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FLUOR

Memorandum

M8141-SLF-05-056

To: S. J. Trent A0-21 Date: January 21, 2005

From: S. L. Fitzgerald, Manager
WSCF Analytical Chemistry

cc:

w/Attachments		w/o Attachments	
T. F. Dale	S3-30	D. J. Hart	S3-30
H. K. Meznarich	S3-30	M. A. Neely	S3-30
P. D. Mix	S3-30	H. S. Rich	S3-28
J. E. Trechter	S3-30	L. C. Swanson	E6-35
		File/LB	

Subject: FINAL RESULTS 200-PW2/200-PW-4 OU – BOREHOLE SOIL SAMPLING – SAMPLE DELIVERY GROUP WSCF20042466 - SAF NUMBER F03-006

Reference: (1) Groundwater Protection Program-Letter of Instruction, FH-EIS-2003-MEM-001, October 31, 2002

(2) HNF-SD-CD-QAPP-017, Rev. 6, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains a narrative (Attachment 1) for sample delivery group WSCF20042466, the analytical results (Attachment 2), and the sample receipt information (Attachment 3).

SLF/grf

Attachments 3

RECEIVED
MAY 17 2005
EDMC

RECEIVED
JAN 26 2005

M8141-SLF-05-056

ATTACHMENT 1

NARRATIVE

Consisting of 7 pages
Including cover page

Sample Delivery Group	WSCF20042466
Sample Matrix	SOIL
Sample Visual	N/A
SAF Number	F03-006
Data Deliverable	Summary Report

Introduction

One (1) 200-PW-2/200-PW-4 OU Borehole Soil Sampling/216-S-7, 180' – 182.5' GRP sample (B1B581) was received at the WSCF Laboratory on December 16, 2004. The sample was 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 Request for Sample Analysis forms are included as Attachment 3.

Analytical Methodology for Requested Analyses

Inorganic

- Ammonia by EPA Method 300.7. Analytical work was performed with no deviations to the approved method.
- Anions by EPA Method 300. Analytical work was performed with no deviations to the approved method.
- Cyanide by EPA Method 335.2. Analytical work was performed with no deviations to the approved method.
- ICP-MS Metals by EPA Method 200.8. Analytical work was performed with no deviations to the approved method.
- Percent Solids by EPA Method 160.3. Analytical work was performed with no deviations to the approved method.
- pH by EPA Method 150.1. Analytical work was performed with no deviations to the approved method.

Organic

- Semi-VOA by EPA Method 8270C. Analytical work was performed with no deviations to the approved method.
- TPH Diesel Range by WDOE Method NWTPH-Dx. Analytical work was performed with no deviations to the approved method.
- TPH Gas Range by WDOE Method NWTPH-Gx. Analytical work was performed with no deviations to the approved method.
- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

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

Inorganic Comments

Ammonia - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See page 12 for QC details. Analytical Note:

- Duplicate, Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1B579 (SDG# 20042392, SAF# F03-006).

All QC controls are within the established limits.

Anions - The hold times for Nitrite and Nitrate 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 13 through 14 for QC details. Analytical Notes:

- Preparation Date: 10-jan-2005.
- Duplicate, Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1B582 (SDG# 20042519, SAF# F03-006).
- Chloride – The Duplicate Relative Percent Difference exceeded established laboratory limits. Sample B1B581 result was below the reportable detection limit and B-flagged.
- Chloride, Nitrate and Sulfate – Sample B1B581 results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.

All other QC controls are within the established limits.

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

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19943 (SDG# 20042435, SAF# F04-015).

All QC controls are within the established limits.

ICP-MS Metals – 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 16 through 20 for QC details. Analytical Notes:

- Preparation Date: 13-jan-2005.
- Antimony, Copper, Mercury and Silver - The analytes detected in the associated preparation Blank sample were evaluated and there was no significant affect on the sample results.
- Arsenic, Barium, Chromium, Copper, Nickel, Selenium and Uranium - Matrix Spike and Matrix Spike precision was evaluated on sample# B1C369 (SDG# 20050062, SAF# F05-002).

All other QC controls are within the established limits.

pH - The hold time for this analysis was met. All laboratory QC controls are within the established limits.

Percent Solids – analyzed for organic analysis correction only.

Organic Comments

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

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 23 through 26 for QC details. Analytical Notes:

- Preparation Date: 21-dec-2004.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1B580 (SDG# 20042436, SAF# F03-006).

All QC controls are within the established limits.

TPHD-WA - The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GRP Letter of Instruction. See page 27 for QC details. Analytical Notes:

- Preparation Date: 21-dec-2004.

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19943 SDG# 20042435, SAF# F04-015.

All QC controls are within the established limits.

TPHG–WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Duplicate, 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: 28-dec-2004.

- Duplicate, Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19943 (SDG# 20042435, SAF# F04-015).

- Total Petroleum Hydrocarbons Gas – The Laboratory Control Sample recovery was slightly below established laboratory limits. Sample B1B581 result was U-flagged.

All other QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 29 through 31 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19943 (SDG# 20042435, SAF# F04-015).

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with these WDOE accredited methods. A Blank, Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 34 through 39 for QC details. Analytical Notes:

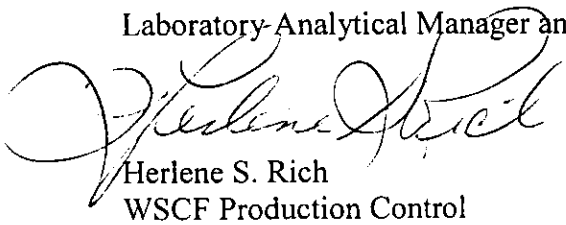
- Americium-241, GEA, Plutonium-239/240, Strontium-89/90 and Uranium-238 - Duplicate QC samples were analyzed on sample# B19943 (SDG# 20042435, SAF# F04-015).

- Neptunium-237 - Duplicate QC samples were analyzed on sample# B1BR59 (SDG# 20042416, SAF# F04-033).

All QC controls are within the established limits.

Radiochemical Tracer Percent Recovery			
Sample Number	**Lab Sample ID**	**Isotope**	**Tracer Recovery (Percent)**
BLANK		Sr-85	93.8
LCS		Sr-85	95.0
B19943	W040002627	Sr-85	97.3
DUPLICATE	W040002627	Sr-85	89.4
B1B581	W040002742	Sr-85	91.3
BLANK		U-232	68.1
LCS		U-232	77.0
B19943	W040002627	U-232	73.3
DUPLICATE	W040002627	U-232	61.3
B1B581	W040002742	U-232	79.2
BLANK		Pu-242	13.9
LCS		Pu-242	23.9
B19943	W040002627	Pu-242	93.3
DUPLICATE	W040002627	Pu-242	92.3
B1B581	W040002742	Pu-242	83.3
BLANK		Am-243	71.9
LCS		Am-243	75.9
B19943	W040002627	Am-243	26.4
DUPLICATE	W040002627	Am-243	94.8
B1B581	W040002742	Am-243	87.7

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.



Herlene S. Rich
WSCF Production Control

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

M8141-SLF-05-056

ATTACHMENT 2

ANALYTICAL RESULTS

Consisting of 37 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: _____

Client Services: _____

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

Confidentiality Notice: The information contained in this report is privileged and confidential information intended only for the use of the addressee. If the reader of this report is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone at (509) 373-7020.

Contract#: FH-EIS-2003-MEM-001
Report#: WSCF20042466
Report Date: 18-jan-2005
Report WGPP/ver. 1.1
Groundwater Remediation Program

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-006: 200-PW-2/PW-4

Group #: WSCF20042466

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Inorganic														
W040002742	B1B581	TRENT	57-12-5	Cyanide	SOIL	LA-695-402	U	< 0.200	mg/kg	1.00	0.20	12/29/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	NH4-N	Nitrogen in ammonium	SOIL	LA-503-401	U	< 0.200	mg/kg	50.00	0.20	01/07/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	TS	Total solids	SOIL	LA-519-412		97.0	%	1.00	0.0	12/20/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	PH	pH Measurement	SOIL	LA-212-411		8.21	pH	1.00	0.010	12/16/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	16984-48-8	Fluoride	SOIL	LA-533-410	U	< 1.15	mg/kg	50.00	1.2	01/10/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	16887-00-6	Chloride	SOIL	LA-533-410	B	2.61	mg/kg	50.00	2.6	01/10/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	NO2-N	Nitrogen in Nitrite	SOIL	LA-533-410	U	< 0.950	mg/kg	50.00	0.95	01/10/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410	B	2.91	mg/kg	50.00	0.65	01/10/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	U	< 2.70	mg/kg	50.00	2.7	01/10/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	B	21.7	mg/kg	50.00	5.0	01/10/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7440-02-0	Nickel	SOIL	LA-505-412		8.65	mg/kg	10.06	5.0	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7440-22-4	Silver	SOIL	LA-505-412	U	< 2.01	mg/kg	10.06	2.0	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 5.03	mg/kg	10.06	5.0	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7440-39-3	Barium	SOIL	LA-505-412		42.1	mg/kg	10.06	2.0	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	U	< 3.02	mg/kg	10.06	3.0	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	U	< 1.01	mg/kg	10.06	1.0	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		7.38	mg/kg	10.06	3.0	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7440-50-8	Copper	SOIL	LA-505-412		20.6	mg/kg	10.06	5.0	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7439-92-1	Lead	SOIL	LA-505-412	U	< 12.1	mg/kg	10.06	12	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7439-97-6	Mercury	SOIL	LA-505-412	U	< 1.01	mg/kg	10.06	1.0	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7440-61-1	Uranium	SOIL	LA-505-412	U	< 1.01	mg/kg	10.06	1.0	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412	U	< 3.02	mg/kg	10.06	3.0	01/14/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 3.02	mg/kg	10.06	3.0	01/14/05	12/16/04	12/16/04

