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Memorandum

M8141-SLF-04-380

To: S. J. Trent A0-21 Date: December 15, 2004

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

cc:

w/Attachments		w/o Attachments	
T. F. Dale	S3-28	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 FOR 200-LW-1/LW-2 CHARACTERIZATION - SOIL – SAMPLE DELIVERY GROUP WSCF20042123 - SAF NUMBER F03-025

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 WSCF20042123, the analytical results (Attachment 2), and the sample receipt information (Attachment 3).

SLF/grf

Attachments 3

RECEIVED
MAY 17 2005
EDMC

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DEC 15 2004

M8141-SLF-04-380

ATTACHMENT 1

NARRATIVE

Consisting of 7 pages
Including cover page

Sample Delivery Group	**WSCF20042123**
Sample Matrix	**Soil**
Sample Visual	**N/A**
SAF Number	**F03-025**
Data Deliverable	**Summary Report**

Introduction

One (1) 200-LW-1/LW-2 Characterization – Soil, 216 T-28, 67.5 – 70', GRP samples (B19193) was received at the WSCF Laboratory on November 11, 2004. The sample was analyzed for the analytes indicated on the three attached copy of the chains 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 three chains 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-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.
- pH by EPA Method 150.1. Analytical work was performed with no deviations to the approved method.

Organic

- Alcohols/Glycols by EPA Method 8015. Analytical work was performed with no deviations to the approved method.
- PCBs by EPA Method 8082B. Analytical work was performed with no deviations to the approved method.
- Semi-VOA by EPA Method 8270B. Analytical work was performed with no deviations to the approved method.
- TPH Diesel Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.
- TPH Gas Range by WDOE Method NWTPH-Dx/Gx. Analytical work was performed with no deviations to the approved method.
- VOA by EPA Method 8260A. Analytical work was performed with no deviations to the approved method.

Radiochemistry

- All RadChem analyses (AEA (Plutonium, Americium, Uranium and Neptunium) and GEA) 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 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# B19187 (SDG# 20042022, SAF# F03-025).

All QC controls are within the established limits.

Anions - The hold times for this analysis was 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: 29-nov-2004.
- Fluoride, Chloride, Phosphate and Sulfate – B19193 sample results were B-flagged; the analyte was less than the reportable detection limit, but greater than or equal to the method detection limit.

All 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 GRP Letter of Instruction. See page 15 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19NJ8 (SDG# 20042117, SAF# F03-018).

All QC controls are within the established limits.

ICP-AES Metals (Bismuth only) – 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 16 for QC details. Analytical Notes:

- Preparation Date: 30-nov-2004.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19187 (SDG# 20042022, SAF# F03-025).
- Bismuth - The analyte detected in the associated preparation Blank sample was evaluated and there was no significant affect on the sample result.

All other 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 17 through 21 for QC details. Analytical Notes:

- Preparation Date: 29-nov-2004.
- Chromium, Mercury and Silver - The analytes detected in the associated preparation Blank sample were evaluated and there was no significant affect on the sample results.

All other QC controls are within the established limits.

Percent Solids – analyzed for organic moisture correction.

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

Organic Comments

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

Alcohol/Glycols - The hold time for this analysis were 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 25 for QC details. Analytical Note:

- Preparation Date: 18-nov-2004.

All QC controls are within the established limits

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 26 through 27 for QC details. Analytical Note:

- Preparation Date: 18-nov-2004.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19194 (SDG# 20042146, SAF# F03-025).

All QC controls are within the established limits.

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 28 through 31 for QC details. Analytical Notes:

- Preparation Date: 18-nov-2004.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19194 (SDG# 20042146, SAF# F03-025).
- Pentachlorophenol – The Laboratory Control Sample, Matrix Spike and Matrix Spike Duplicate recoveries were below established laboratory limits. B1B193 result was below the detection limit and not flagged.

All other QC controls are within the established limits.

TPHD-WA - The hold time for this analysis were 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 32 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19194 (SDG# 20042146, SAF# F03-025).

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis were 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 33 for QC details. Analytical Note:

- Preparation Date: 22-nov-2004.

All 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 34 through 36 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19LJ5 (SDG# 20042126, SAF# F03-018).

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 38 through 42 for QC details. Analytical Notes:

- Americium-241, Neptunium-237, Plutonium-239/240 and Uranium-238 – Duplicate QC samples were analyzed on sample# B1B572 (SDG# 20042127, SAF# F03-006).

- GEA - Duplicate QC samples were analyzed on sample# B19NJ8 (SDG# 20042117, SAF# F03-018).

- Neptunium-237 – Duplicate Relative Percent Difference exceeded established laboratory limit and the Laboratory Control Sample recovery was below established laboratory limits. Sample result was below the detection limit and not flagged, but should be considered suspect.

All other QC controls are within the established limits.

Radiochemical Tracer Percent Recovery			
Sample Number	**Lab Sample ID**	**Isotope**	**Tracer Recovery (Percent)**
BLANK		Am-243	93.9
LCS		Am-243	92.3
B1B572	W040002210	Am-243	85.0
DUPLICATE	W040002210	Am-243	89.6
B19193	W040002206	Am-243	77.9
BLANK		Pu-242	83.0
LCS		Pu-242	87.7
B1B572	W040002210	Pu-242	72.2
DUPLICATE	W040002210	Pu-242	82.1

Radiochemical Tracer Percent Recovery			
Sample Number	**Lab Sample ID**	**Isotope**	**Tracer Recovery (Percent)**
B19193	W040002206	Pu-242	79.2
BLANK		U-232	86.0
LCS		U-232	73.77
B1B572	W040002210	U-232	79.3
DUPLICATE	W040002210	U-232	78.3
B19193	W040002206	U-232	80.8

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-04-380

ATTACHMENT 2

ANALYTICAL RESULTS

Consisting of 43 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#: WSCF20042123
Report Date: 13-dec-2004
Report WGPP/ver. 1.1

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-025: F03-025

Group #: WSCF20042123

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Inorganic													
W040002206	B19193 TRENT	57-12-5	Cyanide	SOIL	LA-695-402	U	< 0.200	mg/kg	1.00	0.20	11/23/04	11/11/04	11/11/04
W040002206	B19193 TRENT	NH4-N	Nitrogen in ammonium	SOIL	LA-503-401		19.2	mg/kg	50.00	0.20	11/24/04	11/11/04	11/11/04
W040002206	B19193 TRENT	TS	Total solids	SOIL	LA-519-412		96.4	%	1.00	0.0	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	PH	pH Measurement	SOIL	LA-212-411		10.0	pH	1.00	0.010	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	16984-48-8	Fluoride	SOIL	LA-533-410	B	5.95	mg/kg	49.00	1.1	11/30/04	11/11/04	11/11/04
W040002206	B19193 TRENT	16887-00-6	Chloride	SOIL	LA-533-410	B	6.49	mg/kg	49.00	2.5	11/30/04	11/11/04	11/11/04
W040002206	B19193 TRENT	NO2-N	Nitrogen in Nitrite	SOIL	LA-533-410	U	< 0.931	mg/kg	49.00	0.93	11/30/04	11/11/04	11/11/04
W040002206	B19193 TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410		11.7	mg/kg	49.00	0.64	11/30/04	11/11/04	11/11/04
W040002206	B19193 TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	B	5.19	mg/kg	49.00	2.6	11/30/04	11/11/04	11/11/04
W040002206	B19193 TRENT	14808-79-8	Sulfate	SOIL	LA-533-410	B	17.0	mg/kg	49.00	4.9	11/30/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7440-69-9	Bismuth	SOIL	LA-505-411		3.91	mg/kg	1.00	0.11	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7440-02-0	Nickel	SOIL	LA-505-412		17.3	mg/kg	10.18	5.1	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7440-22-4	Silver	SOIL	LA-505-412		4.98	mg/kg	10.18	2.0	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 5.09	mg/kg	10.18	5.1	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7440-39-3	Barium	SOIL	LA-505-412		49.8	mg/kg	10.18	2.0	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7440-41-7	Beryllium	SOIL	LA-505-412	U	< 3.05	mg/kg	10.18	3.0	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7440-43-9	Cadmium	SOIL	LA-505-412	U	< 1.02	mg/kg	10.18	1.0	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7440-47-3	Chromium	SOIL	LA-505-412		19.8	mg/kg	10.18	3.0	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7440-50-8	Copper	SOIL	LA-505-412		14.5	mg/kg	10.18	5.1	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7439-92-1	Lead	SOIL	LA-505-412	U	< 12.2	mg/kg	10.18	12	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7439-97-6	Mercury	SOIL	LA-505-412		1.55	mg/kg	10.18	1.0	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7440-61-1	Uranium	SOIL	LA-505-412	U	< 1.02	mg/kg	10.18	1.0	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7440-38-2	Arsenic	SOIL	LA-505-412		6.32	mg/kg	10.18	3.0	12/01/04	11/11/04	11/11/04
W040002206	B19193 TRENT	7782-49-2	Selenium	SOIL	LA-505-412	U	< 3.05	mg/kg	10.18	3.0	12/01/04	11/11/04	11/11/04

