED FROM <i>MR G BRIDGE</i>	DATE/TIME <i>3/22/05 0610</i>	RECEIVED BY/STORED IN <i>MR DWEL</i>	DATE/TIME <i>3/22/05 0610</i>				
RELINQUISHED BY/REMOVED FROM <i>MR DWEL</i>	DATE/TIME <i>3/22/05 0830</i>	RECEIVED BY/STORED IN <i>MR DWEL</i>	DATE/TIME <i>3/22/05 0830</i>				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME			

REVISED
R. Daynes
6/15/05

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-005	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H
SAMPLING LOCATION BC Controlled Area - Random B1		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	DATA TURNAROUND 30 Days / 30 Days	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 SC=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Tie to B1CHF4		PRESERVATION Cool 4C				
			TYPE OF CONTAINER 9G				
			NO. OF CONTAINER(S) 1				
			VOLUME 120mL				
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1CHC9 W050001033	SOIL	3/18/05	0957	X			
CHAIN OF POSSESSION				SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	<p>(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;</p> <p style="text-align: center;">REVISED <i>R. Hughes</i> 6/15/05</p>	
<i>MURPHY</i>		3/18/05 1245	<i>MURPHY</i>		3/18/05 1245		
<i>MURPHY</i>		3/22/05 0610	<i>MURPHY</i>		3/22/05 0610		
<i>MURPHY</i>		3/22/05 0930	<i>MURPHY</i>		3/22/05 0930		
		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME		
		DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME		
LABORATORY SECTION		RECEIVED BY	TITLE		DATE/TIME		
FINAL SAMPLE DISPOSITION		DISPOSAL METHOD	DISPOSED BY		DATE/TIME		

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-006	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H
SAMPLING LOCATION BC Controlled Area - Random		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	DATA TURNAROUND 30 Days / 30 Days
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140E510	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		PRESERVATION	Cool 4C			
	Tied to: BICH5		TYPE OF CONTAINER	9G			
			NO. OF CONTAINER(S)	1			
	SPECIAL HANDLING AND/OR STORAGE		VOLUME	120mL			
		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1CHD0 W050001034	SOIL	3/18/05	1010	X			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;			
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	REVISED RL Hughes 6/15/05			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME			

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-007	PAGE 1	OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND
SAMPLING LOCATION BC Controlled Area - Random B3		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	30 Days / 30 Days	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 TIED TO DICHF6		PRESERVATION Cool 4C					
			TYPE OF CONTAINER eG					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHD1 <i>W050001035</i>	SOIL	<i>3/18/05</i>	<i>0945</i>	<i>X</i>				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM <i>MURKIN/MUR</i>	DATE/TIME <i>3/18/05 1245</i>	RECEIVED BY/STORED IN <i>MD026 FRIDGE 3</i>	DATE/TIME <i>3/18/05 1245</i>	(1)ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium) ICP/MS - 200.8 (Pb) (Mercury) ICP Metals - 6010B (TAL) (Manganese) ICP Metals - 6010B (Add-On) (Boron, Lithium) IC Anions - 300.0 (Chloride, Fluoride, Sulfate) PCBs - 8082;				
RELINQUISHED BY/REMOVED FROM <i>MD026 FRIDGE</i>	DATE/TIME <i>3/22/05 0610</i>	RECEIVED BY/STORED IN <i>MURKIN/MUR</i>	DATE/TIME <i>3/22/05 0610</i>					
RELINQUISHED BY/REMOVED FROM <i>MURKIN/MUR</i>	DATE/TIME <i>3/22/05 0930</i>	RECEIVED BY/STORED IN <i>MD026 FRIDGE</i>	DATE/TIME <i>3/22/05 0930</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
				REVISED <i>Myers</i> <i>6/15/05</i>				
LABORATORY SECTION	RECEIVED BY	TITLE			DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY			DATE/TIME			