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

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: Ammonia (N) by IC

SAF Number: F03-006
Sample Date: 12/13/04
Receive Date:12/13/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002593									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Ammonia (N) by IC	7664-41-7	1.27e+00	6.107	RPD	01/07/05	0.000	20.000	
MS	Ammonia (N) by IC	7664-41-7	3.55e-01	86.165	% Recov	01/07/05	75.000	125.000	
MSD	Ammonia (N) by IC	7664-41-7	3.79e-01	91.990	% Recov	01/07/05	75.000	125.000	
BATCH QC									
BLANK	Ammonia (N) by IC	7664-41-7	<4.00e-3	n/a	mg/L	01/07/05	0.000	30.000	U
BLANK	Ammonia (N) by IC	7664-41-7	<4.00e-3	n/a	mg/L	01/07/05	0.000	30.000	U
LCS	Ammonia (N) by IC	7664-41-7	7.94e+01	96.359	% Recov	01/07/05	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: Anions by Ion Chromatography

SAF Number: F03-006
Sample Date: 12/22/04
Receive Date:12/22/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002824									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Chloride	16887-00-6	5.56e+00	22.623	RPD	01/10/05	0.000	20.000	
DUP	Fluoride	16984-48-8	<1.15e0	n/a	RPD	01/10/05	0.000	20.000	U
DUP	Nitrogen in Nitrite	NO2-N	<9.50e-1	n/a	RPD	01/10/05	0.000	20.000	U
DUP	Nitrogen in Nitrate	NO3-N	1.78e+00	1.130	RPD	01/10/05	0.000	20.000	
DUP	Phosphate (P) by IC	PO4-P	<2.70e0	n/a	RPD	01/10/05	0.000	20.000	U
DUP	Sulfate	14808-79-8	1.70e+01	8.451	RPD	01/10/05	0.000	20.000	
MS	Chloride	16887-00-6	1.04e+00	104.000	% Recov	01/10/05	75.000	125.000	
MS	Fluoride	16984-48-8	4.72e-01	95.547	% Recov	01/10/05	75.000	125.000	
MS	Nitrogen in Nitrite	NO2-N	5.00e-01	100.000	% Recov	01/10/05	75.000	125.000	
MS	Nitrogen in Nitrate	NO3-N	4.44e-01	98.448	% Recov	01/10/05	75.000	125.000	
MS	Phosphate (P) by IC	PO4-P	7.55e-01	77.915	% Recov	01/10/05	75.000	125.000	
MS	Sulfate	14808-79-8	1.80e+00	90.000	% Recov	01/10/05	75.000	125.000	
MSD	Chloride	16887-00-6	1.02e+00	102.000	% Recov	01/10/05	75.000	125.000	
MSD	Fluoride	16984-48-8	4.83e-01	97.773	% Recov	01/10/05	75.000	125.000	
MSD	Nitrogen in Nitrite	NO2-N	5.07e-01	101.400	% Recov	01/10/05	75.000	125.000	
MSD	Nitrogen in Nitrate	NO3-N	4.53e-01	100.443	% Recov	01/10/05	75.000	125.000	
MSD	Phosphate (P) by IC	PO4-P	8.17e-01	84.314	% Recov	01/10/05	75.000	125.000	
MSD	Sulfate	14808-79-8	1.84e+00	92.000	% Recov	01/10/05	75.000	125.000	
BATCH QC									
BLANK	Chloride	16887-00-6	<5.20e-2	n/a	mg/L	01/10/05	0.000	300.000	U
BLANK	Chloride	16887-00-6	<5.20e-2	n/a	mg/L	01/10/05	0.000	300.000	U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	01/10/05	0.000	300.000	U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	01/10/05	0.000	300.000	U
BLANK	Nitrogen in Nitrite	NO2-N	<1.90e-2	n/a	mg/L	01/10/05	0.000	300.000	U
BLANK	Nitrogen in Nitrite	NO2-N	<1.90e-2	n/a	mg/L	01/10/05	0.000	300.000	U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: Anions by Ion Chromatography

SAF Number: F03-006
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Nitrogen in Nitrate	NO3-N	<1.30e-2	n/a	mg/L	01/10/05	0.000	300.000	U
BLANK	Nitrogen in Nitrate	NO3-N	<1.30e-2	n/a	mg/L	01/10/05	0.000	300.000	U
BLANK	Phosphate (P) by IC	PO4-P	<5.40e-2	n/a	mg/L	01/10/05	0.000	300.000	U
BLANK	Phosphate (P) by IC	PO4-P	<5.40e-2	n/a	mg/L	01/10/05	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	01/10/05	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	01/10/05	0.000	300.000	U
LCS	Chloride	16887-00-6	2.02e+02	101.000	% Recov	01/10/05	80.000	120.000	
LCS	Fluoride	16984-48-8	9.11e+01	92.300	% Recov	01/10/05	80.000	120.000	
LCS	Nitrogen in Nitrite	NO2-N	9.77e+01	97.700	% Recov	01/10/05	80.000	120.000	
LCS	Nitrogen in Nitrate	NO3-N	8.71e+01	96.670	% Recov	01/10/05	80.000	120.000	
LCS	Phosphate (P) by IC	PO4-P	1.97e+02	101.651	% Recov	01/10/05	80.000	120.000	
LCS	Sulfate	14808-79-8	3.88e+02	97.243	% Recov	01/10/05	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: Cyanide by Midi/Spectrophotom

SAF Number: F03-006
Sample Date: 12/15/04
Receive Date:12/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002627									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Cyanide by Midi/Spectrophotom	57-12-5	97.7	97.700	% Recov	12/29/04	75.000	125.000	
MSD	Cyanide by Midi/Spectrophotom	57-12-5	95.2	95.200	% Recov	12/29/04	75.000	125.000	
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	95.200	2.592	RPD	12/29/04	0.000	20.000	
BATCH QC									
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	1	1.000	ug/L	12/29/04	-4.000	4.000	
BLNK-PREP	Cyanide by Midi/Spectrophotom	57-12-5	1	1.000	ug/L	12/29/04	-4.000	4.000	
LCS	Cyanide by Midi/Spectrophotom	57-12-5	103.1	103.100	% Recov	12/29/04	85.000	115.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-006
Sample Date: 12/16/04
Receive Date:12/16/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002732									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Silver	7440-22-4	381.1	95.275	% Recov	01/14/05	70.000	130.000	
MS	Cadmium	7440-43-9	396.5	99.125	% Recov	01/14/05	70.000	130.000	
MS	Chromium	7440-47-3	387.65	96.912	% Recov	01/14/05	70.000	130.000	
MS	Copper	7440-50-8	371.97	92.993	% Recov	01/14/05	70.000	130.000	
MS	Mercury	7439-97-6	19.28	96.400	% Recov	01/14/05	70.000	130.000	
MS	Lead	7439-92-1	388.3	97.075	% Recov	01/14/05	70.000	130.000	
MS	Uranium	7440-61-1	397.5	99.375	% Recov	01/14/05	70.000	130.000	
MSD	Silver	7440-22-4	379.5	94.875	% Recov	01/14/05	70.000	130.000	
MSD	Cadmium	7440-43-9	385.7	96.425	% Recov	01/14/05	70.000	130.000	
MSD	Chromium	7440-47-3	369.75	92.438	% Recov	01/14/05	70.000	130.000	
MSD	Copper	7440-50-8	372.17	93.043	% Recov	01/14/05	70.000	130.000	
MSD	Mercury	7439-97-6	19.09	95.450	% Recov	01/14/05	70.000	130.000	
MSD	Lead	7439-92-1	375.9	93.975	% Recov	01/14/05	70.000	130.000	
MSD	Uranium	7440-61-1	382.1	95.525	% Recov	01/14/05	70.000	130.000	
Lab ID: W040002742									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Silver	7440-22-4	395	98.750	% Recov	01/14/05	70.000	130.000	
MS	Arsenic	7440-38-2	407.5	101.875	% Recov	01/14/05	70.000	130.000	
MS	Barium	7440-39-3	400.54	100.135	% Recov	01/14/05	70.000	130.000	
MS	Beryllium	7440-41-7	404.1	101.025	% Recov	01/14/05	70.000	130.000	
MS	Cadmium	7440-43-9	407.2	101.800	% Recov	01/14/05	70.000	130.000	
MS	Chromium	7440-47-3	382.52	95.630	% Recov	01/14/05	70.000	130.000	
MS	Copper	7440-50-8	378.94	94.735	% Recov	01/14/05	70.000	130.000	
MS	Mercury	7439-97-6	20.27	101.350	% Recov	01/14/05	70.000	130.000	
MS	Nickel	7440-02-0	377.65	94.412	% Recov	01/14/05	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-006
Sample Date: 12/16/04
Receive Date:12/16/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	Lead	7439-92-1	397.7	99.425	% Recov	01/14/05	70.000	130.000	
MS	Antimony	7440-36-0	429.1	107.275	% Recov	01/14/05	70.000	130.000	
MS	Selenium	7782-49-2	427.3	106.825	% Recov	01/14/05	70.000	130.000	
MS	Uranium	7440-61-1	401.4	100.350	% Recov	01/14/05	70.000	130.000	
MSD	Silver	7440-22-4	390.3	97.575	% Recov	01/14/05	70.000	130.000	
MSD	Arsenic	7440-38-2	399.2	99.800	% Recov	01/14/05	70.000	130.000	
MSD	Barium	7440-39-3	398.24	99.560	% Recov	01/14/05	70.000	130.000	
MSD	Beryllium	7440-41-7	410.5	102.625	% Recov	01/14/05	70.000	130.000	
MSD	Cadmium	7440-43-9	412.4	103.100	% Recov	01/14/05	70.000	130.000	
MSD	Chromium	7440-47-3	379.12	94.780	% Recov	01/14/05	70.000	130.000	
MSD	Copper	7440-50-8	390.44	97.610	% Recov	01/14/05	70.000	130.000	
MSD	Mercury	7439-97-6	20.4	102.000	% Recov	01/14/05	70.000	130.000	
MSD	Nickel	7440-02-0	399.35	99.838	% Recov	01/14/05	70.000	130.000	
MSD	Lead	7439-92-1	395	98.750	% Recov	01/14/05	70.000	130.000	
MSD	Antimony	7440-36-0	427.6	106.900	% Recov	01/14/05	70.000	130.000	
MSD	Selenium	7782-49-2	422.6	105.650	% Recov	01/14/05	70.000	130.000	
MSD	Uranium	7440-61-1	405.1	101.275	% Recov	01/14/05	70.000	130.000	
SPK-RPD	Silver	7440-22-4	97.575	1.197	RPD	01/14/05	0.000	20.000	
SPK-RPD	Beryllium	7440-41-7	102.625	1.571	RPD	01/14/05	0.000	20.000	
SPK-RPD	Cadmium	7440-43-9	103.100	1.269	RPD	01/14/05	0.000	20.000	
SPK-RPD	Mercury	7439-97-6	102.000	0.639	RPD	01/14/05	0.000	20.000	
SPK-RPD	Lead	7439-92-1	98.750	0.681	RPD	01/14/05	0.000	20.000	
SPK-RPD	Antimony	7440-36-0	106.900	0.350	RPD	01/14/05	0.000	20.000	