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: WSCF20042123
Matrix: SOLID
Test: Ammonia (N) by IC

SAF Number: F03-025
Sample Date: 10/27/04
Receive Date:11/01/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002092									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Ammonia (N) by IC	7664-41-7	8.36e-01	16.867	RPD	11/24/04	0.000	20.000	
MS	Ammonia (N) by IC	7664-41-7	3.98e-01	96.602	% Recov	11/24/04	75.000	125.000	
MSD	Ammonia (N) by IC	7664-41-7	3.87e-01	93.932	% Recov	11/24/04	75.000	125.000	
BATCH QC									
BLANK	Ammonia (N) by IC	7664-41-7	<4.00e-3	n/a	mg/L	11/24/04	0.000	30.000	U
BLANK	Ammonia (N) by IC	7664-41-7	<8.04e-1	n/a	mg/L	11/24/04	0.000	30.000	U
LCS	Ammonia (N) by IC	7664-41-7	7.83e+01	95.255	% Recov	11/24/04	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: Anions by Ion Chromatography

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

Lab ID: W040002206

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
DUP	Chloride	16887-00-6	5.93e+00	9.018	RPD	11/30/04	0.000	20.000	
DUP	Fluoride	16984-48-8	6.49e+00	8.682	RPD	11/30/04	0.000	20.000	
DUP	Nitrogen in Nitrite	NO2-N	<9.50e-1	n/a	RPD	11/30/04	0.000	20.000	U
DUP	Nitrogen in Nitrate	NO3-N	1.22e+01	4.184	RPD	11/30/04	0.000	20.000	
DUP	Phosphate (P) by IC	PO4-P	5.26e+00	1.340	RPD	11/30/04	0.000	20.000	
DUP	Sulfate	14808-79-8	1.76e+01	3.468	RPD	11/30/04	0.000	20.000	
MS	Chloride	16887-00-6	9.76e-01	97.600	% Recov	11/30/04	75.000	125.000	
MS	Fluoride	16984-48-8	4.92e-01	99.595	% Recov	11/30/04	75.000	125.000	
MS	Nitrogen in Nitrite	NO2-N	4.90e-01	98.000	% Recov	11/30/04	75.000	125.000	
MS	Nitrogen in Nitrate	NO3-N	4.56e-01	101.109	% Recov	11/30/04	75.000	125.000	
MS	Phosphate (P) by IC	PO4-P	8.60e-01	88.751	% Recov	11/30/04	75.000	125.000	
MS	Sulfate	14808-79-8	1.92e+00	96.000	% Recov	11/30/04	75.000	125.000	
MSD	Chloride	16887-00-6	9.47e-01	94.700	% Recov	11/30/04	75.000	125.000	
MSD	Fluoride	16984-48-8	4.82e-01	97.571	% Recov	11/30/04	75.000	125.000	
MSD	Nitrogen in Nitrite	NO2-N	4.74e-01	94.800	% Recov	11/30/04	75.000	125.000	
MSD	Nitrogen in Nitrate	NO3-N	4.24e-01	94.013	% Recov	11/30/04	75.000	125.000	
MSD	Phosphate (P) by IC	PO4-P	8.55e-01	88.235	% Recov	11/30/04	75.000	125.000	
MSD	Sulfate	14808-79-8	1.80e+00	90.000	% Recov	11/30/04	75.000	125.000	

BATCH QC

BLANK	Chloride	16887-00-6	<5.20e-2	n/a	mg/L	11/30/04	0.000	300.000	U
BLANK	Chloride	16887-00-6	<5.20e-2	n/a	mg/L	11/30/04	0.000	300.000	U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	11/30/04	0.000	300.000	U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	11/30/04	0.000	300.000	U
BLANK	Nitrogen in Nitrite	NO2-N	<1.90e-2	n/a	mg/L	11/30/04	0.000	300.000	U
BLANK	Nitrogen in Nitrite	NO2-N	<1.90e-2	n/a	mg/L	11/30/04	0.000	300.000	U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: Anions by Ion Chromatography

SAF Number: F03-025
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	11/30/04	0.000	300.000	U
BLANK	Nitrogen in Nitrate	NO3-N	<1.30e-2	n/a	mg/L	11/30/04	0.000	300.000	U
BLANK	Phosphate (P) by IC	PO4-P	<5.40e-2	n/a	mg/L	11/30/04	0.000	300.000	U
BLANK	Phosphate (P) by IC	PO4-P	<5.40e-2	n/a	mg/L	11/30/04	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	11/30/04	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	11/30/04	0.000	300.000	U
LCS	Chloride	16887-00-6	2.05e+02	102.500	% Recov	11/30/04	80.000	120.000	
LCS	Fluoride	16984-48-8	9.00e+01	91.185	% Recov	11/30/04	80.000	120.000	
LCS	Nitrogen in Nitrite	NO2-N	9.57e+01	95.700	% Recov	11/30/04	80.000	120.000	
LCS	Nitrogen in Nitrate	NO3-N	8.94e+01	99.223	% Recov	11/30/04	80.000	120.000	
LCS	Phosphate (P) by IC	PO4-P	1.91e+02	98.555	% Recov	11/30/04	80.000	120.000	
LCS	Sulfate	14808-79-8	3.77e+02	94.486	% Recov	11/30/04	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: Cyanide by Midi/Spectrophotom

SAF Number: F03-025
Sample Date: 11/10/04
Receive Date: 11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002203									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Cyanide by Midi/Spectrophotom	57-12-5	87.4	87.400	% Recov	11/23/04	75.000	125.000	
MSD	Cyanide by Midi/Spectrophotom	57-12-5	84.8	84.800	% Recov	11/23/04	75.000	125.000	
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	84.800	3.020	RPD	11/23/04	0.000	20.000	
BATCH QC									
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	1	1.000	ug/L	11/23/04	-4.000	4.000	
BLNK-PREP	Cyanide by Midi/Spectrophotom	57-12-5	1	1.000	ug/L	11/23/04	-4.000	4.000	
LCS	Cyanide by Midi/Spectrophotom	57-12-5	100.5	100.500	% Recov	11/23/04	85.000	115.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: ICP Metals Analysis, Grd H20 P

SAF Number: F03-025
Sample Date: 10/27/04
Receive Date:11/01/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002092									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Bismuth	7440-69-9	487.382	99.771	% Recov	12/01/04	75.000	125.000	
MSD	Bismuth	7440-69-9	494.482	99.573	% Recov	12/01/04	75.000	125.000	
SPK-RPD	Bismuth	7440-69-9	99.573	0.199	RPD	12/01/04	0.000	20.000	
BATCH QC									
BLANK	Bismuth	7440-69-9	110.7	110.700	ug/L	12/01/04	-1.000	0.068	*
LCS	Bismuth	7440-69-9	207.1	103.550	% Recov	12/01/04	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-025
Sample Date: 11/10/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002203									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Mercury	7439-97-6	20.57	102.850	% Recov	12/01/04	70.000	130.000	
MS	Uranium	7440-61-1	413.2	103.300	% Recov	12/01/04	70.000	130.000	
MSD	Mercury	7439-97-6	19.37	96.850	% Recov	12/01/04	70.000	130.000	
MSD	Uranium	7440-61-1	371.9	92.975	% Recov	12/01/04	70.000	130.000	
Lab ID: W040002206									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Silver	7440-22-4	379.52	94.880	% Recov	12/01/04	70.000	130.000	
MS	Arsenic	7440-38-2	404.58	101.145	% Recov	12/01/04	70.000	130.000	
MS	Barium	7440-39-3	401.72	100.430	% Recov	12/01/04	70.000	130.000	
MS	Beryllium	7440-41-7	378	94.500	% Recov	12/01/04	70.000	130.000	
MS	Cadmium	7440-43-9	403.3	100.825	% Recov	12/01/04	70.000	130.000	
MS	Chromium	7440-47-3	391.39	97.847	% Recov	12/01/04	70.000	130.000	
MS	Copper	7440-50-8	393.63	98.407	% Recov	12/01/04	70.000	130.000	
MS	Mercury	7439-97-6	17.87	89.350	% Recov	12/01/04	70.000	130.000	
MS	Nickel	7440-02-0	398.54	99.635	% Recov	12/01/04	70.000	130.000	
MS	Lead	7439-92-1	392.5	98.125	% Recov	12/01/04	70.000	130.000	
MS	Antimony	7440-36-0	447.7	111.925	% Recov	12/01/04	70.000	130.000	
MS	Selenium	7782-49-2	425.6	106.400	% Recov	12/01/04	70.000	130.000	
MS	Uranium	7440-61-1	391.4	97.850	% Recov	12/01/04	70.000	130.000	
MSD	Silver	7440-22-4	411.92	102.980	% Recov	12/01/04	70.000	130.000	
MSD	Arsenic	7440-38-2	422.68	105.670	% Recov	12/01/04	70.000	130.000	
MSD	Barium	7440-39-3	417.82	104.455	% Recov	12/01/04	70.000	130.000	
MSD	Beryllium	7440-41-7	412	103.000	% Recov	12/01/04	70.000	130.000	
MSD	Cadmium	7440-43-9	438.1	109.525	% Recov	12/01/04	70.000	130.000	
MSD	Chromium	7440-47-3	407.59	101.897	% Recov	12/01/04	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	Copper	7440-50-8	416.23	104.058	% Recov	12/01/04	70.000	130.000	
MSD	Mercury	7439-97-6	19.86	99.300	% Recov	12/01/04	70.000	130.000	
MSD	Nickel	7440-02-0	404.84	101.210	% Recov	12/01/04	70.000	130.000	
MSD	Lead	7439-92-1	423	105.750	% Recov	12/01/04	70.000	130.000	
MSD	Antimony	7440-36-0	481.4	120.350	% Recov	12/01/04	70.000	130.000	
MSD	Selenium	7782-49-2	457	114.250	% Recov	12/01/04	70.000	130.000	
MSD	Uranium	7440-61-1	424.2	106.050	% Recov	12/01/04	70.000	130.000	