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-008	PAGE 1 OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H DATA TURNAROUND 30 Days / 30 Days
SAMPLING LOCATION BC Controlled Area - Random		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 TIED TO BKHF7		PRESERVATION Cool #C				
			TYPE OF CONTAINER 8G				
			NO. OF CONTAINER(S) 1				
			VOLUME 120mL				
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B1CHD2 W050001936	SOIL	3/18/05	1030	X			
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM <i>MR WEIL/SMW</i>	DATE/TIME 3/18/05 1245	RECEIVED BY/STORED IN <i>MOOZG FRIDGE 3</i>	DATE/TIME 3/18/05 1245	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;			
RELINQUISHED BY/REMOVED FROM <i>MOOZG FRIDGE</i>	DATE/TIME 3/22/05 0610	RECEIVED BY/STORED IN <i>MR WEIL/SMW</i>	DATE/TIME 3/22/05 0610				
RELINQUISHED BY/REMOVED FROM <i>MR WEIL/SMW</i>	DATE/TIME 3/22/05 0630	RECEIVED BY/STORED IN <i>MOOZG FRIDGE</i>	DATE/TIME 3/22/05 0630				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME			
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME			

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REVISED
Revised
6/15/05

Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-009	PAGE 1 OF 1		
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND	
SAMPLING LOCATION BC Controlled Area - Random		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization		SAF NO. F05-014		AIR QUALITY <input type="checkbox"/>	30 Days / 30 Days		
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 TST to: BICHF8	PRESERVATION		Cool 4C					
		TYPE OF CONTAINER		aG					
		NO. OF CONTAINER(S)		1					
		VOLUME		120ml.					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1CHD3 LW050001037	SOIL	3/19/05	0930	X					
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;					
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					

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-010	PAGE 1 OF 1	
COLLECTOR HUGHES, KD	COMPANY CONTACT BAUER, RG	TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND 30 Days / 30 Days		
SAMPLING LOCATION BC Controlled Area - Random	PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization	SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>					
ICE CHEST NO.	FIELD LOGBOOK NO.	COA 119140E510	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 Tie to B1CHF9	PRESERVATION	Cool 4C					
		TYPE OF CONTAINER	9G					
		NO. OF CONTAINER(S)	1					
		VOLUME	120ml					
		SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHD4 WR50001038	SOIL	3/11/05	1410	X				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;				
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				

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-012	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ	PRICE CODE 8H	DATA TURNAROUND	
SAMPLING LOCATION BC Controlled Area - Focused A2		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	30 Days / 30 Days	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 Tie to B1CHH1		PRESERVATION Cool 4C					
			TYPE OF CONTAINER 3G					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS * see lab below PDMix 5/11/2005				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHD6	SOIL	3/11/05	1040					
B1CHH4	SOIL	3/11/05	1040					
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	(1)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082; * Add Sr 90 and GSA (Cs-137) PDMix 5/11/2005 ** Add Nitrate and Nitrite P.D. mix PDMix 6/19/2005 <div style="text-align: center;">REVISED</div> 6/15/05				
<i>Kevin Hughes</i>	3/11/05 15:35	<i>Morgan Flinders</i>	3/11/05 15:35					
<i>MRO PRINGS</i>	3/22/05 0610	<i>MIRWEIL JAHN</i>	3/22/05 0610					
<i>MIRWEIL JAHN</i>	3/22/05 0930	<i>Kevin Hughes</i>	3/22/05 0930					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME				

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-011	PAGE 1 OF 1	
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H DATA TURNAROUND 30 Days / 30 Days	
SAMPLING LOCATION BC Controlled Area - Focused A1		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.		FIELD LOGBOOK NO.	COA 119140ES10		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 D5=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Wipe X=Other	POSSIBLE SAMPLE HAZARDS/ REMARKS Tie to B1CHHO		PRESERVATION Cool 4C					
			TYPE OF CONTAINER 9G					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS * See Note Below P.D.M.H. 5/31/2005				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHD5 WAS 8001039	SOIL	3/11/05	1015	X below P.D.M.H. 6/9/2005				
B1CHH3 3 1040	SOIL	3/11/05	1015	Y below P.D.M.H. 6/9/2005				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM Karin Hughes	DATE/TIME 3-11-05 15:30	RECEIVED BY/STORED IN NO 006 Fridge #13	DATE/TIME 3-11-05 15:30	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;				
RELINQUISHED BY/REMOVED FROM NOB FRIDGE	DATE/TIME 3/22/05 0610	RECEIVED BY/STORED IN NIKIEL/TRENT	DATE/TIME 3/22/05 0610	* Add Sr⁹⁰ and GEA (Cs-137) P.D.H. P.D.M.H. 5/31/2005				
RELINQUISHED BY/REMOVED FROM NIKIEL/TRENT	DATE/TIME 3/22/05 0930	RECEIVED BY/STORED IN NO 006	DATE/TIME 3/22/05 0930	** Add Nitrate and Nitrite P.D.H. P.D.M.H. 6/9/2005				
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		REVISED Dyces		DATE/TIME 6/15/05		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY				DATE/TIME		