Lab ID: W050000037
BATCH QC ASSOCIATED WITH SAMPLE

MS	Chromium	7440-47-3	NA	n/a	% Recov	01/14/05	70.000	130.000	
MS	Uranium	7440-61-1	367.92	91.980	% Recov	01/14/05	70.000	130.000	
MSD	Chromium	7440-47-3	NA	n/a	% Recov	01/14/05	70.000	130.000	
MSD	Uranium	7440-61-1	394.22	98.555	% Recov	01/14/05	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-006
Sample Date: 01/10/05
Receive Date:01/10/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050000048									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Arsenic	7440-38-2	389.3	97.325	% Recov	01/14/05	70.000	130.000	
MS	Barium	7440-39-3	379.68	94.920	% Recov	01/14/05	70.000	130.000	
MS	Chromium	7440-47-3	368.44	92.110	% Recov	01/14/05	70.000	130.000	
MS	Copper	7440-50-8	375.38	93.845	% Recov	01/14/05	70.000	130.000	
MS	Nickel	7440-02-0	369.68	92.420	% Recov	01/14/05	70.000	130.000	
MS	Selenium	7782-49-2	418	104.500	% Recov	01/14/05	70.000	130.000	
MS	Uranium	7440-61-1	385.5	96.375	% Recov	01/14/05	70.000	130.000	
MSD	Arsenic	7440-38-2	404.5	101.125	% Recov	01/14/05	70.000	130.000	
MSD	Barium	7440-39-3	385.78	96.445	% Recov	01/14/05	70.000	130.000	
MSD	Chromium	7440-47-3	382.44	95.610	% Recov	01/14/05	70.000	130.000	
MSD	Copper	7440-50-8	390.48	97.620	% Recov	01/14/05	70.000	130.000	
MSD	Nickel	7440-02-0	385.08	96.270	% Recov	01/14/05	70.000	130.000	
MSD	Selenium	7782-49-2	434	108.500	% Recov	01/14/05	70.000	130.000	
MSD	Uranium	7440-61-1	401.9	100.475	% Recov	01/14/05	70.000	130.000	
SPK-RPD	Arsenic	7440-38-2	101.125	3.830	RPD	01/14/05	0.000	20.000	
SPK-RPD	Barium	7440-39-3	96.445	1.594	RPD	01/14/05	0.000	20.000	
SPK-RPD	Chromium	7440-47-3	95.610	3.729	RPD	01/14/05	0.000	20.000	
SPK-RPD	Copper	7440-50-8	97.620	3.943	RPD	01/14/05	0.000	20.000	
SPK-RPD	Nickel	7440-02-0	96.270	4.081	RPD	01/14/05	0.000	20.000	
SPK-RPD	Selenium	7782-49-2	108.500	3.756	RPD	01/14/05	0.000	20.000	
SPK-RPD	Uranium	7440-61-1	100.475	4.166	RPD	01/14/05	0.000	20.000	
BATCH QC									
BLANK	Silver	7440-22-4	<0.2	n/a	ug/L	01/14/05			U
BLANK	Silver	7440-22-4	0.27	0.270	ug/L	01/14/05			
BLANK	Arsenic	7440-38-2	<0.3	n/a	ug/L	01/14/05			U
BLANK	Arsenic	7440-38-2	<0.3	n/a	ug/L	01/14/05			U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-006
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Barium	7440-39-3	<0.2	n/a	ug/L	01/14/05			U
BLANK	Barium	7440-39-3	<0.2	n/a	ug/L	01/14/05			U
BLANK	Beryllium	7440-41-7	<0.3	n/a	ug/L	01/14/05			U
BLANK	Beryllium	7440-41-7	<0.3	n/a	ug/L	01/14/05			U
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L	01/14/05			U
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L	01/14/05			U
BLANK	Chromium	7440-47-3	<0.3	n/a	ug/L	01/14/05			U
BLANK	Chromium	7440-47-3	<0.3	n/a	ug/L	01/14/05			U
BLANK	Copper	7440-50-8	0.78	0.780	ug/L	01/14/05			
BLANK	Copper	7440-50-8	0.93	0.930	ug/L	01/14/05			
BLANK	Mercury	7439-97-6	<0.1	n/a	ug/L	01/14/05			U
BLANK	Mercury	7439-97-6	0.16	0.160	ug/L	01/14/05			
BLANK	Nickel	7440-02-0	<0.5	n/a	ug/L	01/14/05			U
BLANK	Nickel	7440-02-0	<0.5	n/a	ug/L	01/14/05			U
BLANK	Lead	7439-92-1	<1.2	n/a	ug/L	01/14/05			U
BLANK	Lead	7439-92-1	<1.2	n/a	ug/L	01/14/05			U
BLANK	Antimony	7440-36-0	0.64	0.640	ug/L	01/14/05			
BLANK	Antimony	7440-36-0	<0.5	n/a	ug/L	01/14/05			U
BLANK	Selenium	7782-49-2	<0.3	n/a	ug/L	01/14/05			U
BLANK	Selenium	7782-49-2	<0.3	n/a	ug/L	01/14/05			U
BLANK	Uranium	7440-61-1	<0.1	n/a	ug/L	01/14/05			U
BLANK	Uranium	7440-61-1	<0.1	n/a	ug/L	01/14/05			U
LCS	Silver	7440-22-4	155.2	122.205	% Recov	01/14/05	110.000	170.000	
LCS	Silver	7440-22-4	155.4	122.362	% Recov	01/14/05	110.000	170.000	
LCS	Arsenic	7440-38-2	170.6	110.779	% Recov	01/14/05	82.000	142.000	
LCS	Arsenic	7440-38-2	177.5	115.260	% Recov	01/14/05	82.000	142.000	
LCS	Barium	7440-39-3	252.4	101.365	% Recov	01/14/05	79.000	123.000	
LCS	Barium	7440-39-3	273.8	109.960	% Recov	01/14/05	79.000	123.000	
LCS	Beryllium	7440-41-7	109	116.953	% Recov	01/14/05	82.000	128.000	
LCS	Beryllium	7440-41-7	105.2	111.796	% Recov	01/14/05	82.000	128.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-006
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
LCS	Cadmium	7440-43-9	146	112.308	% Recov	01/14/05	88.000	127.000	
LCS	Cadmium	7440-43-9	143.6	110.462	% Recov	01/14/05	88.000	127.000	
LCS	Chromium	7440-47-3	78.26	109.302	% Recov	01/14/05	50.000	126.000	
LCS	Chromium	7440-47-3	75.35	105.237	% Recov	01/14/05	50.000	126.000	
LCS	Copper	7440-50-8	171.6	115.946	% Recov	01/14/05	61.000	134.000	
LCS	Copper	7440-50-8	158.6	107.162	% Recov	01/14/05	61.000	134.000	
LCS	Mercury	7439-97-6	16.07	95.089	% Recov	01/14/05	75.000	114.000	
LCS	Mercury	7439-97-6	16.57	98.047	% Recov	01/14/05	75.000	114.000	
LCS	Nickel	7440-02-0	164.3	113.310	% Recov	01/14/05	84.000	125.000	
LCS	Nickel	7440-02-0	154.8	106.759	% Recov	01/14/05	84.000	125.000	
LCS	Lead	7439-92-1	158	113.669	% Recov	01/14/05	87.000	120.000	
LCS	Lead	7439-92-1	153.8	110.647	% Recov	01/14/05	87.000	120.000	
LCS	Antimony	7440-36-0	100.3	85.726	% Recov	01/14/05	61.000	135.000	
LCS	Antimony	7440-36-0	133.3	113.932	% Recov	01/14/05	61.000	135.000	
LCS	Selenium	7782-49-2	78.7	124.525	% Recov	01/14/05	83.000	145.000	
LCS	Selenium	7782-49-2	74.06	117.184	% Recov	01/14/05	83.000	145.000	
LCS	Uranium	7440-61-1	401	100.250	% Recov	01/14/05	89.000	107.000	
LCS	Uranium	7440-61-1	405.6	101.400	% Recov	01/14/05	89.000	107.000	