Lab ID: W040002209
BATCH QC ASSOCIATED WITH SAMPLE

MS	Mercury	7439-97-6	18.24	91.200	% Recov	12/01/04	70.000	130.000	
MS	Uranium	7440-61-1	401.04	100.260	% Recov	12/01/04	70.000	130.000	
MSD	Mercury	7439-97-6	20.77	103.850	% Recov	12/01/04	70.000	130.000	
MSD	Uranium	7440-61-1	426.24	106.560	% Recov	12/01/04	70.000	130.000	

Lab ID: W040002210
BATCH QC ASSOCIATED WITH SAMPLE

MS	Silver	7440-22-4	410.05	102.513	% Recov	12/01/04	70.000	130.000	
MS	Arsenic	7440-38-2	425.4	106.350	% Recov	12/01/04	70.000	130.000	
MS	Barium	7440-39-3	419.06	104.765	% Recov	12/01/04	70.000	130.000	
MS	Beryllium	7440-41-7	420.6	105.150	% Recov	12/01/04	70.000	130.000	
MS	Cadmium	7440-43-9	437.7	109.425	% Recov	12/01/04	70.000	130.000	
MS	Chromium	7440-47-3	412.95	103.238	% Recov	12/01/04	70.000	130.000	
MS	Copper	7440-50-8	406.17	101.543	% Recov	12/01/04	70.000	130.000	
MS	Mercury	7439-97-6	19.14	95.700	% Recov	12/01/04	70.000	130.000	
MS	Nickel	7440-02-0	408.86	102.215	% Recov	12/01/04	70.000	130.000	
MS	Lead	7439-92-1	427.3	106.825	% Recov	12/01/04	70.000	130.000	
MS	Antimony	7440-36-0	470.5	117.625	% Recov	12/01/04	70.000	130.000	
MS	Selenium	7782-49-2	454.9	113.725	% Recov	12/01/04	70.000	130.000	
MS	Uranium	7440-61-1	424.6	106.150	% Recov	12/01/04	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	Silver	7440-22-4	385.65	96.412	% Recov	12/01/04	70.000	130.000	
MSD	Arsenic	7440-38-2	403.3	100.825	% Recov	12/01/04	70.000	130.000	
MSD	Barium	7440-39-3	398.36	99.590	% Recov	12/01/04	70.000	130.000	
MSD	Beryllium	7440-41-7	392.6	98.150	% Recov	12/01/04	70.000	130.000	
MSD	Cadmium	7440-43-9	416.3	104.075	% Recov	12/01/04	70.000	130.000	
MSD	Chromium	7440-47-3	384.95	96.237	% Recov	12/01/04	70.000	130.000	
MSD	Copper	7440-50-8	386.67	96.668	% Recov	12/01/04	70.000	130.000	
MSD	Mercury	7439-97-6	18.36	91.800	% Recov	12/01/04	70.000	130.000	
MSD	Nickel	7440-02-0	382.46	95.615	% Recov	12/01/04	70.000	130.000	
MSD	Lead	7439-92-1	401.9	100.475	% Recov	12/01/04	70.000	130.000	
MSD	Antimony	7440-36-0	433.5	108.375	% Recov	12/01/04	70.000	130.000	
MSD	Selenium	7782-49-2	429.5	107.375	% Recov	12/01/04	70.000	130.000	
MSD	Uranium	7440-61-1	401.2	100.300	% Recov	12/01/04	70.000	130.000	
SPK-RPD	Silver	7440-22-4	96.412	6.134	RPD	12/01/04	0.000	20.000	
SPK-RPD	Arsenic	7440-38-2	100.825	5.334	RPD	12/01/04	0.000	20.000	
SPK-RPD	Barium	7440-39-3	99.590	5.065	RPD	12/01/04	0.000	20.000	
SPK-RPD	Beryllium	7440-41-7	98.150	6.886	RPD	12/01/04	0.000	20.000	
SPK-RPD	Cadmium	7440-43-9	104.075	5.012	RPD	12/01/04	0.000	20.000	
SPK-RPD	Copper	7440-50-8	96.668	4.919	RPD	12/01/04	0.000	20.000	
SPK-RPD	Mercury	7439-97-6	91.800	4.160	RPD	12/01/04	0.000	20.000	
SPK-RPD	Nickel	7440-02-0	95.615	6.672	RPD	12/01/04	0.000	20.000	
SPK-RPD	Lead	7439-92-1	100.475	6.126	RPD	12/01/04	0.000	20.000	
SPK-RPD	Antimony	7440-36-0	108.375	8.186	RPD	12/01/04	0.000	20.000	
SPK-RPD	Selenium	7782-49-2	107.375	5.744	RPD	12/01/04	0.000	20.000	

Lab ID: W040002415
BATCH QC ASSOCIATED WITH SAMPLE

MS	Chromium	7440-47-3	NA	n/a	% Recov	12/01/04	70.000	130.000
MS	Uranium	7440-61-1	379.3	94.825	% Recov	12/01/04	70.000	130.000
MSD	Chromium	7440-47-3	NA	n/a	% Recov	12/01/04	70.000	130.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-025
Sample Date: 11/18/04
Receive Date:11/24/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	Uranium	7440-61-1	407.1	101.775	% Recov	12/01/04	70.000	130.000	
SPK-RPD	Chromium	7440-47-3	-27.500	217.814	RPD	12/01/04	0.000	20.000	
SPK-RPD	Uranium	7440-61-1	101.775	7.070	RPD	12/01/04	0.000	20.000	
BATCH QC									
BLANK	Silver	7440-22-4	0.27	0.270	ug/g	12/01/04	-0.440	0.440	
BLANK	Arsenic	7440-38-2	<0.3	n/a	ug/g	12/01/04	-0.660	0.660	U
BLANK	Barium	7440-39-3	<0.2	n/a	ug/g	12/01/04	-0.440	0.440	U
BLANK	Beryllium	7440-41-7	<0.3	n/a	ug/g	12/01/04	-0.660	0.660	U
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/g	12/01/04	-0.220	0.220	U
BLANK	Chromium	7440-47-3	0.54	0.540	ug/g	12/01/04	-0.660	0.660	
BLANK	Copper	7440-50-8	<0.5	n/a	ug/g	12/01/04	-1.100	1.100	U
BLANK	Mercury	7439-97-6	0.22	0.220	ug/g	12/01/04	-0.220	0.220	
BLANK	Nickel	7440-02-0	<0.5	n/a	ug/g	12/01/04	-1.100	1.100	U
BLANK	Lead	7439-92-1	<1.2	n/a	ug/g	12/01/04	-2.640	2.640	U
BLANK	Antimony	7440-36-0	<0.5	n/a	ug/g	12/01/04	-1.100	1.100	U
BLANK	Selenium	7782-49-2	<0.3	n/a	ug/g	12/01/04	-0.660	0.660	U
BLANK	Uranium	7440-61-1	<0.1	n/a	ug/g	12/01/04	-0.220	0.220	U
LCS	Silver	7440-22-4	184	154.622	% Recov	12/01/04	110.000	170.000	
LCS	Arsenic	7440-38-2	219.7	112.667	% Recov	12/01/04	82.000	142.000	
LCS	Barium	7440-39-3	417.2	106.429	% Recov	12/01/04	79.000	123.000	
LCS	Beryllium	7440-41-7	87.71	116.481	% Recov	12/01/04	82.000	128.000	
LCS	Cadmium	7440-43-9	82.07	119.636	% Recov	12/01/04	88.000	127.000	
LCS	Chromium	7440-47-3	95.92	110.890	% Recov	12/01/04	50.000	126.000	
LCS	Copper	7440-50-8	143.3	112.835	% Recov	12/01/04	61.000	134.000	
LCS	Mercury	7439-97-6	10.5	111.583	% Recov	12/01/04	75.000	114.000	
LCS	Nickel	7440-02-0	97.27	116.352	% Recov	12/01/04	84.000	125.000	
LCS	Lead	7439-92-1	107.1	113.333	% Recov	12/01/04	87.000	120.000	
LCS	Antimony	7440-36-0	163	118.116	% Recov	12/01/04	61.000	135.000	
LCS	Selenium	7782-49-2	146	128.070	% Recov	12/01/04	83.000	145.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-025
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
LCS	Uranium	7440-61-1	428.1	107.025	% Recov	12/01/04	89.000	107.000	•

