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Memorandum

M8141-SLF-05-112

To: S. J. Trent A0-21 Date: March 7, 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 FOR 200-MW-1 CHARACTERIZATION SAMPLING AND ANALYSIS – WASTE MANAGEMENT– SAMPLE DELIVERY GROUP WSCF20050251 – SAF NUMBER F04-019

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 WSCF20050251, the analytical results (Attachment 2), and the sample receipt information (Attachment 3).

SLF/grf

Attachments 3

MAR 2005 RECEIVED

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M8141-SLF-05-112

ATTACHMENT 1

NARRATIVE

Consisting of 7 pages
Including cover page

Sample Delivery Group	**WSCF20050251**
Sample Matrix	**SOIL**
Sample Visual	**N/A**
SAF Number	**F04-019**
Data Deliverable	**Summary Report**

Introduction

One (1) 200-MW-1 Characterization Sampling and Analysis – Waste Management/216-T-33, 12.5' – 15', GRP sample (B1B3R1) was received at the WSCF Laboratory on February 2, 2005. 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 sample receipt 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

- 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.
- PCB by EPA Method 8082. 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. All QC controls are within the established limits.

Anions - The hold times for Nitrite and Nitrate analyses 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: 16-feb-2005.
- Nitrate – The Matrix Spike and Matrix Spike Duplicate recoveries exceeded established laboratory limits. Sample B1B3R1 result was E-flagged (estimate).
- Phosphate - The Matrix Spike and Matrix Spike Duplicate recoveries were below established laboratory limits. Sample B1B3R1 result was E-flagged (estimate).

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 the GRP Letter of Instruction. See page 15 for QC details. Analytical Notes:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19PM5 (SDG# 20050265, SAF# F04-015).

- The Matrix Spike and Matrix Spike Duplicate recoveries were below established laboratory limits. Sample B1B3R1 was below the detection limit and U-flagged.

All QC controls are within the established limits.

ICP-AES Metals (Bismuth and Boron 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: 02-mar-2005.

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19402 (SDG# 20050329, SAF# F03-025).

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 17 through 19 for QC details. Analytical Notes:

- Preparation Date: 08-feb-2005.

- Beryllium, Cadmium, Mercury, Nickel and Selenium - The analytes detected in the associated preparation Blank sample were evaluated and there was no significant effect on the sample B1B3R1 result.

- Antimony – The Laboratory Control Sample recovery exceeded the established laboratory limits. Sample B1B3R1 result was less than the detection limit and not flagged.

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.

PCB – 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 24 for QC details. Analytical Notes:

- Preparation Date: 03-feb-2005.
- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19PM9 (SDG# 20050265, SAF# F04-015).

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 25 through 28 for QC details. Analytical Notes:

- Preparation Date: 03-feb-2005.
- 4-Nitrophenol - sample B1B3R1 result was J flagged; result was less than the lowest calibration standard but greater than the detection limit.

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 29 for QC details. Analytical Notes:

- Preparation Date: 03-feb-2005.
- Sample B1B3R1 contained Extended Motor Oil. The result was reported in the Analytical Result Report section of the report.

All QC controls are within the established limits.

TPHG-WA - The hold time for this analysis was met. A Blank, Duplicate, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per GRP Letter of Instruction. See page 30 for QC details. Analytical Note:

- Preparation Date: 16-feb-2005.

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 31 through 33 for QC details. Analytical Note:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B19PM7 (SDG# 20050265, 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 Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 36 through 41 for QC details. Analytical Notes:

- Radium-226 – The Duplicate Relative Percent Difference exceeded the established laboratory limit due to a non-homogeneous sample. Sample B1B3R1 result was not flagged.

- Neptunium-237 – the Laboratory Control Sample recovery was below established laboratory limits. Sample B1B3R1 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		Pu-242	89.9
LCS		Pu-242	84.8
B1B3R1	W050000288	Pu-242	86.7
DUPLICATE	W050000288	Pu-242	83.6
BLANK		Am-243	74.4
LCS		Am-243	79.6
B1B3R1	W050000288	Am-243	82.8
DUPLICATE	W050000288	Am-243	85.5
BLANK		Sr-85	95.3
LCS		Sr-85	97.7
B1B3R1	W050000288	Sr-85	90.5
DUPLICATE	W050000288	Sr-85	100.3
BLANK		U-232	68.3

Radiochemical Tracer Percent Recovery			
Sample Number	Lab Sample ID	Isotope	Tracer Recovery (Percent)
LCS		U-232	88.5
B1B3R1	W050000288	U-232	78.3
DUPLICATE	W050000288	U-232	77.5

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-05-112

ATTACHMENT 2

ANALYTICAL RESULTS

Consisting of 42 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: S. Fitzgerald