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-006: 200-PW-2/PW-4
Group #: WSCF20042466

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Organic														
W040002742	B1B581	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	12/28/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 670	ug/kg	1.00	6.7e+02	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 320	ug/kg	1.00	3.2e+02	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 300	ug/kg	1.00	3.0e+02	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 310	ug/kg	1.00	3.1e+02	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	01/05/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04

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

DF=Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-006: 200-PW-2/PW-4

Group #: WSCF20042466

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W040002742	B1B581	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	12/30/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	01/03/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	01/03/05	12/16/04	12/16/04

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

DF=Dilution Factor

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

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date: 12/15/04
Receive Date:12/15/04

Lab ID: W040002628
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	1,2,4-Trichlorobenzene	120-82-1	3272.7	87.900	% Recov	01/05/05	46.000	107.000	
MS	1,4-Dichlorobenzene	106-46-7	3068.4	82.400	% Recov	01/05/05	30.000	96.000	
MS	2,4-Dinitrotoluene	121-14-2	3097.8	83.200	% Recov	01/05/05	59.000	106.000	
MS	2-Fluorophenol	367-12-4	3355.8	90.100	% Recov	01/05/05	42.000	105.000	
MS	Acenaphthene	83-32-9	3632.0	97.600	% Recov	01/05/05	61.000	116.000	
MS	4-Chloro-3-methylphenol	59-50-7	5162.5	92.500	% Recov	01/05/05	61.000	106.000	
MS	2-Chlorophenol	95-57-8	4724.7	84.600	% Recov	01/05/05	66.000	106.000	
MS	N-Nitrosodi-n-dipropylamine	621-64-7	3631.4	97.500	% Recov	01/05/05	71.000	114.000	
MS	2-Fluorobiphenyl	321-60-8	3589.3	96.400	% Recov	01/05/05	56.000	122.000	
MS	Phenol	108-95-2	5558.4	99.500	% Recov	01/05/05	42.000	111.000	
MS	Nitrobenzene-d5	4165-60-0	3270.7	87.900	% Recov	01/05/05	64.000	111.000	
MS	4-Nitrophenol	100-02-7	5313.1	95.100	% Recov	01/05/05	32.000	118.000	
MS	Pentachlorophenol	87-86-5	4712.8	84.400	% Recov	01/05/05	62.000	114.000	
MS	Phenol-d5	4165-62-2	3695.8	99.300	% Recov	01/05/05	54.000	120.000	
MS	Pyrene	129-00-0	3138.7	84.300	% Recov	01/05/05	66.000	118.000	
MS	2,4,6-Tribromophenol	118-79-6	3485.7	93.600	% Recov	01/05/05	24.000	122.000	
MS	Terphenyl-d14 (7Cl)	98904-43-9	3151.9	84.700	% Recov	01/05/05	35.000	150.000	
MSD	1,2,4-Trichlorobenzene	120-82-1	3260.1	87.600	% Recov	01/05/05	46.000	107.000	
MSD	1,4-Dichlorobenzene	106-46-7	3117.0	83.800	% Recov	01/05/05	30.000	96.000	
MSD	2,4-Dinitrotoluene	121-14-2	3135.0	84.300	% Recov	01/05/05	59.000	106.000	
MSD	2-Fluorophenol	367-12-4	3424.3	92.000	% Recov	01/05/05	42.000	105.000	
MSD	Acenaphthene	83-32-9	3641.4	97.900	% Recov	01/05/05	61.000	116.000	
MSD	4-Chloro-3-methylphenol	59-50-7	5154.0	92.300	% Recov	01/05/05	61.000	106.000	
MSD	2-Chlorophenol	95-57-8	4811.4	86.200	% Recov	01/05/05	66.000	106.000	
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	3599.8	96.700	% Recov	01/05/05	71.000	114.000	
MSD	2-Fluorobiphenyl	321-60-8	3531.1	94.900	% Recov	01/05/05	56.000	122.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date: 12/15/04
Receive Date:12/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	Phenol	108-95-2	5613.4	101.000	% Recov	01/05/05	42.000	111.000	
MSD	Nitrobenzene-d5	4165-60-0	3300.8	88.700	% Recov	01/05/05	64.000	111.000	
MSD	4-Nitrophenol	100-02-7	5087.6	91.200	% Recov	01/05/05	32.000	118.000	
MSD	Pentachlorophenol	87-86-5	5274.6	94.500	% Recov	01/05/05	62.000	114.000	
MSD	Phenol-d5	4165-62-2	3847.4	103.000	% Recov	01/05/05	54.000	120.000	
MSD	Pyrene	129-00-0	3096.6	83.200	% Recov	01/05/05	66.000	118.000	
MSD	2,4,6-Tribromophenol	118-79-6	3522.4	94.700	% Recov	01/05/05	24.000	122.000	
MSD	Terphenyl-d14 (7Cl)	98904-43-9	3150.6	84.700	% Recov	01/05/05	35.000	150.000	
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	87.600	0.342	RPD	01/05/05	0.000	20.000	
SPK-RPD	1,4-Dichlorobenzene	106-46-7	83.800	1.685	RPD	01/05/05	0.000	20.000	
SPK-RPD	2,4-Dinitrotoluene	121-14-2	84.300	1.313	RPD	01/05/05	0.000	20.000	
SPK-RPD	2-Fluorophenol	367-12-4	92.000	2.087	RPD	01/05/05	0.000	20.000	
SPK-RPD	Acenaphthene	83-32-9	97.900	0.307	RPD	01/05/05	0.000	20.000	
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	92.300	0.216	RPD	01/05/05	0.000	20.000	
SPK-RPD	2-Chlorophenol	95-57-8	86.200	1.874	RPD	01/05/05	0.000	20.000	
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	96.700	0.824	RPD	01/05/05	0.000	20.000	
SPK-RPD	2-Fluorobiphenyl	321-60-8	94.900	1.568	RPD	01/05/05	0.000	20.000	
SPK-RPD	Phenol	108-95-2	101.000	1.496	RPD	01/05/05	0.000	20.000	
SPK-RPD	Nitrobenzene-d5	4165-60-0	88.700	0.906	RPD	01/05/05	0.000	20.000	
SPK-RPD	4-Nitrophenol	100-02-7	91.200	4.187	RPD	01/05/05	0.000	20.000	
SPK-RPD	Pentachlorophenol	87-86-5	94.500	11.291	RPD	01/05/05	0.000	20.000	
SPK-RPD	Phenol-d5	4165-62-2	103.000	3.658	RPD	01/05/05	0.000	20.000	
SPK-RPD	Pyrene	129-00-0	83.200	1.313	RPD	01/05/05	0.000	20.000	
SPK-RPD	2,4,6-Tribromophenol	118-79-6	94.700	1.168	RPD	01/05/05	0.000	20.000	
SPK-RPD	Terphenyl-d14 (7Cl)	98904-43-9	84.700	0.000	RPD	01/05/05	0.000	20.000	