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-025: F03-025

Group #: WSCF20042123

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Organic														
W040002206	B19193	TRENT	107-21-1	Ethylene glycol	SOIL	Organics	U	< 5.00e+03	ug/kg	1.00	5.0e+03	11/22/04	11/11/04	11/11/04
W040002206	B19193	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	11/22/04	11/11/04	11/11/04
W040002206	B19193	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 50.0	ug/kg	1.00	50	11/23/04	11/11/04	11/11/04
W040002206	B19193	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 100	ug/kg	1.00	1.0e+02	11/23/04	11/11/04	11/11/04
W040002206	B19193	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 50.0	ug/kg	1.00	50	11/23/04	11/11/04	11/11/04
W040002206	B19193	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 50.0	ug/kg	1.00	50	11/23/04	11/11/04	11/11/04
W040002206	B19193	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 50.0	ug/kg	1.00	50	11/23/04	11/11/04	11/11/04
W040002206	B19193	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427	U	< 50.0	ug/kg	1.00	50	11/23/04	11/11/04	11/11/04
W040002206	B19193	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427	U	< 50.0	ug/kg	1.00	50	11/23/04	11/11/04	11/11/04
W040002206	B19193	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 50.0	ug/kg	1.00	50	11/23/04	11/11/04	11/11/04
W040002206	B19193	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 50.0	ug/kg	1.00	50	11/23/04	11/11/04	11/11/04
W040002206	B19193	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	U	< 670	ug/kg	1.00	6.7e+02	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 320	ug/kg	1.00	3.2e+02	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 300	ug/kg	1.00	3.0e+02	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 310	ug/kg	1.00	3.1e+02	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 69.0	ug/kg	1.00	69	11/29/04	11/11/04	11/11/04
W040002206	B19193	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04

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: F03-025: F03-025

Group #: WSCF20042123

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W040002206	B19193 TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04

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: F03-025: F03-025

Group #: WSCF20042123

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W040002206	B19193 TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 41.0	ug/kg	1.00	41	11/18/04	11/11/04	11/11/04
W040002206	B19193 TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	11/22/04	11/11/04	11/11/04
W040002206	B19193 TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 3.90e+03	ug/kg	1.00	3.9e+03	11/22/04	11/11/04	11/11/04

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: WSCF20042123
Matrix: SOLID
Test: Alcohols, Glycols - 8015

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

Lab ID: W040002206

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
DUP	2-Bromoethanol	540-51-2	8000	22.222	rpd	11/22/04	0.000	25.000	
DUP	Ethylene glycol	107-21-1	<5000	n/a	RPD	11/22/04	0.000	25.000	U
MS	2-Bromoethanol	540-51-2	7300	73.000	% Recov	11/22/04	70.000	125.000	
MS	Ethylene glycol	107-21-1	10700	107.000	% Recov	11/22/04	75.000	125.000	
MSD	2-Bromoethanol	540-51-2	8000	80.000	% Recov	11/22/04	70.000	125.000	
MSD	Ethylene glycol	107-21-1	10900	109.000	% Recov	11/22/04	75.000	125.000	
SPK-RPD	2-Bromoethanol	540-51-2	80.000	9.150	RPD	11/22/04	0.000	20.000	
SPK-RPD	Ethylene glycol	107-21-1	109.000	1.852	RPD	11/22/04	0.000	20.000	

BATCH QC

BLANK	2-Bromoethanol	540-51-2	7300	0.730	ug/Kg	11/22/04	0.000	10.000	
BLANK	Ethylene glycol	107-21-1	<5000	n/a	ug/Kg	11/22/04	0.000	5.000	U
LCS	2-Bromoethanol	540-51-2	7100	71.000	% Recov	11/22/04	70.000	130.000	
LCS	Ethylene glycol	107-21-1	8900	89.000	% Recov	11/22/04	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: PCBs complete list

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002206									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	990.35	99.400	% Recov	11/23/04	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1002.0	101.000	% Recov	11/23/04	50.000	150.000	
Lab ID: W040002212									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Aroclor-1260	11096-82-5	1125.6	97.100	% Recov	11/23/04	75.000	125.000	
MS	Decachlorobiphenyl	2051-24-3	1142.1	98.500	% Recov	11/23/04	50.000	150.000	
MS	Tetrachloro-m-xylene	877-09-8	1139.4	98.300	% Recov	11/23/04	50.000	150.000	
MSD	Aroclor-1260	11096-82-5	1116.5	97.700	% Recov	11/24/04	75.000	125.000	
MSD	Decachlorobiphenyl	2051-24-3	1159.2	101.000	% Recov	11/24/04	50.000	150.000	
MSD	Tetrachloro-m-xylene	877-09-8	1154.4	101.000	% Recov	11/24/04	50.000	150.000	
SPK-RPD	Aroclor-1260	11096-82-5	97.700	0.616	RPD	11/23/04	0.000	25.000	
SPK-RPD	Decachlorobiphenyl	2051-24-3	101.000	2.506	RPD	11/23/04	0.000	20.000	
SPK-RPD	Tetrachloro-m-xylene	877-09-8	101.000	2.709	RPD	11/23/04	0.000	20.000	
BATCH QC									
BLANK	Aroclor-1016	12674-11-2	< 100	n/a	UGKG	11/23/04			U
BLANK	Aroclor-1221	11104-28-2	< 200	n/a	ug/Kg	11/23/04			U
BLANK	Aroclor-1232	11141-16-5	< 100	n/a	ug/Kg	11/23/04			U
BLANK	Aroclor-1242	53469-21-9	< 100	n/a	ug/Kg	11/23/04			U
BLANK	Aroclor-1248	12672-29-6	< 100	n/a	ug/Kg	11/23/04			U
BLANK	Aroclor-1254	11097-69-1	< 100	n/a	ug/Kg	11/23/04			U
BLANK	Aroclor-1260	11096-82-5	< 100	n/a	ug/Kg	11/23/04			U
BLANK	Aroclor-1262	37324-23-5	< 100	n/a	ug/Kg	11/23/04			U
BLANK	Aroclor-1268	11100-14-4	< 100	n/a	ug/Kg	11/23/04			U
BLANK	Decachlorobiphenyl	2051-24-3	1930.4	96.500	% Recov	11/23/04	50.000	150.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: PCBs complete list