Client Services: P.O. Mex 3/7/2005

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#: WSCF20050251
Report Date: 4-mar-2005
Report WGPP/ver. 1.1
Groundwater Remediation Program

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-019: F04-019

Group #: WSCF20050251

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Inorganic															
W050000288	B1B3R1	GRP	TRENT	57-12-5	Cyanide	SOIL	LA-695-402	U	< 0.200	mg/kg	1.00	0.20	02/22/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	NH4-N	Nitrogen in ammonium	SOIL	LA-503-401		2.83	mg/kg	50.00	0.20	02/18/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	TS	Total solids	SOIL	LA-519-412		95.0	%	1.00	0.0	02/08/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	PH	pH Measurement	SOIL	LA-212-411		7.92	pH	1.00	0.010	02/08/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	16984-48-8	Fluoride	SOIL	LA-533-410		5.99	mg/kg	50.00	1.2	02/16/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	NO2-N	Nitrogen in Nitrite	SOIL	LA-533-410	U	< 0.950	mg/kg	50.00	0.95	02/16/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	NO3-N	Nitrogen in Nitrate	SOIL	LA-533-410	E	57.3	mg/kg	50.00	0.65	02/16/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	PO4-P	Phosphate (P) by IC	SOIL	LA-533-410	E	10.3	mg/kg	50.00	2.7	02/16/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	14808-79-8	Sulfate	SOIL	LA-533-410		159	mg/kg	50.00	5.0	02/16/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7440-42-8	Boron	SOIL	LA-505-411	U	< 2.54	mg/kg	97.71	2.5	03/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7440-69-9	Bismuth	SOIL	LA-505-411	U	< 2.15	mg/kg	97.71	2.2	03/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7440-02-0	Nickel	SOIL	LA-505-412		20.6	mg/kg	9.98	0.21	02/09/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7440-22-4	Silver	SOIL	LA-505-412		0.341	mg/kg	9.98	0.010	02/09/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7440-36-0	Antimony	SOIL	LA-505-412	U	< 7.13	mg/kg	9.98	7.1	02/09/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7440-39-3	Barium	SOIL	LA-505-412		90.1	mg/kg	9.98	0.92	02/09/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7440-41-7	Beryllium	SOIL	LA-505-412		0.390	mg/kg	9.98	0.020	02/09/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7440-43-9	Cadmium	SOIL	LA-505-412		1.63	mg/kg	9.98	0.020	02/09/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7440-47-3	Chromium	SOIL	LA-505-412		33.7	mg/kg	9.98	3.4	02/09/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7440-50-8	Copper	SOIL	LA-505-412		21.0	mg/kg	9.98	0.64	02/09/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7439-92-1	Lead	SOIL	LA-505-412		30.7	mg/kg	9.98	0.26	02/09/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7439-97-6	Mercury	SOIL	LA-505-412		1.03	mg/kg	9.98	0.010	02/09/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7440-38-2	Arsenic	SOIL	LA-505-412		4.63	mg/kg	9.98	2.4	02/09/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	7782-49-2	Selenium	SOIL	LA-505-412		0.933	mg/kg	9.98	0.73	02/09/05	02/02/05	02/02/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

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

DF = Dilution Factor

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

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: Ammonia (N) by IC

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050000288									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Ammonia (N) by IC	7664-41-7	2.61e+00	8.088	RPD	02/18/05	0.000	20.000	
MS	Ammonia (N) by IC	7664-41-7	3.41e-01	82.767	% Recov	02/18/05	75.000	125.000	
MSD	Ammonia (N) by IC	7664-41-7	3.35e-01	81.311	% Recov	02/18/05	75.000	125.000	
BATCH QC									
BLANK	Ammonia (N) by IC	7664-41-7	<4.00e-3	n/a	mg/L	02/18/05	0.000	30.000	U
BLANK	Ammonia (N) by IC	7664-41-7	<4.00e-3	n/a	mg/L	02/18/05	0.000	30.000	U
LCS	Ammonia (N) by IC	7664-41-7	8.49e+01	103.034	% Recov	02/18/05	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: Anions by Ion Chromatography