Lab ID: W040002742
BATCH QC ASSOCIATED WITH SAMPLE

SURR	2-Fluorophenol	367-12-4	2936.5	85.500	% Recov	01/05/05	42.000	105.000
SURR	2-Fluorobiphenyl	321-60-8	3237.2	94.300	% Recov	01/05/05	56.000	122.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date: 12/16/04
Receive Date:12/16/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
SURR	Nitrobenzene-d5	4165-60-0	2879.0	83.800	% Recov	01/05/05	64.000	111.000	
SURR	Phenol-d5	4165-62-2	3193.4	93.000	% Recov	01/05/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	2745.6	79.900	% Recov	01/05/05	24.000	122.000	
SURR	Terphenyl-d14 (7Cl)	98904-43-9	2978.1	86.700	% Recov	01/05/05	35.000	150.000	
BATCH QC									
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 290	n/a	ug/Kg	01/05/05			U
BLANK	1,4-Dichlorobenzene	106-46-7	< 310	n/a	ug/Kg	01/05/05			U
BLANK	2,4-Dinitrotoluene	121-14-2	< 67	n/a	ug/Kg	01/05/05			U
BLANK	2-Fluorophenol	367-12-4	2836.8	85.100	% Recov	01/05/05	42.000	105.000	
BLANK	Acenaphthene	83-32-9	< 67	n/a	ug/Kg	01/05/05			U
BLANK	4-Chloro-3-methylphenol	59-50-7	< 67	n/a	ug/Kg	01/05/05			U
BLANK	2-Chlorophenol	95-57-8	< 150	n/a	ug/Kg	01/05/05			U
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 67	n/a	ug/Kg	01/05/05			U
BLANK	2-Fluorobiphenyl	321-60-8	3389.2	102.000	% Recov	01/05/05	56.000	122.000	
BLANK	Phenol	108-95-2	< 100	n/a	ug/Kg	01/05/05			U
BLANK	Nitrobenzene-d5	4165-60-0	2947.9	88.400	% Recov	01/05/05	64.000	111.000	
BLANK	4-Nitrophenol	100-02-7	< 650	n/a	ug/Kg	01/05/05			U
BLANK	Pentachlorophenol	87-86-5	< 300	n/a	ug/Kg	01/05/05			U
BLANK	Phenol-d5	4165-62-2	3225.7	96.800	% Recov	01/05/05	54.000	120.000	
BLANK	Pyrene	129-00-0	< 67	n/a	ug/Kg	01/05/05			U
BLANK	Tributyl phosphate	126-73-8	< 67	n/a	ug/Kg	01/05/05			U
BLANK	2,4,6-Tribromophenol	118-79-6	2612.2	78.400	% Recov	01/05/05	24.000	122.000	
BLANK	Terphenyl-d14 (7Cl)	98904-43-9	3111.0	93.300	% Recov	01/05/05	35.000	150.000	
LCS	1,2,4-Trichlorobenzene	120-82-1	2929.4	87.900	% Recov	01/05/05	46.000	107.000	
LCS	1,4-Dichlorobenzene	106-46-7	2720.8	81.600	% Recov	01/05/05	42.000	111.000	
LCS	2,4-Dinitrotoluene	121-14-2	2823.4	84.700	% Recov	01/05/05	59.000	106.000	
LCS	2-Fluorophenol	367-12-4	3086.1	92.600	% Recov	01/05/05	50.000	110.000	
LCS	Acenaphthene	83-32-9	3251.4	97.500	% Recov	01/05/05	61.000	116.000	
LCS	4-Chloro-3-methylphenol	59-50-7	4796.8	95.900	% Recov	01/05/05	61.000	106.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
LCS	2-Chlorophenol	95-57-8	4202.4	84.000	% Recov	01/05/05	66.000	106.000	
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	3066.1	92.000	% Recov	01/05/05	71.000	114.000	
LCS	2-Fluorobiphenyl	321-60-8	3087.5	92.600	% Recov	01/05/05	58.000	109.000	
LCS	Phenol	108-95-2	4718.0	94.400	% Recov	01/05/05	67.000	105.000	
LCS	Nitrobenzene-d5	4165-60-0	2789.5	83.700	% Recov	01/05/05	60.000	118.000	
LCS	4-Nitrophenol	100-02-7	4781.5	95.600	% Recov	01/05/05	32.000	118.000	
LCS	Pentachlorophenol	87-86-5	5007.2	100.000	% Recov	01/05/05	62.000	114.000	
LCS	Phenol-d5	4165-62-2	2902.5	87.100	% Recov	01/05/05	59.000	116.000	
LCS	Pyrene	129-00-0	2683.1	80.500	% Recov	01/05/05	66.000	118.000	
LCS	2,4,6-Tribromophenol	118-79-6	3120.4	93.600	% Recov	01/05/05	60.000	120.000	
LCS	Terphenyl-d14 (7Cl)	98904-43-9	2972.2	89.200	% Recov	01/05/05	60.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: F03-006
Sample Date: 12/15/04
Receive Date:12/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002627									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	ortho-Terphenyl Surr	84-15-1	25403	98.100	% Recov	01/04/05	70.000	130.000	
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	131300	101.000	% Recov	01/04/05	75.000	125.000	
MSD	ortho-Terphenyl Surr	84-15-1	26324	102.000	% Recov	01/03/05	70.000	130.000	
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	130940	101.000	% Recov	01/03/05	75.000	125.000	
SPK-RPD	ortho-Terphenyl Surr	84-15-1	102.000	3.898	RPD	01/03/05	0.000	20.000	
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	101.000	0.000	RPD	01/03/05	0.000	20.000	
Lab ID: W040002742									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	23780	92.300	% Recov	01/03/05	70.000	130.000	
BATCH QC									
BLANK	Kerosene	TPHKEROSENE	< 3800	n/a	ug/Kg	01/03/05			U
BLANK	ortho-Terphenyl Surr	84-15-1	19254	77.000	% Recov	01/03/05	70.000	130.000	
BLANK	Total Pet. Hydrocarbons Diesel	TPHDIESEL	< 3800	n/a	ug/Kg	01/03/05			U
LCS	Kerosene	TPHKEROSENE	116200	93.000	% Recov	01/04/05	70.000	130.000	
LCS	ortho-Terphenyl Surr	84-15-1	21428	85.700	% Recov	01/04/05	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: NWTPH-GX TPH Gasoline Range

SAF Number: F03-006
Sample Date: 12/15/04
Receive Date:12/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit		RQ
Lab ID: W040002627										
BATCH QC ASSOCIATED WITH SAMPLE										
DUP	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<250	n/a	RPD	12/28/04	0.000	20.000		U
MS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	3000	83.333	% Recov	12/28/04	50.000	150.000		
MSD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	3100	86.111	% Recov	12/28/04	50.000	150.000		
SPK-RPD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	86.111	3.279	RPD	12/28/04	0.000	20.000		
BATCH QC										
BLANK	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<250	n/a	mg/L	12/28/04	0.000	300.000		U
LCS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	1083	84.875	% Recov	12/28/04	85.000	115.000	*	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F03-006
Sample Date: 12/15/04
Receive Date:12/15/04