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Fluor Hanford Inc.		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F05-014-013	PAGE 1	OF 1
COLLECTOR HUGHES, KD		COMPANY CONTACT BAUER, RG		TELEPHONE NO. 376-5908	PROJECT COORDINATOR TRENT, SJ		PRICE CODE 8H	DATA TURNAROUND
SAMPLING LOCATION BC Controlled Area - Focused A3		PROJECT DESIGNATION BC Controlled Area Surficial Soil Characterization			SAF NO. F05-014	AIR QUALITY <input type="checkbox"/>	30 Days / 30 Days	
ICE CHEST NO.		FIELD LOGBOOK NO.		COA 119140ES10	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 Tie to B1CHH2		PRESERVATION Cool 4C					
			TYPE OF CONTAINER #G					
			NO. OF CONTAINER(S) 1					
			VOLUME 120mL					
	SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS * See Note below					
								P.D.M. # ADW 5/31/2005
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B1CHD7 <i>was 00001043</i>	SOIL 1'	3/11/05	1200	X				
B1CHH5 <i>1044</i>	SOIL 3'	3/11/05	1200	Y				
CHAIN OF POSSESSION		SIGN/ PRINT NAMES			SPECIAL INSTRUCTIONS			
RELINQUISHED BY/REMOVED FROM <i>Reinhold, J. B. [Signature]</i>	DATE/TIME <i>3/11/05</i>	RECEIVED BY/STORED IN <i>Morgan, R. [Signature]</i>	DATE/TIME <i>3/11/05 15:35</i>	(1) ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Molybdenum, Selenium, Thallium, Tin, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010B (TAL) {Manganese} ICP Metals - 6010B (Add-On) {Boron, Lithium} IC Anions - 300.0 {Chloride, Fluoride, Sulfate} PCBs - 8082;				
RELINQUISHED BY/REMOVED FROM <i>Morgan, R. [Signature]</i>	DATE/TIME <i>3/22/05 06:10</i>	RECEIVED BY/STORED IN <i>Morgan, R. [Signature]</i>	DATE/TIME <i>3/22/05 06:10</i>	* Add Sr-90 and GEA (G-157) P.D.M. # <i>ADW 5/31/2005</i>				
RELINQUISHED BY/REMOVED FROM <i>Morgan, R. [Signature]</i>	DATE/TIME <i>3/22/05 09:30</i>	RECEIVED BY/STORED IN <i>[Signature]</i>	DATE/TIME <i>3/22/05 09:30</i>	** Add Nitrate and Nitrite P.D.M. # <i>ADW 6/15/2005</i>				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	<div style="text-align: center;"> REVISED <i>RL Hughes</i> <i>6/15/05</i> </div>				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME					
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME				
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME				

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Appendix 5
Data Validation Supporting Documentation

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INORGANIC ANALYSIS DATA VALIDATION CHECKLIST

VALIDATION LEVEL:	A	B	C	D	E
PROJECT: <i>BC controlled area</i>	DATA PACKAGE: <i>50636</i>				
VALIDATOR: <i>TLT</i>	LAB: <i>WSCF</i>		DATE: <i>7/2/05</i>		
			SDG: <i>50636</i>		
ANALYSES PERFORMED					
SW-846/ICP	SW-846/GFAA	SW-846/Hg	SW-846 Cyanide	ICP-MS	
SAMPLES/MATRIX					
<i>BICHH6</i>	<i>BICHH7</i>	<i>BICHH8</i>	<i>BICHH8</i>	<i>BICHH9</i>	
<i>BICHD0</i>	<i>BICHD1</i>	<i>BICHD2</i>	<i>BICHD3</i>	<i>BICHD4</i>	
<i>BICHD5</i>	<i>BICHH3</i>	<i>BICHD6</i>	<i>BICHH4</i>	<i>BICHD7</i>	
<i>BICHH5</i>					
					<i>Soil</i>

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: Mangan 13720 MSD - J all detail

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)

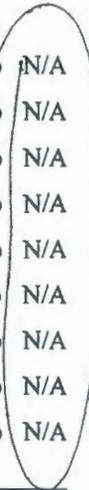
- ICP serial dilution samples analyzed? Yes No N/A
- ICP serial dilution %D values acceptable? Yes No N/A
- ICP post digestion spike required? Yes No N/A
- ICP post digestion spike values acceptable? Yes No N/A
- Standards traceable? Yes No N/A
- Standards expired? Yes No N/A
- Transcription/calculation 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
- 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: Hy over
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Appendix 6