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

Lab ID: W050000288

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit		RQ
DUP	Fluoride	16984-48-8	5.85e+00	2.365	RPD	02/16/05	0.000	20.000		
DUP	Nitrogen in Nitrite	NO2-N	<9.50e-1	n/a	RPD	02/16/05	0.000	20.000		U
DUP	Nitrogen in Nitrate	NO3-N	6.44e+01	11.668	RPD	02/16/05	0.000	20.000		
DUP	Phosphate (P) by IC	PO4-P	8.69e+00	16.956	RPD	02/16/05	0.000	20.000		
DUP	Sulfate	14808-79-8	1.68e+02	5.505	RPD	02/16/05	0.000	20.000		
MS	Fluoride	16984-48-8	4.71e-01	95.344	% Recov	02/16/05	75.000	125.000		
MS	Nitrogen in Nitrite	NO2-N	5.23e-01	104.600	% Recov	02/16/05	75.000	125.000		
MS	Nitrogen in Nitrate	NO3-N	6.93e-01	153.659	% Recov	02/16/05	75.000	125.000	*	
MS	Phosphate (P) by IC	PO4-P	6.87e-01	70.898	% Recov	02/16/05	75.000	125.000	*	
MS	Sulfate	14808-79-8	2.34e+00	117.000	% Recov	02/16/05	75.000	125.000		
MSD	Fluoride	16984-48-8	4.63e-01	93.725	% Recov	02/16/05	75.000	125.000		
MSD	Nitrogen in Nitrite	NO2-N	4.96e-01	99.200	% Recov	02/16/05	75.000	125.000		
MSD	Nitrogen in Nitrate	NO3-N	6.71e-01	148.780	% Recov	02/16/05	75.000	125.000	*	
MSD	Phosphate (P) by IC	PO4-P	7.20e-01	74.303	% Recov	02/16/05	75.000	125.000	*	
MSD	Sulfate	14808-79-8	2.19e+00	109.500	% Recov	02/16/05	75.000	125.000		

BATCH QC

BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	02/16/05	0.000	300.000		U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	02/16/05	0.000	300.000		U
BLANK	Nitrogen in Nitrite	NO2-N	<1.90e-2	n/a	mg/L	02/16/05	0.000	300.000		U
BLANK	Nitrogen in Nitrite	NO2-N	<1.90e-2	n/a	mg/L	02/16/05	0.000	300.000		U
BLANK	Nitrogen in Nitrate	NO3-N	<1.30e-2	n/a	mg/L	02/16/05	0.000	300.000		U
BLANK	Nitrogen in Nitrate	NO3-N	<1.30e-2	n/a	mg/L	02/16/05	0.000	300.000		U
BLANK	Phosphate (P) by IC	PO4-P	<5.40e-2	n/a	mg/L	02/16/05	0.000	300.000		U
BLANK	Phosphate (P) by IC	PO4-P	<5.40e-2	n/a	mg/L	02/16/05	0.000	300.000		U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	02/16/05	0.000	300.000		U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: Anions by Ion Chromatography

SAF Number: F04-019
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	02/16/05	0.000	300.000	U
LCS	Fluoride	16984-48-8	9.10e+01	92.199	% Recov	02/16/05	80.000	120.000	
LCS	Nitrogen in Nitrite	NO2-N	9.75e+01	97.500	% Recov	02/16/05	80.000	120.000	
LCS	Nitrogen in Nitrate	NO3-N	9.21e+01	102.220	% Recov	02/16/05	80.000	120.000	
LCS	Phosphate (P) by IC	PO4-P	1.89e+02	97.523	% Recov	02/16/05	80.000	120.000	
LCS	Sulfate	14808-79-8	3.80e+02	95.238	% Recov	02/16/05	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: Cyanide by Midi/Spectrophotom

SAF Number: F04-019
Sample Date: 02/03/05
Receive Date:02/03/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit		RQ
Lab ID: W050000296										
BATCH QC ASSOCIATED WITH SAMPLE										
MS	Cyanide by Midi/Spectrophotom	57-12-5	74.1	74.100	% Recov	02/22/05	75.000	125.000	*	
MSD	Cyanide by Midi/Spectrophotom	57-12-5	72.1	72.100	% Recov	02/22/05	75.000	125.000	*	
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	89.100	18.382	RPD	02/22/05	0.000	20.000		
BATCH QC										
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	<1	n/a	ug/L	02/22/05	-4.000	4.000		U
BLNK-PREP	Cyanide by Midi/Spectrophotom	57-12-5	<4	n/a	ug/L	02/22/05	-4.000	4.000		U
LCS	Cyanide by Midi/Spectrophotom	57-12-5	92.7	92.700	% Recov	02/22/05	85.000	115.000		

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: ICP Metals Analysis, Grd H20 P

SAF Number: F04-019
Sample Date: 02/08/05
Receive Date:02/08/05

Lab ID: W050000473

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	Boron	7440-42-8	182	92.857	% Recov	03/02/05	75.000	125.000	
MS	Bismuth	7440-69-9	170	86.735	% Recov	03/02/05	75.000	125.000	
MSD	Boron	7440-42-8	183	92.424	% Recov	03/02/05	75.000	125.000	
MSD	Bismuth	7440-69-9	168	84.848	% Recov	03/02/05	75.000	125.000	
SPK-RPD	Boron	7440-42-8	92.424	0.467	RPD	03/02/05	0.000	20.000	
SPK-RPD	Bismuth	7440-69-9	84.848	2.200	RPD	03/02/05	0.000	20.000	