Lab ID: W040002627
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	1,1-Dichloroethene	75-35-4	51.930	100.000	% Recov	12/29/04	63.000	117.000	
MS	Benzene	71-43-2	56.890	110.000	% Recov	12/29/04	75.000	129.000	
MS	4-Bromofluorobenzene	460-00-4	107.30	103.000	% Recov	12/29/04	84.000	116.000	
MS	Chlorobenzene	108-90-7	58.900	114.000	% Recov	12/29/04	79.000	119.000	
MS	1,2-Dichloroethane-d4	17060-07-0	117.60	113.000	% Recov	12/29/04	82.000	136.000	
MS	Toluene-d8	2037-26-5	111.40	107.000	% Recov	12/29/04	89.000	119.000	
MS	Toluene	108-88-3	56.080	108.000	% Recov	12/29/04	76.000	120.000	
MS	Trichloroethene	79-01-6	53.130	102.000	% Recov	12/29/04	73.000	123.000	
MSD	1,1-Dichloroethene	75-35-4	50.850	98.000	% Recov	12/29/04	63.000	117.000	
MSD	Benzene	71-43-2	58.570	113.000	% Recov	12/29/04	75.000	129.000	
MSD	4-Bromofluorobenzene	460-00-4	105.50	102.000	% Recov	12/29/04	84.000	116.000	
MSD	Chlorobenzene	108-90-7	58.230	112.000	% Recov	12/29/04	79.000	119.000	
MSD	1,2-Dichloroethane-d4	17060-07-0	119.10	115.000	% Recov	12/29/04	82.000	136.000	
MSD	Toluene-d8	2037-26-5	110.10	106.000	% Recov	12/29/04	89.000	119.000	
MSD	Toluene	108-88-3	56.000	108.000	% Recov	12/29/04	76.000	120.000	
MSD	Trichloroethene	79-01-6	54.450	105.000	% Recov	12/29/04	73.000	123.000	
SPK-RPD	1,1-Dichloroethene	75-35-4	98.000	2.020	RPD	12/29/04	0.000	25.000	
SPK-RPD	Benzene	71-43-2	113.000	2.691	RPD	12/29/04	0.000	25.000	
SPK-RPD	4-Bromofluorobenzene	460-00-4	102.000	0.976	RPD	12/29/04	0.000	25.000	
SPK-RPD	Chlorobenzene	108-90-7	112.000	1.770	RPD	12/29/04	0.000	25.000	
SPK-RPD	1,2-Dichloroethane-d4	17060-07-0	115.000	1.754	RPD	12/29/04	0.000	25.000	
SPK-RPD	Toluene-d8	2037-26-5	106.000	0.939	RPD	12/29/04	0.000	25.000	
SPK-RPD	Toluene	108-88-3	108.000	0.000	RPD	12/29/04	0.000	25.000	
SPK-RPD	Trichloroethene	79-01-6	105.000	2.899	RPD	12/29/04	0.000	25.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F03-006
Sample Date: 12/16/04
Receive Date:12/16/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002742									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	106.40	103.000	% Recov	12/30/04	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	120.60	117.000	% Recov	12/30/04	80.000	134.000	
SURR	Toluene-d8	2037-26-5	112.80	109.000	% Recov	12/30/04	80.000	126.000	
BATCH QC									
BLANK	1,1-Dichloroethane	75-34-3	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	1,1,1-Trichloroethane	71-55-6	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	1,1,2-Trichloroethane	79-00-5	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	1,1-Dichloroethene	75-35-4	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	1,2-Dichloroethane	107-06-2	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	2-Hexanone	591-78-6	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	4-Methyl-2-Pentanone	108-10-1	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Acetone	67-64-1	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Bromodichloromethane	75-27-4	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Benzene	71-43-2	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	4-Bromofluorobenzene	460-00-4	52.060	104.000	% Recov	12/29/04	71.000	125.000	
BLANK	Bromoform	75-25-2	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Carbon disulfide	75-15-0	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Carbon tetrachloride	56-23-5	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Dibromochloromethane	124-48-1	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Chloroform	67-66-3	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Chlorobenzene	108-90-7	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Chloroethane	75-00-3	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	1,2-Dichloroethane-d4	17060-07-0	59.070	118.000	% Recov	12/29/04	80.000	134.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F03-006
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	1,2-Dichloropropane	78-87-5	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Ethylbenzene	100-41-4	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Bromomethane	74-83-9	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Chloromethane	74-87-3	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	2-Butanone	78-93-3	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Methylenechloride	75-09-2	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Tetrachloroethene	127-18-4	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Styrene	100-42-5	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Xylenes (total)	1330-20-7	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Toluene-d8	2037-26-5	55.560	111.000	% Recov	12/29/04	80.000	126.000	
BLANK	Toluene	108-88-3	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Trichloroethene	79-01-6	< 2.0	n/a	ug/Kg	12/29/04			U
BLANK	Vinyl chloride	75-01-4	< 2.0	n/a	ug/Kg	12/29/04			U
LCS	1,1-Dichloroethene	75-35-4	52.190	104.000	% Recov	12/30/04	70.000	130.000	
LCS	Benzene	71-43-2	56.530	113.000	% Recov	12/30/04	70.000	130.000	
LCS	4-Bromofluorobenzene	460-00-4	104.70	105.000	% Recov	12/30/04	71.000	125.000	
LCS	Chlorobenzene	108-90-7	59.020	118.000	% Recov	12/30/04	70.000	130.000	
LCS	1,2-Dichloroethane-d4	17060-07-0	118.00	118.000	% Recov	12/30/04	80.000	134.000	
LCS	Toluene-d8	2037-26-5	109.10	109.000	% Recov	12/30/04	80.000	126.000	
LCS	Toluene	108-88-3	56.930	114.000	% Recov	12/30/04	70.000	130.000	
LCS	Trichloroethene	79-01-6	53.990	108.000	% Recov	12/30/04	70.000	130.000	

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-006: 200-PW-2/PW-4
Group #: WSCF20042466

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Radiochemistry														
W040002742	B1B581	TRENT	14596-10-2	Americium-241	SOIL	LA-508-471		0.0220	pCi/g	1.00	0.013	01/12/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.013	pCi/g	1.00	0.0	01/12/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481	U	3.09e-03	pCi/g	1.00	0.011	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 6.4e-03	pCi/g	1.00	0.0	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481	U	1.37e-03	pCi/g	1.00	0.011	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 6.4e-03	pCi/g	1.00	0.0	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	14683-23-9	Europium-152	SOIL	LA-508-481	U	-0.0173	pCi/g	1.00	0.027	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.020	pCi/g	1.00	0.0	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	15585-10-1	Europium-154	SOIL	LA-508-481	U	6.41e-03	pCi/g	1.00	0.037	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.021	pCi/g	1.00	0.0	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	14391-16-3	Europium-155	SOIL	LA-508-481	U	0.0393	pCi/g	1.00	0.039	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.025	pCi/g	1.00	0.0	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	13982-63-3	Radium-226	SOIL	LA-508-481		0.271	pCi/g	1.00	0.019	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Ra-226 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.041	pCi/g	1.00	0.0	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	15262-20-1	Radium-228	SOIL	LA-508-481		0.438	pCi/g	1.00	0.036	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Ra-228 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.064	pCi/g	1.00	0.0	01/04/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	13994-20-2	Neptunium-237	SOIL	LA-508-471	U	-1.80e-03	pCi/g	1.00	0.011	01/10/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Np-237 by AEA Total Ctng Error	SOIL	LA-508-471		+- 0.018	pCi/g	1.00	0.0	01/10/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471	U	-1.70e-03	pCi/g	1.00	0.034	01/12/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.017	pCi/g	1.00	0.0	01/12/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471	U	5.20e-03	pCi/g	1.00	0.016	01/12/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+- 9.4e-03	pCi/g	1.00	0.0	01/12/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	10098-97-2	Strontium-89/90	SOIL	LA-508-415	U	0.0210	pCi/g	1.00	0.20	12/29/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+- 0.21	pCi/g	1.00	0.0	12/29/04	12/16/04	12/16/04
W040002742	B1B581	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471		0.0980	pCi/g	1.00	4.7e-03	01/13/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+- 0.036	pCi/g	1.00	0.0	01/13/05	12/16/04	12/16/04

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

DF=Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-006: 200-PW-2/PW-4

Group #: WSCF20042466

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W040002742	B1B581	TRENT	15117-96-1	Uranium-235	SOIL	LA-508-471		0.0190	pCi/g	1.00	5.1e-03	01/13/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.013	pCi/g	-1.00	0.0	01/13/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.140	pCi/g	1.00	4.7e-03	01/13/05	12/16/04	12/16/04
W040002742	B1B581	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.048	pCi/g	1.00	0.10	01/13/05	12/16/04	12/16/04

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

DF=Dilution Factor

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

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: Americium by AEA

SAF Number: F03-006
Sample Date: 12/15/04
Receive Date:12/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002627									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Americium-241	14596-10-2	2.9e-02	12.903	RPD	01/12/05	0.000	20.000	
BATCH QC									
BLANK	Americium-241	14596-10-2	3.2e-02	0.032	pCi/g	01/12/05	-10.000	1000.000	
LCS	Americium-241	14596-10-2	4.3e+01	89.397	% Recov	01/13/05	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: Gamma Energy Analysis-grd H2O

SAF Number: F03-006
Sample Date: 12/15/04
Receive Date:12/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002627									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Cobalt-60	10198-40-0	U8.28e-04	n/a	RPD	12/29/04	0.000	20.000	
DUP	Cesium-137	10045-97-3	U-6.91e0	n/a	RPD	12/29/04	0.000	20.000	
DUP	Europium-152	14683-23-9	U1.33e-02	n/a	RPD	12/29/04	0.000	20.000	
DUP	Europium-154	15585-10-1	U-1.58e-2	n/a	RPD	12/29/04	0.000	20.000	
DUP	Europium-155	14391-16-3	4.54e-02	n/a	RPD	12/29/04	0.000	20.000	
BATCH QC									
BLANK	Cobalt-60	10198-40-0	U1.81e-3	n/a	pCi/g	12/27/04	-10.000	1000.000	
BLANK	Cesium-137	10045-97-3	U1.03e-3	n/a	pCi/g	12/27/04	-10.000	1000.000	
BLANK	Europium-152	14683-23-9	U-9.7e-4	n/a	pCi/g	12/27/04	-10.000	1000.000	
BLANK	Europium-154	15585-10-1	U7.84e-4	n/a	pCi/g	12/27/04	-10.000	1000.000	
BLANK	Europium-155	14391-16-3	U-4.6e-3	n/a	pCi/g	12/27/04	-10.000	1000.000	
BLANK	Radium-226	13982-63-3	6.39e-02	0.064	pCi/g	12/27/04	-10.000	1000.000	
BLANK	Radium-228	15262-20-1	3.50e-02	0.035	pCi/g	12/27/04	-10.000	1000.000	
LCS	Cobalt-60	10198-40-0	4.35e+03	103.819	% Recov	12/28/04	80.000	120.000	
LCS	Cesium-137	10045-97-3	3.89e+03	108.659	% Recov	12/28/04	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: Neptunium by AEA

SAF Number: F03-006
Sample Date: 12/14/04
Receive Date:12/14/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002619									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Neptunium-237	13994-20-2	U7.7E-04	n/a	RPD	01/10/05	0.000	25.000	
BATCH QC									
BLANK	Neptunium-237	13994-20-2	2.9e-03	0.003	pCi/g	01/10/05	-10.000	1000.000	
LCS	Neptunium-237	13994-20-2	96.3	96.300	% Recov	01/10/05	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: Plutonium Isotopics by AEA

SAF Number: F03-006
Sample Date: 12/15/04
Receive Date:12/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002627									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Pu-239/240 by AEA	PU-239/240	U1.7e-03	n/a	RPD	01/12/05	0.000	20.000	
BATCH QC									
BLANK	Pu-239/240 by AEA	PU-239/240	U1.9e-02	n/a	pCi/g	01/12/05	-10.000	1000.000	
LCS	Pu-239/240 by AEA	PU-239/240	4.7e+01	95.528	% Recov	01/12/05	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: Strontium 89/90