SAF Number: F03-025
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Tetrachloro-m-xylene	877-09-8	1914.1	95.700	% Recov	11/23/04	50.000	150.000	
LCS	Aroclor-1260	11096-82-5	1936.5	96.800	% Recov	11/23/04	70.000	130.000	
LCS	Decachlorobiphenyl	2051-24-3	2029.5	101.000	% Recov	11/23/04	50.000	150.000	
LCS	Tetrachloro-m-xylene	877-09-8	1977.3	98.900	% Recov	11/23/04	50.000	150.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002206									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	2-Fluorophenol	367-12-4	3430.6	99.400	% Recov	11/29/04	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	3147.4	91.200	% Recov	11/29/04	56.000	122.000	
SURR	Nitrobenzene-d5	4165-60-0	3091.4	89.600	% Recov	11/29/04	64.000	111.000	
SURR	Phenol-d5	4165-62-2	2933.5	85.000	% Recov	11/29/04	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	2424.4	70.300	% Recov	11/29/04	24.000	122.000	
SURR	Terphenyl-d14 (7Cl)	98904-43-9	3038.6	88.100	% Recov	11/29/04	35.000	150.000	
Lab ID: W040002212									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	1,2,4-Trichlorobenzene	120-82-1	3398.1	86.600	% Recov	11/29/04	46.000	107.000	
MS	1,4-Dichlorobenzene	106-46-7	3472.2	88.400	% Recov	11/29/04	30.000	96.000	
MS	2,4-Dinitrotoluene	121-14-2	3227.9	82.200	% Recov	11/29/04	59.000	106.000	
MS	2-Fluorophenol	367-12-4	3882.0	98.900	% Recov	11/29/04	42.000	105.000	
MS	Acenaphthene	83-32-9	3518.2	89.600	% Recov	11/29/04	61.000	116.000	
MS	4-Chloro-3-methylphenol	59-50-7	5252.6	89.200	% Recov	11/29/04	61.000	106.000	
MS	2-Chlorophenol	95-57-8	4677.4	79.400	% Recov	11/29/04	66.000	106.000	
MS	N-Nitrosodi-n-dipropylamine	621-64-7	3478.9	88.600	% Recov	11/29/04	71.000	114.000	
MS	2-Fluorobiphenyl	321-60-8	3487.2	88.800	% Recov	11/29/04	56.000	122.000	
MS	Phenol	108-95-2	5118.5	86.900	% Recov	11/29/04	42.000	111.000	
MS	Nitrobenzene-d5	4165-60-0	3493.7	89.000	% Recov	11/29/04	64.000	111.000	
MS	4-Nitrophenol	100-02-7	4457.3	75.700	% Recov	11/29/04	32.000	118.000	
MS	Pentachlorophenol	87-86-5	3278.6	55.700	% Recov	11/29/04	62.000	114.000	
MS	Phenol-d5	4165-62-2	3270.9	83.300	% Recov	11/29/04	54.000	120.000	
MS	Pyrene	129-00-0	3307.8	84.300	% Recov	11/29/04	66.000	118.000	
MS	2,4,6-Tribromophenol	118-79-6	3542.2	90.200	% Recov	11/29/04	24.000	122.000	
MS	Terphenyl-d14 (7Cl)	98904-43-9	3340.8	85.100	% Recov	11/29/04	35.000	150.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-025
Sample Date: 11/15/04
Receive Date:11/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	1,2,4-Trichlorobenzene	120-82-1	3436.8	87.300	% Recov	11/29/04	46.000	107.000	
MSD	1,4-Dichlorobenzene	106-46-7	3547.0	90.100	% Recov	11/29/04	30.000	96.000	
MSD	2,4-Dinitrotoluene	121-14-2	3231.0	82.100	% Recov	11/29/04	59.000	106.000	
MSD	2-Fluorophenol	367-12-4	3963.5	101.000	% Recov	11/29/04	42.000	105.000	
MSD	Acenaphthene	83-32-9	3504.4	89.000	% Recov	11/29/04	61.000	116.000	
MSD	4-Chloro-3-methylphenol	59-50-7	5195.2	88.000	% Recov	11/29/04	61.000	106.000	
MSD	2-Chlorophenol	95-57-8	4719.3	79.900	% Recov	11/29/04	66.000	106.000	
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	3599.7	91.500	% Recov	11/29/04	71.000	114.000	
MSD	2-Fluorobiphenyl	321-60-8	3521.3	89.500	% Recov	11/29/04	56.000	122.000	
MSD	Phenol	108-95-2	5089.1	86.200	% Recov	11/29/04	42.000	111.000	
MSD	Nitrobenzene-d5	4165-60-0	3564.8	90.600	% Recov	11/29/04	64.000	111.000	
MSD	4-Nitrophenol	100-02-7	4359.8	73.800	% Recov	11/29/04	32.000	118.000	
MSD	Pentachlorophenol	87-86-5	3204.0	54.300	% Recov	11/29/04	62.000	114.000	
MSD	Phenol-d5	4165-62-2	3213.0	81.600	% Recov	11/29/04	54.000	120.000	
MSD	Pyrene	129-00-0	3413.5	86.700	% Recov	11/29/04	66.000	118.000	
MSD	2,4,6-Tribromophenol	118-79-6	3558.6	90.400	% Recov	11/29/04	24.000	122.000	
MSD	Terphenyl-d14 (7Cl)	98904-43-9	3405.1	86.500	% Recov	11/29/04	35.000	150.000	
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	87.300	0.805	RPD	11/29/04	0.000	20.000	
SPK-RPD	1,4-Dichlorobenzene	106-46-7	90.100	1.905	RPD	11/29/04	0.000	20.000	
SPK-RPD	2,4-Dinitrotoluene	121-14-2	82.100	0.122	RPD	11/29/04	0.000	20.000	
SPK-RPD	2-Fluorophenol	367-12-4	101.000	2.101	RPD	11/29/04	0.000	20.000	
SPK-RPD	Acenaphthene	83-32-9	89.000	0.672	RPD	11/29/04	0.000	20.000	
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	88.000	1.354	RPD	11/29/04	0.000	20.000	
SPK-RPD	2-Chlorophenol	95-57-8	79.900	0.628	RPD	11/29/04	0.000	20.000	
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	91.500	3.220	RPD	11/29/04	0.000	20.000	
SPK-RPD	2-Fluorobiphenyl	321-60-8	89.500	0.785	RPD	11/29/04	0.000	20.000	
SPK-RPD	Phenol	108-95-2	86.200	0.809	RPD	11/29/04	0.000	20.000	
SPK-RPD	Nitrobenzene-d5	4165-60-0	90.600	1.782	RPD	11/29/04	0.000	20.000	
SPK-RPD	4-Nitrophenol	100-02-7	73.800	2.542	RPD	11/29/04	0.000	20.000	
SPK-RPD	Pentachlorophenol	87-86-5	54.300	2.545	RPD	11/29/04	0.000	20.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-025
Sample Date: 11/15/04
Receive Date: 11/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
SPK-RPD	Phenol-d5	4165-62-2	81.600	2.062	RPD	11/29/04	0.000	20.000	
SPK-RPD	Pyrene	129-00-0	86.700	2.807	RPD	11/29/04	0.000	20.000	
SPK-RPD	2,4,6-Tribromophenol	118-79-6	90.400	0.221	RPD	11/29/04	0.000	20.000	
SPK-RPD	Terphenyl-d14 (7Cl)	98904-43-9	86.500	1.632	RPD	11/29/04	0.000	20.000	
BATCH QC									
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 290	n/a	ug/Kg	11/29/04			U
BLANK	1,4-Dichlorobenzene	106-46-7	< 310	n/a	ug/Kg	11/29/04			U
BLANK	2,4-Dinitrotoluene	121-14-2	< 67	n/a	ug/Kg	11/29/04			U
BLANK	2-Fluorophenol	367-12-4	3395.0	102.000	% Recov	11/29/04	42.000	105.000	
BLANK	Acenaphthene	83-32-9	< 67	n/a	ug/Kg	11/29/04			U
BLANK	4-Chloro-3-methylphenol	59-50-7	< 67	n/a	ug/Kg	11/29/04			U
BLANK	2-Chlorophenol	95-57-8	< 150	n/a	ug/Kg	11/29/04			U
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 67	n/a	ug/Kg	11/29/04			U
BLANK	2-Fluorobiphenyl	321-60-8	3148.6	94.500	% Recov	11/29/04	56.000	122.000	
BLANK	Phenol	108-95-2	< 100	n/a	ug/Kg	11/29/04			U
BLANK	Nitrobenzene-d5	4165-60-0	2940.9	88.200	% Recov	11/29/04	64.000	111.000	
BLANK	4-Nitrophenol	100-02-7	< 650	n/a	ug/Kg	11/29/04			U
BLANK	Pentachlorophenol	87-86-5	< 300	n/a	ug/Kg	11/29/04			U
BLANK	Phenol-d5	4165-62-2	2782.7	83.500	% Recov	11/29/04	54.000	120.000	
BLANK	Pyrene	129-00-0	< 67	n/a	ug/Kg	11/29/04			U
BLANK	Tributyl phosphate	126-73-8	< 67	n/a	ug/Kg	11/29/04			U
BLANK	2,4,6-Tribromophenol	118-79-6	2423.0	72.700	% Recov	11/29/04	24.000	122.000	
BLANK	Terphenyl-d14 (7Cl)	98904-43-9	3118.9	93.600	% Recov	11/29/04	35.000	150.000	
LCS	1,2,4-Trichlorobenzene	120-82-1	3082.8	92.500	% Recov	11/29/04	46.000	107.000	
LCS	1,4-Dichlorobenzene	106-46-7	3074.8	92.200	% Recov	11/29/04	42.000	111.000	
LCS	2,4-Dinitrotoluene	121-14-2	2824.4	84.700	% Recov	11/29/04	59.000	106.000	
LCS	2-Fluorophenol	367-12-4	3364.5	101.000	% Recov	11/29/04	50.000	110.000	
LCS	Acenaphthene	83-32-9	3075.0	92.300	% Recov	11/29/04	61.000	116.000	
LCS	4-Chloro-3-methylphenol	59-50-7	4607.6	92.200	% Recov	11/29/04	61.000	106.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-025
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	4101.7	82.000	% Recov	11/29/04	66.000	106.000	
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	3063.0	91.900	% Recov	11/29/04	71.000	114.000	
LCS	2-Fluorobiphenyl	321-60-8	2967.1	89.000	% Recov	11/29/04	58.000	109.000	
LCS	Phenol	108-95-2	4271.1	85.400	% Recov	11/29/04	67.000	105.000	
LCS	Nitrobenzene-d5	4165-60-0	3031.9	91.000	% Recov	11/29/04	60.000	118.000	
LCS	4-Nitrophenol	100-02-7	3498.9	70.000	% Recov	11/29/04	32.000	118.000	
LCS	Pentachlorophenol	87-86-5	2826.7	56.500	% Recov	11/29/04	62.000	114.000	
LCS	Phenol-d5	4165-62-2	2748.6	82.500	% Recov	11/29/04	59.000	116.000	
LCS	Pyrene	129-00-0	2942.0	88.300	% Recov	11/29/04	66.000	118.000	
LCS	2,4,6-Tribromophenol	118-79-6	3038.7	91.200	% Recov	11/29/04	60.000	120.000	
LCS	Terphenyl-d14 (7Cl)	98904-43-9	3109.6	93.300	% Recov	11/29/04	60.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002206									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	ortho-Terphenyl Surr	84-15-1	24164	93.400	% Recov	11/22/04	70.000	130.000	
Lab ID: W040002212									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Kerosene	TPHKEROSENE	145880	98.800	% Recov	11/22/04	70.000	130.000	
MS	ortho-Terphenyl Surr	84-15-1	26614	90.100	% Recov	11/22/04	70.000	130.000	
MSD	Kerosene	TPHKEROSENE	126810	85.900	% Recov	11/22/04	70.000	130.000	
MSD	ortho-Terphenyl Surr	84-15-1	23319	79.000	% Recov	11/22/04	70.000	130.000	
SPK-RPD	ortho-Terphenyl Surr	84-15-1	79.000	13.128	RPD	11/22/04	0.000	20.000	
BATCH QC									
BLANK	Kerosene	TPHKEROSENE	< 3800	n/a	ug/Kg	11/22/04			U
BLANK	ortho-Terphenyl Surr	84-15-1	19016	76.100	% Recov	11/22/04	70.000	130.000	
BLANK	Total Pet. Hydrocarbons Diesel	TPHDIESEL	< 3800	n/a	ug/Kg	11/22/04			U
LCS	ortho-Terphenyl Surr	84-15-1	23480	93.900	% Recov	11/22/04	70.000	130.000	
LCS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	123360	98.700	% Recov	11/22/04	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: NWTPH-GX TPH Gasoline Range