BATCH QC

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Boron	7440-42-8	<2.6e-2	n/a	ug/L	03/02/05			U
BLANK	Bismuth	7440-69-9	<2.2e-2	n/a	ug/L	03/02/05			U
LCS	Boron	7440-42-8	294	99.324	% Recov	03/02/05	45.000	156.000	
LCS	Bismuth	7440-69-9	190	95.477	% Recov	03/02/05	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

Lab ID: W050000288
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	Silver	7440-22-4	360.6593	90.165	% Recov	02/09/05	70.000	130.000	
MS	Arsenic	7440-38-2	388.572	97.143	% Recov	02/09/05	70.000	130.000	
MS	Barium	7440-39-3	360.63	90.157	% Recov	02/09/05	70.000	130.000	
MS	Beryllium	7440-41-7	359.0104	89.753	% Recov	02/09/05	70.000	130.000	
MS	Cadmium	7440-43-9	388.566	97.141	% Recov	02/09/05	70.000	130.000	
MS	Chromium	7440-47-3	372.26	93.065	% Recov	02/09/05	70.000	130.000	
MS	Copper	7440-50-8	378.19	94.547	% Recov	02/09/05	70.000	130.000	
MS	Mercury	7439-97-6	17.943	89.715	% Recov	02/09/05	70.000	130.000	
MS	Nickel	7440-02-0	376.75	94.188	% Recov	02/09/05	70.000	130.000	
MS	Lead	7439-92-1	364.56	91.140	% Recov	02/09/05	70.000	130.000	
MS	Antimony	7440-36-0	422	105.500	% Recov	02/09/05	70.000	130.000	
MS	Selenium	7782-49-2	408.5674	102.142	% Recov	02/09/05	70.000	130.000	
MSD	Silver	7440-22-4	376.4593	94.115	% Recov	02/09/05	70.000	130.000	
MSD	Arsenic	7440-38-2	412.972	103.243	% Recov	02/09/05	70.000	130.000	
MSD	Barium	7440-39-3	390.23	97.558	% Recov	02/09/05	70.000	130.000	
MSD	Beryllium	7440-41-7	378.7104	94.678	% Recov	02/09/05	70.000	130.000	
MSD	Cadmium	7440-43-9	401.266	100.317	% Recov	02/09/05	70.000	130.000	
MSD	Chromium	7440-47-3	391.06	97.765	% Recov	02/09/05	70.000	130.000	
MSD	Copper	7440-50-8	388.49	97.123	% Recov	02/09/05	70.000	130.000	
MSD	Mercury	7439-97-6	18.763	93.815	% Recov	02/09/05	70.000	130.000	
MSD	Nickel	7440-02-0	394.85	98.713	% Recov	02/09/05	70.000	130.000	
MSD	Lead	7439-92-1	387.26	96.815	% Recov	02/09/05	70.000	130.000	
MSD	Antimony	7440-36-0	432.5	108.125	% Recov	02/09/05	70.000	130.000	
MSD	Selenium	7782-49-2	426.1674	106.542	% Recov	02/09/05	70.000	130.000	
SPK-RPD	Silver	7440-22-4	94.115	4.287	RPD	02/09/05	0.000	20.000	
SPK-RPD	Arsenic	7440-38-2	103.243	6.088	RPD	02/09/05	0.000	20.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
SPK-RPD	Barium	7440-39-3	97.558	7.885	RPD	02/09/05	0.000	20.000	
SPK-RPD	Beryllium	7440-41-7	94.678	5.341	RPD	02/09/05	0.000	20.000	
SPK-RPD	Cadmium	7440-43-9	100.317	3.217	RPD	02/09/05	0.000	20.000	
SPK-RPD	Chromium	7440-47-3	97.765	4.926	RPD	02/09/05	0.000	20.000	
SPK-RPD	Copper	7440-50-8	97.123	2.688	RPD	02/09/05	0.000	20.000	
SPK-RPD	Mercury	7439-97-6	93.815	4.468	RPD	02/09/05	0.000	20.000	
SPK-RPD	Nickel	7440-02-0	98.713	4.692	RPD	02/09/05	0.000	20.000	
SPK-RPD	Lead	7439-92-1	96.815	6.039	RPD	02/09/05	0.000	20.000	
SPK-RPD	Antimony	7440-36-0	108.125	2.458	RPD	02/09/05	0.000	20.000	
SPK-RPD	Selenium	7782-49-2	106.542	4.217	RPD	02/09/05	0.000	20.000	