SAF Number: F03-006
Sample Date: 12/15/04
Receive Date:12/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002627									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Strontium-89/90	10098-97-2	5.7e-01	n/a	RPD	12/29/04	0.000	20.000	
BATCH QC									
BLANK	Strontium-89/90	10098-97-2	3.2e-01	0.320	pCi/g	12/29/04	-10.000	300.000	
LCS	Strontium-89/90	10098-97-2	72.7	102.250	% Recov	12/29/04	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042466
Matrix: SOLID
Test: Uranium Isotopics by AEA

SAF Number: F03-006
Sample Date: 12/15/04
Receive Date:12/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002627									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Uranium-238	U-238	1.4e-01	0.000	RPD	01/13/05	0.000	20.000	
BATCH QC									
BLANK	Uranium-238	24678-82-8	2.9e-02	0.029	pCi/g	01/13/05	-10.000	1000.000	
LCS	Uranium-238	24678-82-8	8.6e+01	113.427	% Recov	01/13/05	75.000	125.000	

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F03-006

Group #: WSCF20042466

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ORGANICS: Sample concentrations are corrected for moisture and reported on a dry weight basis. gar ICP-MS: Preparation blank results evaluated and have no effect on sample results -wb

Lab Areas: VALGROUP - Group Validation
LOGSAMP - Login for Sample
VALTEST - Test Validation
LOGTEST - Login for Tests
TESTDATA - Test Data Entry

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F03-006 :200-PW-2/PW-4

Group #: WSCF20042466

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error				12	%
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	TL-208 Count Error				15	%
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	AC-228 Count Error				15	%
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error				15	%
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	SN-126 Count Error				27	%
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	U-235 Count Error				31	%
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	TH-234 Count Error				33	%
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	BI-212 Count Error				34	%
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	CS-134 Count Error				39	%
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	K-40 Count Error				8.4	%
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error				9.4	%
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	CS-134				0.031	pCi/g
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	TL-208				0.14	pCi/g
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	BI-214				0.27	pCi/g
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	BI-212				0.28	pCi/g
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	PB-214				0.30	pCi/g
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	AC-228				0.44	pCi/g
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	PB-212				0.47	pCi/g
W040002742	B1B581	TRENT	Gamma Energy Analysis-grd H2O	K-40				13	pCi/g
W040002742	B1B581	TRENT	SW-846 8270B Semi-Vols	SMP 14.635 Di-n-butylphthalate	84-74-2	14.63533		9.0e+02	ug/kg

RQ=Result Qualifier

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WSCF
METHOD REFERENCES REPORT

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

LA-212-411	Determination of Soil pH Measurement	
	EPA SW-846 9045C	SOIL AND WASTE pH
LA-503-401	LA-503-401: ANALYSIS OF CATIONS BY ION CHROMATOGRAPHY	
	EPA-600/4-86-024 300.7	Dissolved Sodium, Ammonium, Potassium, and Calcium in Wet Deposition by Chemical
LA-505-412	LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY	
	EPA-600/R-94-111 200.8	DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS
LA-508-415	LA-508-415: OPERATION OF THE PROTEAN 2-INCH ALPHA/BETA COUNTING SYSTEM FOR GROSS	
	None	No reference to any industry method.
LA-508-471	LA-508-471: ALPHA ENERGY ANALYZER DATA ACQUISITION AND SYSTEM CHECKOUT USING ALP	
	None	No reference to any industry method.
LA-508-481	LA-508-481: GAMMA ENERGY ANALYSIS USING PROCOUNT SOFTWARE	
	None	No reference to any industry method.
LA-519-412	LA-519-412: TOTAL RESIDUE/% SOLIDS DRIED AT 103 - 105 C	
	EPA-600/4-79-020 160.3	RESIDUE, TOTAL
	Standard Methods 2540B	Total Solids Dried at 103-105 C
LA-523-443	LA-523-443: GAS CHROMATOGRAPH ANALYSIS OF GASOLINE RANGE TOTAL PETROLEUM HYDROCA	
	WDOE TPH NWTPH-G	Volatile Petroleum Products Method for Soil and Water

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at \\ap006\aspdocs\WSCF\Sample Mgmt\ProcedureMethodCrossReference.pdf. This document includes on-line links to full-text versions of the procedures and methods, where available.

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LA-523-455	LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846	
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8260B	VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
LA-523-456	LA-523-456: SEMIVOLATILE SAMPLE ANALYSIS BY SW-846, METHOD 8270C	
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
LA-533-410	LA-533-410: ANION ANALYSIS BY ION CHROMATOGRAPHY	
	EPA-600/R-94-111 300	DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY
LA-695-402	LA-695-402: DETERMINATION OF CYANIDE BY MIDIDISTILLATION AND SPECTROPHOTOMETRIC	
	EPA-600/4-79-020 335.2	Cyanide, Total
NWTPH	NWTPH-Diesel and/or Gasoline	
	WDOE NWTPH-Dx/Gx	Total Petroleum Hydrocarbons - Diesel/Gasoline

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at \\ap006\aspdocs\WSCF\Sample Mgmt\ProcedureMethodCrossReference.pdf. This document includes on-line links to full-text versions of the procedures and methods, where available.

w13qlog v1 21-jan-2005 09:19:53

W13q Worklist/Batch/QC Report for Group# WSCF20042466

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
				SAMPLE	W040002742	Percent Solids
				SAMPLE	W040002742	pH Soil and Waste Measurement
			28228	BLANK		Cyanide by Midi/Spectrophotom
			28228	BLNK-PREP		Cyanide by Midi/Spectrophotom
			28228	LCS		Cyanide by Midi/Spectrophotom
			28228	MS	W040002627	Cyanide by Midi/Spectrophotom
			28228	MSD	W040002627	Cyanide by Midi/Spectrophotom
			28228	SPK-RPD	W040002627	Cyanide by Midi/Spectrophotom
			28228	SAMPLE	W040002742	Cyanide by Midi/Spectrophotom
24532	1	24890	28229	BLANK		Strontium 89/90
24532	2	24890	28229	LCS		Strontium 89/90
24532	3	24890	28229	DUP	W040002627	Strontium 89/90
24532	10	24890	28229	SAMPLE	W040002742	Strontium 89/90
24496	1	24865	28261	BLANK		Gamma Energy Analysis-grd H2O
24496	2	24865	28261	LCS		Gamma Energy Analysis-grd H2O
24496	3	24865	28261	DUP	W040002627	Gamma Energy Analysis-grd H2O
24496	10	24865	28261	SAMPLE	W040002742	Gamma Energy Analysis-grd H2O
			28264	BLANK		WTPH-D TPH Diesel Range (Wa)
			28264	LCS		WTPH-D TPH Diesel Range (Wa)
			28264	MS	W040002627	WTPH-D TPH Diesel Range (Wa)
			28264	MSD	W040002627	WTPH-D TPH Diesel Range (Wa)
			28264	SPK-RPD	W040002627	WTPH-D TPH Diesel Range (Wa)
			28264	SAMPLE	W040002742	WTPH-D TPH Diesel Range (Wa)
			28264	SURR	W040002742	WTPH-D TPH Diesel Range (Wa)
			28319	BLANK		SW-846 8270B Semi-Vols
			28319	LCS		SW-846 8270B Semi-Vols
			28319	MS	W040002628	SW-846 8270B Semi-Vols
			28319	MSD	W040002628	SW-846 8270B Semi-Vols
			28319	SPK-RPD	W040002628	SW-846 8270B Semi-Vols
			28319	SAMPLE	W040002742	SW-846 8270B Semi-Vols
			28319	SURR	W040002742	SW-846 8270B Semi-Vols
24655	2	25011	28345	BLANK		Ammonia (N) by IC
24655	15	25011	28345	BLANK		Ammonia (N) by IC
24655	3	25011	28345	LCS		Ammonia (N) by IC
24655	5	25011	28345	DUP	W040002593	Ammonia (N) by IC
24655	6	25011	28345	MS	W040002593	Ammonia (N) by IC
24655	7	25011	28345	MSD	W040002593	Ammonia (N) by IC
24655	11	25011	28345	SAMPLE	W040002742	Ammonia (N) by IC
24631	1	24987	28348	BLANK		Neptunium by AEA
24631	2	24987	28348	LCS		Neptunium by AEA
24631	3	24987	28348	DUP	W040002619	Neptunium by AEA
24631	5	24987	28348	SAMPLE	W040002742	Neptunium by AEA
24662	2	25018	28366	BLANK		Anions by Ion Chromatography
24662	13	25018	28366	BLANK		Anions by Ion Chromatography
24662	3	25018	28366	LCS		Anions by Ion Chromatography
24662	11	25018	28366	SAMPLE	W040002742	Anions by Ion Chromatography