Additional Documentation Requested by Client

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: ICP Metals Analysis, Grd H2O P

SAF Number: F05-014
 Sample Date: 03/18/05
 Receive Date: 03/22/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001016									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Boron	7440-42-8	177	91.237	% Recov	03/30/05	75.000	125.000	
MS	Lithium	7439-93-2	213.77	110.181	% Recov	03/30/05	70.000	130.000	
MS	Manganese	7439-96-5	205	105.670	% Recov	03/30/05	75.000	125.000	
MSD	Boron	7440-42-8	184	92.929	% Recov	03/30/05	75.000	125.000	
MSD	Lithium	7439-93-2	217.77	109.985	% Recov	03/30/05	75.000	125.000	
MSD	Manganese	7439-96-5	272	137.374	% Recov	03/30/05	75.000	125.000	
SPK-RPD	Boron	7440-42-8	92.929	1.837	RPD	03/30/05	0.000	20.000	
SPK-RPD	Lithium	7439-93-2	109.885	0.187	RPD	03/30/05	0.000	20.000	
SPK-RPD	Manganese	7439-96-5	137.374	26.089	RPD	03/30/05	0.000	20.000	
Lab ID: W050001051									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Boron	7440-42-8	187	95.897	% Recov	03/30/05	75.000	125.000	
MSD	Boron	7440-42-8	189	94.875	% Recov	03/30/05	75.000	125.000	
SPK-RPD	Boron	7440-42-8	94.975	0.966	RPD	03/30/05	0.000	20.000	
BATCH QC									
BLANK	Boron	7440-42-8	1.3	1.300	ug/L	03/30/05			
BLANK	Lithium	7439-93-2	1e-3	0.001	ug/L	03/30/05			
BLANK	Manganese	7439-96-5	1.3	1.300	ug/L	03/30/05			
LCS	Boron	7440-42-8	279	94.576	% Recov	03/30/05	45.000	156.000	
LCS	Lithium	7439-93-2	222	108.824	% Recov	03/30/05	80.000	120.000	
LCS	Manganese	7439-96-5	626	103.300	% Recov	03/30/05	76.000	124.000	

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 6/15/05

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: ICP-2008 MS All possible metal

SAF Number: F05-014
 Sample Date: 03/18/05
 Receive Date: 03/22/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050001016									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Silver	7440-22-4	205.9	102.950	% Recov	05/15/05	70.000	130.000	
MS	Arsenic	7440-38-2	194.802	97.301	% Recov	05/15/05	70.000	130.000	
MS	Barium	7440-39-3	207.15	103.575	% Recov	05/15/05	70.000	130.000	
MS	Beryllium	7440-41-7	190.4337	95.217	% Recov	05/15/05	70.000	130.000	
MS	Cadmium	7440-43-9	207.777	103.888	% Recov	05/15/05	70.000	130.000	
MS	Cobalt	7440-48-4	200.387	100.194	% Recov	05/15/05	70.000	130.000	
MS	Chromium	7440-47-3	196.705	98.353	% Recov	05/15/05	70.000	130.000	
MS	Copper	7440-50-8	198.337	99.168	% Recov	05/15/05	70.000	130.000	
MS	Mercury	7439-97-8	2.1957	108.785	% Recov	05/15/05	70.000	130.000	
MS	Molybdenum	7439-98-7	188.7369	94.368	% Recov	05/15/05	70.000	130.000	
MS	Nickel	7440-02-0	212.737	106.368	% Recov	05/15/05	70.000	130.000	
MS	Lead	7439-92-1	212.768	106.383	% Recov	05/15/05	70.000	130.000	
MS	Antimony	7440-36-0	228.6	114.300	% Recov	05/15/05	70.000	130.000	
MS	Selenium	7782-49-2	191.8	95.900	% Recov	05/15/05	70.000	130.000	
MS	Tin	7440-31-5	211.6	105.800	% Recov	05/15/05	70.000	130.000	
MS	Thallium	7440-28-0	206.421	103.211	% Recov	05/15/05	70.000	130.000	
MS	Uranium	7440-61-1	206.5566	103.278	% Recov	05/15/05	70.000	130.000	
MS	Vanadium	7440-62-2	198.56	99.280	% Recov	05/15/05	70.000	130.000	
MS	Zinc	7440-66-6	206.97	103.485	% Recov	05/15/05	70.000	130.000	
MSD	Silver	7440-22-4	217.2	108.600	% Recov	05/15/05	70.000	130.000	
MSD	Arsenic	7440-38-2	203.202	101.601	% Recov	05/15/05	70.000	130.000	
MSD	Barium	7440-39-3	222.95	111.475	% Recov	05/15/05	70.000	130.000	
MSD	Beryllium	7440-41-7	200.8337	100.317	% Recov	05/15/05	70.000	130.000	
MSD	Cadmium	7440-43-9	220.877	110.438	% Recov	05/15/05	70.000	130.000	
MSD	Cobalt	7440-48-4	203.787	101.893	% Recov	05/15/05	70.000	130.000	
MSD	Chromium	7440-47-3	205.105	102.553	% Recov	05/15/05	70.000	130.000	