BATCH QC

BLANK	Silver	7440-22-4	<1e-3	n/a	ug/L	02/09/05			U
BLANK	Arsenic	7440-38-2	<0.24	n/a	ug/L	02/09/05			U
BLANK	Barium	7440-39-3	<9.2e-2	n/a	ug/L	02/09/05			U
BLANK	Beryllium	7440-41-7	4.04e-3	0.004	ug/L	02/09/05			
BLANK	Cadmium	7440-43-9	3.634e-3	0.004	ug/L	02/09/05			
BLANK	Chromium	7440-47-3	<0.336	n/a	ug/L	02/09/05			U
BLANK	Copper	7440-50-8	<6.4e-2	n/a	ug/L	02/09/05			U
BLANK	Mercury	7439-97-6	4.281e-2	0.043	ug/L	02/09/05			
BLANK	Nickel	7440-02-0	0.1098	0.110	ug/L	02/09/05			
BLANK	Lead	7439-92-1	<2.6e-2	n/a	ug/L	02/09/05			U
BLANK	Antimony	7440-36-0	<0.714	n/a	ug/L	02/09/05			U
BLANK	Selenium	7782-49-2	0.1484	0.148	ug/L	02/09/05			
LCS	Silver	7440-22-4	153.5	118.077	% Recov	02/09/05	110.000	170.000	
LCS	Arsenic	7440-38-2	180	111.801	% Recov	02/09/05	82.000	142.000	
LCS	Barium	7440-39-3	264.3	104.881	% Recov	02/09/05	79.000	123.000	
LCS	Beryllium	7440-41-7	99.02	104.894	% Recov	02/09/05	82.000	128.000	
LCS	Cadmium	7440-43-9	139.5	108.984	% Recov	02/09/05	88.000	127.000	
LCS	Chromium	7440-47-3	73.76	106.129	% Recov	02/09/05	50.000	126.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F04-019
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
LCS	Copper	7440-50-8	155.2	104.865	% Recov	02/09/05	61.000	134.000	
LCS	Mercury	7439-97-6	16.55	97.929	% Recov	02/09/05	75.000	114.000	
LCS	Nickel	7440-02-0	157.8	107.347	% Recov	02/09/05	84.000	125.000	
LCS	Lead	7439-92-1	150.5	105.986	% Recov	02/09/05	87.000	120.000	
LCS	Antimony	7440-36-0	131.9	216.585	% Recov	02/09/05	61.000	135.000	*
LCS	Selenium	7782-49-2	73.55	114.564	% Recov	02/09/05	83.000	145.000	

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-019: F04-019

Group #: WSCF20050251

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Organic															
W050000288	B1B3R1	GRP	TRENT	TPHGASOLINE	Total Pet. Hydrocarbons Gas	SOIL	LA-523-443	U	< 250	ug/kg	1.00	2.5e+02	02/16/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	12674-11-2	Aroclor-1016	SOIL	LA-523-427	U	< 510	ug/kg	10.00	5.1e+02	02/22/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	11104-28-2	Aroclor-1221	SOIL	LA-523-427	U	< 1.00e+03	ug/kg	10.00	1.0e+03	02/22/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	11141-16-5	Aroclor-1232	SOIL	LA-523-427	U	< 510	ug/kg	10.00	5.1e+02	02/22/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	53469-21-9	Aroclor-1242	SOIL	LA-523-427	U	< 510	ug/kg	10.00	5.1e+02	02/22/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	12672-29-6	Aroclor-1248	SOIL	LA-523-427	U	< 510	ug/kg	10.00	5.1e+02	02/22/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	11097-69-1	Aroclor-1254	SOIL	LA-523-427		9.40e+03	ug/kg	10.00	5.1e+02	02/22/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	11096-82-5	Aroclor-1260	SOIL	LA-523-427		3.90e+03	ug/kg	10.00	5.1e+02	02/22/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	37324-23-5	Aroclor-1262	SOIL	LA-523-427	U	< 510	ug/kg	10.00	5.1e+02	02/22/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	11100-14-4	Aroclor-1268	SOIL	LA-523-427	U	< 510	ug/kg	10.00	5.1e+02	02/22/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	100-02-7	4-Nitrophenol	SOIL	LA-523-456	J	1.10e+03	ug/kg	1.00	6.8e+02	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	SOIL	LA-523-456	U	< 330	ug/kg	1.00	3.3e+02	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	108-95-2	Phenol	SOIL	LA-523-456	U	< 110	ug/kg	1.00	1.1e+02	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	SOIL	LA-523-456	U	< 310	ug/kg	1.00	3.1e+02	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	SOIL	LA-523-456	U	< 70.0	ug/kg	1.00	70	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	129-00-0	Pyrene	SOIL	LA-523-456	U	< 70.0	ug/kg	1.00	70	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	SOIL	LA-523-456	U	< 70.0	ug/kg	1.00	70	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	SOIL	LA-523-456	U	< 70.0	ug/kg	1.00	70	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	83-32-9	Acenaphthene	SOIL	LA-523-456	U	< 70.0	ug/kg	1.00	70	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	87-86-5	Pentachlorophenol	SOIL	LA-523-456	U	< 320	ug/kg	1.00	3.2e+02	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	95-57-8	2-Chlorophenol	SOIL	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	126-73-8	Tributyl phosphate	SOIL	LA-523-456	U	< 70.0	ug/kg	1.00	70	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	75-35-4	1,1-Dichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	79-01-6	Trichloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	71-43-2	Benzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	108-88-3	Toluene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