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002206									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<100	n/a	RPD	11/22/04	0.000	20.000	U
MS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	3600	100.000	% Recov	11/22/04	50.000	150.000	
MSD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	3600	100.000	% Recov	11/22/04	50.000	150.000	
SPK-RPD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	100.000	0.000	RPD	11/22/04	0.000	20.000	
BATCH QC									
BLANK	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<100	n/a	mg/L	11/22/04	0.000	300.000	U
LCS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	3900	113.043	% Recov	11/22/04	85.000	115.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002206									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	48.680	97.400	% Recov	11/18/04	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	59.400	119.000	% Recov	11/18/04	80.000	134.000	
SURR	Toluene-d8	2037-26-5	53.070	106.000	% Recov	11/18/04	80.000	126.000	
Lab ID: W040002209									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	1,1-Dichloroethene	75-35-4	58.050	102.000	% Recov	11/18/04	63.000	117.000	
MS	Benzene	71-43-2	63.240	111.000	% Recov	11/18/04	75.000	129.000	
MS	4-Bromofluorobenzene	460-00-4	110.10	96.300	% Recov	11/18/04	84.000	116.000	
MS	Chlorobenzene	108-90-7	64.840	113.000	% Recov	11/18/04	79.000	119.000	
MS	1,2-Dichloroethane-d4	17060-07-0	132.90	116.000	% Recov	11/18/04	82.000	136.000	
MS	Toluene-d8	2037-26-5	121.90	107.000	% Recov	11/18/04	89.000	119.000	
MS	Toluene	108-88-3	61.540	108.000	% Recov	11/18/04	76.000	120.000	
MS	Trichloroethene	79-01-6	60.090	105.000	% Recov	11/18/04	73.000	123.000	
MSD	1,1-Dichloroethene	75-35-4	61.620	108.000	% Recov	11/18/04	63.000	117.000	
MSD	Benzene	71-43-2	66.650	117.000	% Recov	11/18/04	75.000	129.000	
MSD	4-Bromofluorobenzene	460-00-4	107.80	94.300	% Recov	11/18/04	84.000	116.000	
MSD	Chlorobenzene	108-90-7	67.280	118.000	% Recov	11/18/04	79.000	119.000	
MSD	1,2-Dichloroethane-d4	17060-07-0	134.50	118.000	% Recov	11/18/04	82.000	136.000	
MSD	Toluene-d8	2037-26-5	122.10	107.000	% Recov	11/18/04	89.000	119.000	
MSD	Toluene	108-88-3	64.850	113.000	% Recov	11/18/04	76.000	120.000	
MSD	Trichloroethene	79-01-6	61.280	107.000	% Recov	11/18/04	73.000	123.000	
SPK-RPD	1,1-Dichloroethene	75-35-4	108.000	5.714	RPD	11/18/04	0.000	25.000	
SPK-RPD	Benzene	71-43-2	117.000	5.263	RPD	11/18/04	0.000	25.000	
SPK-RPD	4-Bromofluorobenzene	460-00-4	94.300	2.099	RPD	11/18/04	0.000	25.000	
SPK-RPD	Chlorobenzene	108-90-7	118.000	4.329	RPD	11/18/04	0.000	25.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
SPK-RPD	1,2-Dichloroethane-d4	17060-07-0	118.000	1.709	RPD	11/18/04	0.000	25.000	
SPK-RPD	Toluene-d8	2037-26-5	107.000	0.000	RPD	11/18/04	0.000	25.000	
SPK-RPD	Toluene	108-88-3	113.000	4.525	RPD	11/18/04	0.000	25.000	
SPK-RPD	Trichloroethene	79-01-6	107.000	1.887	RPD	11/18/04	0.000	25.000	
BATCH QC									
BLANK	1,1-Dichloroethane	75-34-3	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	1,1,1-Trichloroethane	71-55-6	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	1,1,2-Trichloroethane	79-00-5	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	1,1-Dichloroethene	75-35-4	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	1,2-Dichloroethane	107-06-2	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	1-Butanol	71-36-3	< 40	n/a	ug/Kg	11/18/04			U
BLANK	2-Hexanone	591-78-6	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	4-Methyl-2-Pentanone	108-10-1	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Acetone	67-64-1	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Bromodichloromethane	75-27-4	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Benzene	71-43-2	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	4-Bromofluorobenzene	460-00-4	50.140	100.000	% Recov	11/18/04	71.000	125.000	
BLANK	Bromoform	75-25-2	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Carbon disulfide	75-15-0	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Carbon tetrachloride	56-23-5	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Dibromochloromethane	124-48-1	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Chloroform	67-66-3	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Chlorobenzene	108-90-7	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Chloroethane	75-00-3	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	1,2-Dichloroethane-d4	17060-07-0	59.360	119.000	% Recov	11/18/04	80.000	134.000	
BLANK	1,2-Dichloropropane	78-87-5	< 2.0	n/a	ug/Kg	11/18/04			U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F03-025
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Ethylbenzene	100-41-4	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Bromomethane	74-83-9	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Chloromethane	74-87-3	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	2-Butanone	78-93-3	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Methylenechloride	75-09-2	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Tetrachloroethene	127-18-4	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Styrene	100-42-5	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Xylenes (total)	1330-20-7	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Toluene-d8	2037-26-5	52.740	105.000	% Recov	11/18/04	80.000	126.000	
BLANK	Toluene	108-88-3	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Trichloroethene	79-01-6	< 2.0	n/a	ug/Kg	11/18/04			U
BLANK	Vinyl chloride	75-01-4	< 2.0	n/a	ug/Kg	11/18/04			U
LCS	1,1-Dichloroethene	75-35-4	24.880	99.500	% Recov	11/18/04	70.000	130.000	
LCS	Benzene	71-43-2	28.660	115.000	% Recov	11/18/04	70.000	130.000	
LCS	4-Bromofluorobenzene	460-00-4	48.700	97.400	% Recov	11/18/04	71.000	125.000	
LCS	Chlorobenzene	108-90-7	28.380	114.000	% Recov	11/18/04	70.000	130.000	
LCS	1,2-Dichloroethane-d4	17060-07-0	59.280	119.000	% Recov	11/18/04	80.000	134.000	
LCS	Toluene-d8	2037-26-5	52.950	106.000	% Recov	11/18/04	80.000	126.000	
LCS	Toluene	108-88-3	28.100	112.000	% Recov	11/18/04	70.000	130.000	
LCS	Trichloroethene	79-01-6	26.370	105.000	% Recov	11/18/04	70.000	130.000	

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-025: F03-025

Group #: WSCF20042123

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Radiochemistry														
W040002206	B19193	TRENT	14596-10-2	Americium-241	SOIL	LA-508-471		3.60	pCi/g	1.00	0.060	12/08/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.94	pCi/g	1.00	0.0	12/08/04	11/11/04	11/11/04
W040002206	B19193	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481		0.134	pCi/g	1.00	0.014	11/16/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.025	pCi/g	1.00	0.0	11/16/04	11/11/04	11/11/04
W040002206	B19193	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481		0.845	pCi/g	1.00	0.023	11/16/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.14	pCi/g	1.00	0.0	11/16/04	11/11/04	11/11/04
W040002206	B19193	TRENT	14683-23-9	Europium-152	SOIL	LA-508-481		0.171	pCi/g	1.00	0.059	11/16/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.052	pCi/g	1.00	0.0	11/16/04	11/11/04	11/11/04
W040002206	B19193	TRENT	15585-10-1	Europium-154	SOIL	LA-508-481		8.68	pCi/g	1.00	0.050	11/16/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 1.2	pCi/g	1.00	0.0	11/16/04	11/11/04	11/11/04
W040002206	B19193	TRENT	14391-16-3	Europium-155	SOIL	LA-508-481		3.71	pCi/g	1.00	0.10	11/16/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.51	pCi/g	1.00	0.0	11/16/04	11/11/04	11/11/04
W040002206	B19193	TRENT	13994-20-2	Neptunium-237	SOIL	LA-508-471	U	8.70e-04	pCi/g	1.00	2.4e-03	11/30/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	Np-237 by AEA Total Ctng Error	SOIL	LA-508-471		+- 8.7e-03	pCi/g	1.00	0.0	11/30/04	11/11/04	11/11/04
W040002206	B19193	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471	U	0.0180	pCi/g	1.00	0.058	12/08/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.034	pCi/g	1.00	0.0	12/08/04	11/11/04	11/11/04
W040002206	B19193	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471	U	0.0170	pCi/g	1.00	0.022	12/08/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+- 0.016	pCi/g	1.00	0.0	12/08/04	11/11/04	11/11/04
W040002206	B19193	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471		0.130	pCi/g	1.00	0.025	12/01/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+- 0.048	pCi/g	1.00	0.0	12/01/04	11/11/04	11/11/04
W040002206	B19193	TRENT	15117-96-1	Uranium-235	SOIL	LA-508-471	U	4.60e-03	pCi/g	1.00	6.2e-03	12/01/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+- 6.4e-03	pCi/g	1.00	0.0	12/01/04	11/11/04	11/11/04
W040002206	B19193	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.140	pCi/g	1.00	5.7e-03	12/01/04	11/11/04	11/11/04
W040002206	B19193	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.050	pCi/g	1.00	0.10	12/01/04	11/11/04	11/11/04