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 6/15/05

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: ICP-2008 MS All possible metal

SAF Number: F05-014
 Sample Date: 03/18/05
 Receive Date: 03/22/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	Copper	7440-50-8	208.037	104.019	% Recov	05/15/05	70.000	130.000	
MSD	Mercury	7439-97-8	2.2777	113.885	% Recov	05/15/05	70.000	130.000	
MSD	Molybdenum	7439-98-7	202.5369	101.268	% Recov	05/15/05	70.000	130.000	
MSD	Nickel	7440-02-0	217.437	108.719	% Recov	05/15/05	70.000	130.000	
MSD	Lead	7439-92-1	220.766	110.383	% Recov	05/15/05	70.000	130.000	
MSD	Antimony	7440-38-0	244.7	122.350	% Recov	05/15/05	70.000	130.000	
MSD	Selenium	7782-49-2	203.2	101.800	% Recov	05/15/05	70.000	130.000	
MSD	Tin	7440-31-5	223.6	111.800	% Recov	05/15/05	70.000	130.000	
MSD	Thallium	7440-28-0	216.421	108.210	% Recov	05/15/05	70.000	130.000	
MSD	Uranium	7440-61-1	214.3566	107.178	% Recov	05/15/05	70.000	130.000	
MSD	Vanadium	7440-62-2	205.68	102.830	% Recov	05/15/05	70.000	130.000	
MSD	Zinc	7440-68-6	216.47	108.235	% Recov	05/15/05	70.000	130.000	
SPK-RPD	Silver	7440-22-4	108.600	5.342	RPD	05/15/05	0.000	20.000	
SPK-RPD	Arsenic	7440-38-2	101.801	4.324	RPD	05/15/05	0.000	20.000	
SPK-RPD	Barium	7440-39-3	111.475	7.347	RPD	05/15/05	0.000	20.000	
SPK-RPD	Beryllium	7440-41-7	100.317	5.216	RPD	05/15/05	0.000	20.000	
SPK-RPD	Cadmium	7440-43-9	110.438	8.112	RPD	05/15/05	0.000	20.000	
SPK-RPD	Cobalt	7440-48-4	101.893	1.881	RPD	05/15/05	0.000	20.000	
SPK-RPD	Chromium	7440-47-3	102.553	4.181	RPD	05/15/05	0.000	20.000	
SPK-RPD	Copper	7440-50-8	104.019	4.775	RPD	05/15/05	0.000	20.000	
SPK-RPD	Mercury	7439-97-8	113.885	3.666	RPD	05/15/05	0.000	20.000	
SPK-RPD	Molybdenum	7439-98-7	101.268	7.054	RPD	05/15/05	0.000	20.000	
SPK-RPD	Nickel	7440-02-0	108.719	2.186	RPD	05/15/05	0.000	20.000	
SPK-RPD	Lead	7439-92-1	110.383	3.691	RPD	05/15/05	0.000	20.000	
SPK-RPD	Antimony	7440-38-0	122.350	6.803	RPD	05/15/05	0.000	20.000	
SPK-RPD	Selenium	7782-49-2	101.600	5.772	RPD	05/15/05	0.000	20.000	
SPK-RPD	Tin	7440-31-5	111.800	5.515	RPD	05/15/05	0.000	20.000	
SPK-RPD	Thallium	7440-28-0	108.210	4.729	RPD	05/15/05	0.000	20.000	
SPK-RPD	Uranium	7440-61-1	107.178	3.706	RPD	05/15/05	0.000	20.000	
SPK-RPD	Vanadium	7440-62-2	102.830	3.513	RPD	05/15/05	0.000	20.000	