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

DF=Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-019: F04-019

Group #: WSCF20050251

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050000288	B1B3R1	GRP	TRENT	108-90-7	Chlorobenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	75-34-3	1,1-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	100-41-4	Ethylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	100-42-5	Styrene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	107-06-2	1,2-Dichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	124-48-1	Dibromochloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	127-18-4	Tetrachloroethene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	1330-20-7	Xylenes (total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	56-23-5	Carbon tetrachloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	591-78-6	2-Hexanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	67-64-1	Acetone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	67-66-3	Chloroform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	74-83-9	Bromomethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	74-87-3	Chloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	75-00-3	Chloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	75-01-4	Vinyl chloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	75-09-2	Methylenechloride	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	75-15-0	Carbon disulfide	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	75-25-2	Bromoform	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	75-27-4	Bromodichloromethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	78-87-5	1,2-Dichloropropane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	78-93-3	2-Butanone	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05

MDL=Minimum Detection Limit
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U - Analyzed for but not detected above limiting criteria.
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DF=Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-019: F04-019

Group #: WSCF20050251

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050000288	B1B3R1	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	71-36-3	1-Butanol	SOIL	LA-523-455	U	< 42.0	ug/kg	1.00	42	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	104-51-8	n-Butylbenzene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	SOIL	LA-523-455	U	< 2.10	ug/kg	1.00	2.1	02/15/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	TPHDIESEL	Total Pet. Hydrocarbons Diesel	SOIL	NWTPH	U	< 6.60e+03	ug/kg	1.00	6.6e+03	02/08/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	TPHKEROSENE	Kerosene	SOIL	NWTPH	U	< 6.60e+03	ug/kg	1.00	6.6e+03	02/08/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	TPH/OILH	Tot Pet H-Carbons Motor Oil	SOIL	NWTPH		5.70e+05	ug/kg	1.00	6.6e+03	02/08/05	02/02/05	02/02/05

MDL=Minimum Detection Limit
RQ=Result Qualifier

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

DF=Dilution Factor

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

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: PCBs complete list

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050000288									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	Decachlorobiphenyl	2051-24-3	1230.9	120.000	% Recov	02/22/05	50.000	150.000	
SURR	Tetrachloro-m-xylene	877-09-8	1301.0	127.000	% Recov	02/22/05	50.000	150.000	
Lab ID: W050000300									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	Aroclor-1254	11097-69-1	1243.4	120.000	% Recov	02/22/05	75.000	125.000	
MS	Decachlorobiphenyl	2051-24-3	1063.4	103.000	% Recov	02/22/05	50.000	150.000	
MS	Tetrachloro-m-xylene	877-09-8	1010.0	97.500	% Recov	02/22/05	50.000	150.000	
MSD	Aroclor-1254	11097-69-1	1208.7	116.630	% Recov	02/22/05	75.000	125.000	
MSD	Decachlorobiphenyl	2051-24-3	1063.7	103.000	% Recov	02/22/05	50.000	150.000	
MSD	Tetrachloro-m-xylene	877-09-8	1021.4	98.600	% Recov	02/22/05	50.000	150.000	
SPK-RPD	Aroclor-1254	11097-69-1	116.630	2.848	RPD	02/22/05	0.000	25.000	
SPK-RPD	Decachlorobiphenyl	2051-24-3	103.000	0.000	RPD	02/16/05	0.000	20.000	
SPK-RPD	Tetrachloro-m-xylene	877-09-8	98.600	1.122	RPD	02/16/05	0.000	20.000	
BATCH QC									
BLANK	Aroclor-1016	12674-11-2	< 50	n/a	UGKG	02/16/05			U
BLANK	Aroclor-1221	11104-28-2	< 100	n/a	ug/Kg	02/16/05			U
BLANK	Aroclor-1232	11141-16-5	< 50	n/a	ug/Kg	02/16/05			U
BLANK	Aroclor-1242	53469-21-9	< 50	n/a	ug/Kg	02/16/05			U
BLANK	Aroclor-1248	12672-29-6	< 50	n/a	ug/Kg	02/16/05			U
BLANK	Aroclor-1254	11097-69-1	< 50	n/a	ug/Kg	02/16/05			U
BLANK	Aroclor-1260	11096-82-5	< 50	n/a	ug/Kg	02/16/05			U
BLANK	Aroclor-1262	37324-23-5	< 50	n/a	ug/Kg	02/16/05			U
BLANK	Aroclor-1268	11100-14-4	< 50	n/a	ug/Kg	02/16/05			U
BLANK	Decachlorobiphenyl	2051-24-3	981.38	98.100	% Recov	02/16/05	50.000	150.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: PCBs complete list