24662	5	25018	28366	DUP	W040002824	Anions by Ion Chromatography
24662	6	25018	28366	MS	W040002824	Anions by Ion Chromatography
24662	7	25018	28366	MSD	W040002824	Anions by Ion Chromatography
24724	1	25080	28427	BLANK		ICP-2008 MS All possible metal
24724	16	25080	28427	BLANK		ICP-2008 MS All possible metal
24724	2	25080	28427	LCS		ICP-2008 MS All possible metal
24724	17	25080	28427	LCS		ICP-2008 MS All possible metal
24724	4	25080	28427	MS	W040002732	ICP-2008 MS All possible metal
24724	5	25080	28427	MSD	W040002732	ICP-2008 MS All possible metal
24724	9	25080	28427	MS	W040002742	ICP-2008 MS All possible metal
24724	10	25080	28427	MSD	W040002742	ICP-2008 MS All possible metal
24724	8	25080	28427	SAMPLE	W040002742	ICP-2008 MS All possible metal
24724	0	25080	28427	SPK-RPD	W040002742	ICP-2008 MS All possible metal
24724	19	25080	28427	MS	W050000037	ICP-2008 MS All possible metal
24724	20	25080	28427	MSD	W050000037	ICP-2008 MS All possible metal
24724	14	25080	28427	MS	W050000048	ICP-2008 MS All possible metal
24724	15	25080	28427	MSD	W050000048	ICP-2008 MS All possible metal
24724	0	25080	28427	SPK-RPD	W050000048	ICP-2008 MS All possible metal
24729	1	25087	28429	BLANK		NWTPH-GX TPH Gasoline Range
24729	2	25087	28429	LCS		NWTPH-GX TPH Gasoline Range
24729	4	25087	28429	DUP	W040002627	NWTPH-GX TPH Gasoline Range
24729	5	25087	28429	MS	W040002627	NWTPH-GX TPH Gasoline Range
24729	6	25087	28429	MSD	W040002627	NWTPH-GX TPH Gasoline Range
24729	6	25087	28429	SPK-RPD	W040002627	NWTPH-GX TPH Gasoline Range
24729	10	25087	28429	SAMPLE	W040002742	NWTPH-GX TPH Gasoline Range
24708	1	25064	28432	BLANK		Uranium Isotopics by AEA
24708	2	25064	28432	LCS		Uranium Isotopics by AEA
24708	3	25064	28432	DUP	W040002627	Uranium Isotopics by AEA
24708	7	25064	28432	SAMPLE	W040002742	Uranium Isotopics by AEA
24700	1	25056	28433	BLANK		Plutonium Isotopics by AEA
24700	2	25056	28433	LCS		Plutonium Isotopics by AEA
24700	3	25056	28433	DUP	W040002627	Plutonium Isotopics by AEA
24700	7	25056	28433	SAMPLE	W040002742	Plutonium Isotopics by AEA
24701	1	25057	28434	BLANK		Americium by AEA
24701	2	25057	28434	LCS		Americium by AEA
24701	3	25057	28434	DUP	W040002627	Americium by AEA
24701	7	25057	28434	SAMPLE	W040002742	Americium by AEA
			28440	BLANK		VOA Ground Water Protection
			28440	LCS		VOA Ground Water Protection
			28440	MS	W040002627	VOA Ground Water Protection
			28440	MSD	W040002627	VOA Ground Water Protection
			28440	SPK-RPD	W040002627	VOA Ground Water Protection
			28440	SAMPLE	W040002742	VOA Ground Water Protection
			28440	SURR	W040002742	VOA Ground Water Protection

M8141-SLF-05-056

ATTACHMENT 3

SAMPLE RECEIPT INFORMATION

Consisting of 4 pages
Including cover page

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

1/17/05

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 119153/ES10
Group#: 20042466
Project#: F03-006
Proj Mgr: STEVE TRENT A0-21
Phone: 373-5869

The following samples were received from you on 12/16/04. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample#	Sample Id	Matrix	Sample Date
	Tests Scheduled		
W040002742	B1B581	Solid, or handle as if solid	12/16/04
	TRENT		
	@2008 @AEA-30 @AEA-31 @AEA-32 @AEA-33		
	@GEA-GPP @IC-30 @SR89_90 @SVOCGPP @TPHD-WA @TPHG		
	@VOA-GPP CN-02 NH4-IC PERSOLID PH-30		

Test Acronym Description

Test Acronym	Description
@2008	ICP-2008 MS All possible metal
@AEA-30	Plutonium Isotopics by AEA
@AEA-31	Americium by AEA
@AEA-32	Uranium Isotopics by AEA
@AEA-33	Neptunium by AEA
@GEA-GPP	Gamma Energy Analysis-grd H2O
@IC-30	Anions by Ion Chromatography
@SR89_90	Strontium 89/90
@SVOCGPP	SW-846 8270B Semi-Vols
@TPHD-WA	WTPH-D TPH Diesel Range (Wa)
@TPHG-WA	NWTPH-GX TPH Gasoline Range
@VOA-GPP	VOA Ground Water Protection
CN-02	Cyanide by Midi/Spectrophotom
NH4-IC	Ammonia (N) by IC
PERSOLID	Percent Solids
PH-30	pH Soil and Waste Measurement

Fluor Hanford Inc.

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F03-006-273 PAGE 1 OF 2

COLLECTOR: Pope/Pfister/Wiberg/Tyra 1/17	COMPANY CONTACT: TRENT, SJ	TELEPHONE NO.: 373-5869	PROJECT COORDINATOR: TRENT, SJ
PRICE CODE: 8N	DATA TURNAROUND: 45 Days / 45 Days	AIR QUALITY: ☐	
SAMPLING LOCATION: 200-PW2/216-S-7, 180-182.5 ft	PROJECT DESIGNATION: 200-PW-2/200-PW-4 OU - Borehole Soil Sampling	SAF NO.: F03-006	
ICE CHEST NO.: AFS04059	FIELD LOGBOOK NO.: HNF-N-336 1	COA: 119153ES10	METHOD OF SHIPMENT: Government Vehicle
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A

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

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE
RADIOACTIVE TIE TO: B1B593
200124166

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS
				Cool 4C	aGs*	3	40mL	SEE ITEM (1) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	120mL	SEE ITEM (2) IN SPECIAL INSTRUCTIONS
				Cool 4C	aGs*	3	40mL	TPH-Gasoline Range - WTPH-G;
				Cool 4C	P	1	500mL	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	250mL	SEE ITEM (4) IN SPECIAL INSTRUCTIONS
				Cool 4C	aG	1	250mL	SEE ITEM (5) IN SPECIAL INSTRUCTIONS
B1B581	SOIL	12/16/04	1110	X	X	X	X	X
W09 0002742								

CHAIN OF POSSESSION	SIGN/ PRINT NAMES	SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: Kevin Hughes / Brad Dyke DATE/TIME: 12-16-04 1235	RECEIVED BY/STORED IN: VB DATE/TIME: 12/16/04 1235	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: DATE/TIME:	RECEIVED BY/STORED IN: DATE/TIME:	
RELINQUISHED BY/REMOVED FROM: DATE/TIME:	RECEIVED BY/STORED IN: DATE/TIME:	
RELINQUISHED BY/REMOVED FROM: DATE/TIME:	RECEIVED BY/STORED IN: DATE/TIME:	
RELINQUISHED BY/REMOVED FROM: DATE/TIME:	RECEIVED BY/STORED IN: DATE/TIME:	
RELINQUISHED BY/REMOVED FROM: DATE/TIME:	RECEIVED BY/STORED IN: DATE/TIME:	
RELINQUISHED BY/REMOVED FROM: DATE/TIME:	RECEIVED BY/STORED IN: DATE/TIME:	

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

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F03-006-273	PAGE 2 OF 2
COLLECTOR Pope/Pfister/Wiberg/Tyra	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** TRENT, SJ	**PRICE CODE** 8N **AIR QUALITY** ☐	**DATA TURNAROUND** 45 Days
SAMPLING LOCATION 200-PW2/216-S-7, 180-182.5 ft	**PROJECT DESIGNATION** 200-PW-2/200-PW-4 OU - Borehole Soil Sampling		**SAF NO.** F03-006		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA** 119153ES10	**METHOD OF SHIPMENT** Government Vehicle		
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The laboratory is to report both kerosene and diesel range compounds from WTPH-D analysis. FH acknowledges that the analytical holding times (less than 14 days) may not be met by the labs due to the radiological characteristics of the samples.

(1)VOA - 8260A (TCL); ~~VOA - 8260A (Add-On) {1-Butanol, 2-Pentanone, Benzyl alcohol, n-Butylbenzene}~~ MJ9-22-04
(2)~~Semi-VOA - 8270A (TCL); Semi-VOA - 8270A (Add-On) {2-Butoxyethanol,~~ Tributyl phosphate} TPH-Diesel Range - WTPH-D; MJ9-22-04 MJ9-22-04
(3)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Gamma Spec - Add-on ~~{Antimony-125, Cesium-134,~~ Radium-226, Radium-228, ~~Tin-126}~~ Isotopic Plutonium; Americium-241; Isotopic Uranium; Neptunium-237; Strontium-89,90 -- Total Sr;
(4)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Nickel, Silver} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Selenium, Uranium} ICP/MS - 200.8 (Hg) {Mercury} ICP Metals - 6010A (Add-on) ~~{Bismuth, Boron}~~ MJ9-22-04
(5)IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate} Cyanide (Total) - 335.2; Cations (IC) - 300.7 {Nitrogen in ammonium} pH (Soil) - 9045;

A-6003-618(03/03)