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 6/15/05

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: ICP-2008 MS All possible metal

SAF Number: F05-014
 Sample Date: 03/18/05
 Receive Date: 03/22/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
SPK-RPD	Zinc	7440-86-8	108.235	4.487	RPD	05/15/05	0.000	20.000	
BATCH QC									
BLANK	Silver	7440-22-4	<0.1	n/a	ug/L	05/15/05			U
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L	05/15/05			U
BLANK	Barium	7440-39-3	<4	n/a	ug/L	05/15/05			U
BLANK	Beryllium	7440-41-7	<0.1	n/a	ug/L	05/15/05			U
BLANK	Cadmium	7440-43-8	<0.1	n/a	ug/L	05/15/05			U
BLANK	Cobalt	7440-48-4	2.178e-2	0.022	ug/L	05/15/05			
BLANK	Chromium	7440-47-3	<4	n/a	ug/L	05/15/05			U
BLANK	Copper	7440-50-8	<2	n/a	ug/L	05/15/05			U
BLANK	Mercury	7439-97-8	<0.1	n/a	ug/L	05/15/05			U
BLANK	Molybdenum	7439-98-7	0.422	0.422	ug/L	05/15/05			
BLANK	Nickel	7440-02-0	0.1045	0.104	ug/L	05/15/05			
BLANK	Lead	7439-92-1	<0.2	n/a	ug/L	05/15/05			U
BLANK	Antimony	7440-36-0	<1	n/a	ug/L	05/15/05			U
BLANK	Selenium	7782-49-2	<0.4	n/a	ug/L	05/15/05			U
BLANK	Tin	7440-31-5	<1	n/a	ug/L	05/15/05			U
BLANK	Thallium	7440-28-0	3.033e-2	0.030	ug/L	05/15/05			
BLANK	Uranium	7440-61-1	<0.1	n/a	ug/L	05/15/05			U
BLANK	Vanadium	7440-62-2	0.2024	0.202	ug/L	05/15/05			
BLANK	Zinc	7440-86-8	<4	n/a	ug/L	05/15/05			U
LCS	Silver	7440-22-4	163.6	125.846	% Recov	05/15/05	110.000	170.000	
LCS	Arsenic	7440-38-2	178.5	109.827	% Recov	05/15/05	82.000	142.000	
LCS	Barium	7440-39-3	275.2	109.206	% Recov	05/15/05	79.000	123.000	
LCS	Beryllium	7440-41-7	106.7	113.030	% Recov	05/15/05	82.000	128.000	
LCS	Cadmium	7440-43-8	148.2	114.219	% Recov	05/15/05	88.000	127.000	
LCS	Cobalt	7440-48-4	37.4	106.250	% Recov	05/15/05	78.000	111.000	
LCS	Chromium	7440-47-3	75.05	107.986	% Recov	05/15/05	50.000	126.000	
LCS	Copper	7440-50-8	158.8	105.946	% Recov	05/15/05	61.000	134.000	

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 6/15/05

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050636
 Matrix: SOLID
 Test: ICP-2008 MS All possible metal

SAF Number: F05-014
 Sample Date:
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
LCS	Mercury	7439-97-6	19.41	114.852	% Recov	05/15/05	75.000	114.000	*
LCS	Molybdenum	7439-98-7	89.41	108.314	% Recov	06/15/05	85.000	116.000	
LCS	Nickel	7440-02-0	168.9	114.898	% Recov	05/15/05	84.000	125.000	
LCS	Lead	7439-92-1	185.3	116.408	% Recov	05/15/05	87.000	120.000	
LCS	Antimony	7440-36-0	125.8	208.588	% Recov	05/15/05	81.000	135.000	*
LCS	Selenium	7782-49-2	70.47	109.786	% Recov	05/15/05	83.000	146.000	
LCS	Tin	7440-31-5	69.95	114.672	% Recov	05/15/05	85.000	115.000	
LCS	Thallium	7440-28-0	98.11	116.798	% Recov	06/15/05	79.000	125.000	
LCS	Uranium	7440-81-1	435.1	108.775	% Recov	05/15/05	89.000	107.000	*
LCS	Vanadium	7440-82-2	105	107.914	% Recov	05/15/05	77.000	111.000	
LCS	Zinc	7440-86-8	178.7	108.303	% Recov	05/15/05	76.000	148.000	

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R. Reyes
 6/15/05