SAF Number: F04-019
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	998.65	99.900	% Recov	02/16/05	50.000	150.000	
LCS	Aroclor-1254	11097-69-1	1142.4	114.000	% Recov	02/16/05	70.000	130.000	
LCS	Decachlorobiphenyl	2051-24-3	1022.8	102.000	% Recov	02/16/05	50.000	150.000	
LCS	Tetrachloro-m-xylene	877-09-8	990.99	99.100	% Recov	02/16/05	50.000	150.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

Lab ID: W050000288
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	3157.0	90.300	% Recov	02/15/05	46.000	107.000	
MS	1,4-Dichlorobenzene	106-46-7	3118.0	89.200	% Recov	02/15/05	30.000	96.000	
MS	2,4-Dinitrotoluene	121-14-2	2689.6	76.900	% Recov	02/15/05	59.000	106.000	
MS	2-Fluorophenol	367-12-4	3132.8	89.600	% Recov	02/15/05	42.000	105.000	
MS	Acenaphthene	83-32-9	3130.4	89.500	% Recov	02/15/05	61.000	116.000	
MS	4-Chloro-3-methylphenol	59-50-7	5051.7	96.300	% Recov	02/15/05	61.000	106.000	
MS	2-Chlorophenol	95-57-8	4658.2	88.800	% Recov	02/15/05	66.000	106.000	
MS	N-Nitrosodi-n-dipropylamine	621-64-7	3499.9	100.000	% Recov	02/15/05	71.000	114.000	
MS	2-Fluorobiphenyl	321-60-8	3250.8	93.000	% Recov	02/15/05	56.000	122.000	
MS	Phenol	108-95-2	5101.0	97.200	% Recov	02/15/05	42.000	111.000	
MS	Nitrobenzene-d5	4165-60-0	3251.0	93.000	% Recov	02/15/05	64.000	111.000	
MS	4-Nitrophenol	100-02-7	4076.3	77.700	% Recov	02/15/05	32.000	118.000	
MS	Pentachlorophenol	87-86-5	4934.6	94.100	% Recov	02/15/05	62.000	114.000	
MS	Phenol-d5	4165-62-2	3350.8	95.800	% Recov	02/15/05	54.000	120.000	
MS	Pyrene	129-00-0	3111.0	89.000	% Recov	02/15/05	66.000	118.000	
MS	2,4,6-Tribromophenol	118-79-6	3377.0	96.600	% Recov	02/15/05	24.000	122.000	
MS	Terphenyl-d14 (7Cl)	98904-43-9	3158.6	90.300	% Recov	02/15/05	35.000	150.000	
MSD	1,2,4-Trichlorobenzene	120-82-1	3253.4	92.700	% Recov	02/15/05	46.000	107.000	
MSD	1,4-Dichlorobenzene	106-46-7	3046.7	86.800	% Recov	02/15/05	30.000	96.000	
MSD	2,4-Dinitrotoluene	121-14-2	2443.5	69.600	% Recov	02/15/05	59.000	106.000	
MSD	2-Fluorophenol	367-12-4	3153.3	89.800	% Recov	02/15/05	42.000	105.000	
MSD	Acenaphthene	83-32-9	3152.1	89.800	% Recov	02/15/05	61.000	116.000	
MSD	4-Chloro-3-methylphenol	59-50-7	5287.2	100.000	% Recov	02/15/05	61.000	106.000	
MSD	2-Chlorophenol	95-57-8	4592.0	87.200	% Recov	02/15/05	66.000	106.000	
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	3503.8	99.800	% Recov	02/15/05	71.000	114.000	
MSD	2-Fluorobiphenyl	321-60-8	3158.2	90.000	% Recov	02/15/05	56.000	122.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	Phenol	108-95-2	5028.5	95.500	% Recov	02/15/05	42.000	111.000	
MSD	Nitrobenzene-d5	4165-60-0	3339.2	95.100	% Recov	02/15/05	64.000	111.000	
MSD	4-Nitrophenol	100-02-7	4042.1	76.800	% Recov	02/15/05	32.000	118.000	
MSD	Pentachlorophenol	87-86-5	4750.5	90.200	% Recov	02/15/05	62.000	114.000	
MSD	Phenol-d5	4165-62-2	3255.8	92.800	% Recov	02/15/05	54.000	120.000	
MSD	Pyrene	129-00-0	3105.7	88.500	% Recov	02/15/05	66.000	118.000	
MSD	2,4,6-Tribromophenol	118-79-6	3378.6	96.300	% Recov	02/15/05	24.000	122.000	