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: WSCF20042123
Matrix: SOLID
Test: Americium by AEA

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002210									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Americium-241	14596-10-2	U4.2e-02	n/a	RPD	12/08/04	0.000	20.000	
BATCH QC									
BLANK	Americium-241	14596-10-2	5.2e-02	0.052	pCi/g	12/08/04	-10.000	1000.000	
LCS	Americium-241	14596-10-2	4.5e+01	93.555	% Recov	12/08/04	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: Gamma Energy Analysis-grd H2O

SAF Number: F03-025
Sample Date: 11/10/04
Receive Date:11/11/04

Lab ID: W040002203

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
DUP	Cobalt-60	10198-40-0	U2.57e-03	n/a	RPD	11/17/04	0.000	20.000	
DUP	Cesium-137	10045-97-3	U-6.20e-4	n/a	RPD	11/17/04	0.000	20.000	
DUP	Europium-152	14683-23-9	U1.73e-02	n/a	RPD	11/17/04	0.000	20.000	
DUP	Europium-154	15585-10-1	U-1.38e-2	n/a	RPD	11/17/04	0.000	20.000	
DUP	Europium-155	14391-16-3	U1.07e-02	n/a	RPD	11/17/04	0.000	20.000	

BATCH QC

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Cobalt-60	10198-40-0	U-8.9e-4	n/a	pCi/g	11/16/04	-10.000	1000.000	
BLANK	Cesium-137	10045-97-3	U1.71e-4	n/a	pCi/g	11/16/04	-10.000	1000.000	
BLANK	Europium-152	14683-23-9	U5.28e-3	n/a	pCi/g	11/16/04	-10.000	1000.000	
BLANK	Europium-154	15585-10-1	U4.55e-3	n/a	pCi/g	11/16/04	-10.000	1000.000	
BLANK	Europium-155	14391-16-3	U-6.4e-3	n/a	pCi/g	11/16/04	-10.000	1000.000	
LCS	Cobalt-60	10198-40-0	4411.0	105.274	% Recov	11/17/04	80.000	120.000	
LCS	Cesium-137	10045-97-3	3837.0	107.179	% Recov	11/17/04	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: Neptunium by AEA

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

Lab ID: W040002210

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
DUP	Neptunium-237	13994-20-2	-8.5e-04	818.182	RPD	11/30/04	0.000	25.000	*

BATCH QC

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Neptunium-237	13994-20-2	2.7e-03	0.003	pCi/g	11/30/04	-10.000	1000.000	
LCS	Neptunium-237	13994-20-2	55.3	55.300	% Recov	11/30/04	75.000	125.000	*

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: Plutonium Isotopics by AEA

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002210									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Pu-239/240 by AEA	PU-239/240	U8.0e-03	n/a	RPD	12/08/04	0.000	20.000	
BATCH QC									
BLANK	Pu-239/240 by AEA	PU-239/240	U3.6e-03	n/a	pCi/g	12/08/04	-10.000	1000.000	
LCS	Pu-239/240 by AEA	PU-239/240	4.9e+01	99.593	% Recov	12/08/04	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042123
Matrix: SOLID
Test: Uranium Isotopics by AEA

SAF Number: F03-025
Sample Date: 11/11/04
Receive Date:11/11/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002210									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Uranium-238	U-238	1.7e-01	0.000	RPD	12/01/04	0.000	20.000	
BATCH QC									
BLANK	Uranium-238	24678-82-8	U1.8e-03	n/a	pCi/g	12/01/04	-10.000	1000.000	
LCS	Uranium-238	24678-82-8	8.4e+01	110.789	% Recov	12/01/04	75.000	125.000	

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F03-025

Group #: WSCF20042123

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		W040002206/Am241 = 3.4 pCi/Gram with from GEA test. Np237 batch dup is below detection. Due to low LCS recovery, the sample result is an estimated value.lmh ICP-MS: Silver,Chromium and Mercury detected in preparation blank above MDL (units in ug/L); no flags ICP-AES: Blank contained .111ug/G, all results >than MDL and less than 20 times the blank value will receive "C" flag. ldl ORGANICS: Sample concentrations are corrected for moisture and reported on dry weight basis. gar SVOA: Pentachlorophenol is out low in the LCS, MS, and MSD. den

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 F03-025 :F03-025

Group #: WSCF20042123

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	SN-126 Count Error				14	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error				15	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	AM-241 Count Error				16	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error				17	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	TL-208 Count Error				18	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error				19	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	RA-226 Count Error				19	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	AC-228 Count Error				23	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	RA-228 Count Error				23	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	BI-212 Count Error				39	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	U-235 Count Error				39	%
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	U-235				0.091	pCi/g
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	TL-208				0.23	pCi/g
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	BI-212				0.36	pCi/g
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	BI-214				0.38	pCi/g
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	RA-226				0.38	pCi/g
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	PB-214				0.40	pCi/g
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	AC-228				0.51	pCi/g
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	RA-228				0.51	pCi/g
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	PB-212				0.53	pCi/g
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	K-40				16	pCi/g
W040002206	B19193	TRENT	Gamma Energy Analysis-grd H2O	SN-126				2.4	pCi/g
W040002206	B19193	TRENT	SW-846 8270B Semi-Vols	SMP 10.963 Diethylphthalate	84-66-2	10.96338		4.1e+02	ug/kg
W040002206	B19193	TRENT	SW-846 8270B Semi-Vols	SMP 14.754 Di-n-butylphthalate	84-74-2	14.75453		1.7e+03	ug/kg

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F03-025 :F03-025

Group #: WSCF20042123

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units

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-505-411	LA-505-411: ELEMENTAL ANALYSIS BY INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPE	
	EPA SW-846 6010B	INDUCTIVELY COUPLED PLASMA-ATOMIC EMISSION SPECTROMETRY
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-508-471	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-523-427	LA-523-427: POLYCHLORINATED BIPHENYLS (PCBs) BY GAS CHROMATOGRAPHY	
	EPA SW-846 3510C	SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION
	EPA SW-846 3545	PRESSURIZED FLUID EXTRACTION (PFE)

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.

WSCF
METHOD REFERENCES REPORT

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	EPA SW-846 3665A	SULFURIC ACID/PERMANGANATE CLEANUP
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8082	POLYCHLORINATED BIPHENYLS (PCBs) BY GAS CHROMATOGRAPHY
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
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
Organics	Organics - Alcohols, Glycols	

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.

WSCF
METHOD REFERENCES REPORT

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EPA SW-846 8015B	Nonhalogenated Organics Using GC/FID

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 13-dec-2004 06:45:39

W13q Worklist/Batch/QC Report for Group# WSCF20042123

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
				SAMPLE	W040002206	Percent Solids
				SAMPLE	W040002206	pH Soil and Waste Measurement
24057	1	24414	27735	BLANK		Gamma Energy Analysis-grd H2O
24057	2	24414	27735	LCS		Gamma Energy Analysis-grd H2O
24057	3	24414	27735	DUP	W040002203	Gamma Energy Analysis-grd H2O
24057	5	24414	27735	SAMPLE	W040002206	Gamma Energy Analysis-grd H2O
			27831	BLANK		Cyanide by Midi/Spectrophotom
			27831	BLNK-PREP		Cyanide by Midi/Spectrophotom
			27831	LCS		Cyanide by Midi/Spectrophotom
			27831	MS	W040002203	Cyanide by Midi/Spectrophotom
			27831	MSD	W040002203	Cyanide by Midi/Spectrophotom
			27831	SPK-RPD	W040002203	Cyanide by Midi/Spectrophotom
			27831	SAMPLE	W040002206	Cyanide by Midi/Spectrophotom
24177	2	24533	27843	BLANK		Ammonia (N) by IC
24177	16	24533	27843	BLANK		Ammonia (N) by IC
24177	3	24533	27843	LCS		Ammonia (N) by IC
24177	5	24533	27843	DUP	W040002092	Ammonia (N) by IC
24177	6	24533	27843	MS	W040002092	Ammonia (N) by IC
24177	7	24533	27843	MSD	W040002092	Ammonia (N) by IC
24177	11	24533	27843	SAMPLE	W040002206	Ammonia (N) by IC
24176	1	24532	27856	BLANK		Neptunium by AEA
24176	2	24532	27856	LCS		Neptunium by AEA
24176	4	24532	27856	SAMPLE	W040002206	Neptunium by AEA
24176	3	24532	27856	DUP	W040002210	Neptunium by AEA
24201	2	24558	27863	BLANK		Anions by Ion Chromatography
24201	11	24558	27863	BLANK		Anions by Ion Chromatography
24201	3	24558	27863	LCS		Anions by Ion Chromatography
24201	5	24558	27863	DUP	W040002206	Anions by Ion Chromatography
24201	6	24558	27863	MS	W040002206	Anions by Ion Chromatography
24201	7	24558	27863	MSD	W040002206	Anions by Ion Chromatography
24201	4	24558	27863	SAMPLE	W040002206	Anions by Ion Chromatography
24245	1	24602	27893	BLANK		ICP-2008 MS All possible metal
24245	2	24602	27893	LCS		ICP-2008 MS All possible metal
24245	4	24602	27893	MS	W040002203	ICP-2008 MS All possible metal
24245	5	24602	27893	MSD	W040002203	ICP-2008 MS All possible metal
24245	7	24602	27893	MS	W040002206	ICP-2008 MS All possible metal
24245	8	24602	27893	MSD	W040002206	ICP-2008 MS All possible metal
24245	6	24602	27893	SAMPLE	W040002206	ICP-2008 MS All possible metal
24245	10	24602	27893	MS	W040002209	ICP-2008 MS All possible metal
24245	11	24602	27893	MSD	W040002209	ICP-2008 MS All possible metal
24245	13	24602	27893	MS	W040002210	ICP-2008 MS All possible metal
24245	14	24602	27893	MSD	W040002210	ICP-2008 MS All possible metal
24245	0	24602	27893	SPK-RPD	W040002210	ICP-2008 MS All possible metal
24245	16	24602	27893	MS	W040002415	ICP-2008 MS All possible metal
24245	17	24602	27893	MSD	W040002415	ICP-2008 MS All possible metal
24245	0	24602	27893	SPK-RPD	W040002415	ICP-2008 MS All possible metal
			27896	BLANK		SW-846 8270B Semi-Vols

			27896	LCS		SW-846 8270B Semi-Vols
			27896	SAMPLE	W040002206	SW-846 8270B Semi-Vols
			27896	SURR	W040002206	SW-846 8270B Semi-Vols
			27896	MS	W040002212	SW-846 8270B Semi-Vols
			27896	MSD	W040002212	SW-846 8270B Semi-Vols
			27896	SPK-RPD	W040002212	SW-846 8270B Semi-Vols
24248	1	24605	27908	BLANK		ICP Metals Analysis, Grd H20 P
24248	2	24605	27908	LCS		ICP Metals Analysis, Grd H20 P
24248	4	24605	27908	MS	W040002092	ICP Metals Analysis, Grd H20 P
24248	5	24605	27908	MSD	W040002092	ICP Metals Analysis, Grd H20 P
24248	0	24605	27908	SPK-RPD	W040002092	ICP Metals Analysis, Grd H20 P
24248	9	24605	27908	SAMPLE	W040002206	ICP Metals Analysis, Grd H20 P
24206	1	24561	27924	BLANK		Uranium Isotopics by AEA
24206	2	24561	27924	LCS		Uranium Isotopics by AEA
24206	3	24561	27924	SAMPLE	W040002206	Uranium Isotopics by AEA
24206	4	24561	27924	DUP	W040002210	Uranium Isotopics by AEA
			27934	BLANK		WTPH-D TPH Diesel Range (Wa)
			27934	LCS		WTPH-D TPH Diesel Range (Wa)
			27934	SAMPLE	W040002206	WTPH-D TPH Diesel Range (Wa)
			27934	SURR	W040002206	WTPH-D TPH Diesel Range (Wa)
			27934	MS	W040002212	WTPH-D TPH Diesel Range (Wa)
			27934	MSD	W040002212	WTPH-D TPH Diesel Range (Wa)
			27934	SPK-RPD	W040002212	WTPH-D TPH Diesel Range (Wa)
			27943	BLANK		PCBs complete list
			27943	LCS		PCBs complete list
			27943	SAMPLE	W040002206	PCBs complete list
			27943	SURR	W040002206	PCBs complete list
			27943	MS	W040002212	PCBs complete list
			27943	MSD	W040002212	PCBs complete list
			27943	SPK-RPD	W040002212	PCBs complete list
			27962	BLANK		VOA Ground Water Protection
			27962	LCS		VOA Ground Water Protection
			27962	SAMPLE	W040002206	VOA Ground Water Protection
			27962	SURR	W040002206	VOA Ground Water Protection
			27962	MS	W040002209	VOA Ground Water Protection
			27962	MSD	W040002209	VOA Ground Water Protection
			27962	SPK-RPD	W040002209	VOA Ground Water Protection
24232	1	24590	27992	BLANK		Plutonium Isotopics by AEA
24232	2	24590	27992	LCS		Plutonium Isotopics by AEA
24232	3	24590	27992	SAMPLE	W040002206	Plutonium Isotopics by AEA
24232	4	24590	27992	DUP	W040002210	Plutonium Isotopics by AEA
24236	1	24592	27993	BLANK		Americium by AEA
24236	2	24592	27993	LCS		Americium by AEA
24236	4	24592	27993	SAMPLE	W040002206	Americium by AEA
24236	3	24592	27993	DUP	W040002210	Americium by AEA
24347	1	24705	28023	BLANK		Alcohols, Glycols - 8015
24347	2	24705	28023	LCS		Alcohols, Glycols - 8015
24347	4	24705	28023	DUP	W040002206	Alcohols, Glycols - 8015
24347	5	24705	28023	MS	W040002206	Alcohols, Glycols - 8015
24347	6	24705	28023	MSD	W040002206	Alcohols, Glycols - 8015
24347	3	24705	28023	SAMPLE	W040002206	Alcohols, Glycols - 8015
24347	6	24705	28023	SPK-RPD	W040002206	Alcohols, Glycols - 8015

24351	1	24709	28026	BLANK		NWTPH-GX TPH Gasoline Range
24351	2	24709	28026	LCS		NWTPH-GX TPH Gasoline Range
24351	4	24709	28026	DUP	W040002206	NWTPH-GX TPH Gasoline Range
24351	5	24709	28026	MS	W040002206	NWTPH-GX TPH Gasoline Range
24351	6	24709	28026	MSD	W040002206	NWTPH-GX TPH Gasoline Range
24351	7	24709	28026	SAMPLE	W040002206	NWTPH-GX TPH Gasoline Range
24351	6	24709	28026	SPK-RPD	W040002206	NWTPH-GX TPH Gasoline Range

M8141-SLF-04-380

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

12/10/04

ACKNOWLEDGMENT OF SAMPLES RECEIVED

File R3

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 119143/ES20
Group#: 20042123
Project#: F03-025
Proj Mgr: Steve Trent A0-21
Phone: 373-5869

The following samples were received from you on 11/11/04. 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	Tests Scheduled	Matrix	Sample Date
W040002206	B19193	TRENT @2008 @8015GPP @AEA-30 @AEA-31 @AEA-32 @AEA-33 @GEA-GPP @GPP6010 @IC-30 @PCBGPP @SVOC @TPHD-WA @TPHG-WA @VOA-GPP CN-02 NH4-IC PERSO PH-30	Solid, or handle as if solid	11/11/04

Test Acronym Description

Test Acronym	Description
@2008	ICP-2008 MS All possible metal
@8015GPP	Alcohols, Glycols - 8015
@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
@GPP6010	ICP Metals Analysis, Grd H20 P
@IC-30	Anions by Ion Chromatography
@PCBGPP	PCBs complete list
@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. 12/10	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F03-025-061	PAGE 1 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
Pope/Pfister/Wiberg/Tyra	TRENT, STEVE	373-5689	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-T-28; 67.5-70 ft	200-LW-1/LW-2 Characterization - Soil		F03-025		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
		119143ES10	Government Vehicle		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Waste Sampling & Characterization	N/A		N/A		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
N/A

20042123

SPECIAL HANDLING AND/OR STORAGE
~~N/A~~ 7gr 10-31-04
Radiowhse tec to: 8141D1

PRESERVATION	Cool 4C	Cool 4C	Cool 4C	Cool 4C	None	None	None				
TYPE OF CONTAINER	Gs*	aG	aG	Gs*	P	aG	aG				
NO. OF CONTAINER(S)	3	1	1	3	1	1	1				
VOLUME	40mL	120mL	120mL	40mL	500mL	250mL	120mL				
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	SEE ITEM (6) IN SPECIAL INSTRUCTIONS				

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B19193	SOIL	11/11/04	1320	X	X	X	X	X	X	X			
LC041122206													

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
R. Pfister/Pfister	11/11/04 1400	KBC KBC	11/11/04 1400
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

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