MSD	Terphenyl-d14 (7Cl)	98904-43-9	3175.0	90.500	% Recov	02/15/05	35.000	150.000	
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	92.700	2.623	RPD	02/15/05	0.000	20.000	
SPK-RPD	1,4-Dichlorobenzene	106-46-7	86.800	2.727	RPD	02/15/05	0.000	20.000	
SPK-RPD	2,4-Dinitrotoluene	121-14-2	69.600	9.966	RPD	02/15/05	0.000	20.000	
SPK-RPD	2-Fluorophenol	367-12-4	89.800	0.223	RPD	02/15/05	0.000	20.000	
SPK-RPD	Acenaphthene	83-32-9	89.800	0.335	RPD	02/15/05	0.000	20.000	
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	100.000	3.770	RPD	02/15/05	0.000	20.000	
SPK-RPD	2-Chlorophenol	95-57-8	87.200	1.818	RPD	02/15/05	0.000	20.000	
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	99.800	0.200	RPD	02/15/05	0.000	20.000	
SPK-RPD	2-Fluorobiphenyl	321-60-8	90.000	3.279	RPD	02/15/05	0.000	20.000	
SPK-RPD	Phenol	108-95-2	95.500	1.764	RPD	02/15/05	0.000	20.000	
SPK-RPD	Nitrobenzene-d5	4165-60-0	95.100	2.233	RPD	02/15/05	0.000	20.000	
SPK-RPD	4-Nitrophenol	100-02-7	76.800	1.165	RPD	02/15/05	0.000	20.000	
SPK-RPD	Pentachlorophenol	87-86-5	90.200	4.232	RPD	02/15/05	0.000	20.000	
SPK-RPD	Phenol-d5	4165-62-2	92.800	3.181	RPD	02/15/05	0.000	20.000	
SPK-RPD	Pyrene	129-00-0	88.500	0.563	RPD	02/15/05	0.000	20.000	
SPK-RPD	2,4,6-Tribromophenol	118-79-6	96.300	0.311	RPD	02/15/05	0.000	20.000	
SPK-RPD	Terphenyl-d14 (7Cl)	98904-43-9	90.500	0.221	RPD	02/15/05	0.000	20.000	
SURR	2-Fluorophenol	367-12-4	2684.4	76.700	% Recov	02/15/05	42.000	105.000	
SURR	2-Fluorobiphenyl	321-60-8	2953.8	84.400	% Recov	02/15/05	56.000	122.000	
SURR	Nitrobenzene-d5	4165-60-0	3027.3	86.500	% Recov	02/15/05	64.000	111.000	
SURR	Phenol-d5	4165-62-2	2983.4	85.200	% Recov	02/15/05	54.000	120.000	
SURR	2,4,6-Tribromophenol	118-79-6	2882.3	82.300	% Recov	02/15/05	24.000	122.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
SURR	Terphenyl-d14 (7Cl)	98904-43-9	2696.9	77.000	% Recov	02/15/05	35.000	150.000	
BATCH QC									
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 290	n/a	ug/Kg	02/15/05			U
BLANK	1,4-Dichlorobenzene	106-46-7	< 310	n/a	ug/Kg	02/15/05			U
BLANK	2,4-Dinitrotoluene	121-14-2	< 67	n/a	ug/Kg	02/15/05			U
BLANK	2-Fluorophenol	367-12-4	2987.5	89.600	% Recov	02/15/05	42.000	105.000	
BLANK	Acenaphthene	83-32-9	< 67	n/a	ug/Kg	02/15/05			U
BLANK	4-Chloro-3-methylphenol	59-50-7	< 67	n/a	ug/Kg	02/15/05			U
BLANK	2-Chlorophenol	95-57-8	< 150	n/a	ug/Kg	02/15/05			U
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 67	n/a	ug/Kg	02/15/05			U
BLANK	2-Fluorobiphenyl	321-60-8	3185.6	95.600	% Recov	02/15/05	56.000	122.000	
BLANK	Phenol	108-95-2	< 100	n/a	ug/Kg	02/15/05			U
BLANK	Nitrobenzene-d5	4165-60-0	3241.3	97.200	% Recov	02/15/05	64.000	111.000	
BLANK	4-Nitrophenol	100-02-7	< 650	n/a	ug/Kg	02/15/05			U
BLANK	Pentachlorophenol	87-86-5	< 300	n/a	ug/Kg	02/15/05			U
BLANK	Phenol-d5	4165-62-2	3240.9	97.200	% Recov	02/15/05	54.000	120.000	
BLANK	Pyrene	129-00-0	< 67	n/a	ug/Kg	02/15/05			U
BLANK	Tributyl phosphate	126-73-8	< 67	n/a	ug/Kg	02/15/05			U
BLANK	2,4,6-Tribromophenol	118-79-6	2875.4	86.300	% Recov	02/15/05	24.000	122.000	
BLANK	Terphenyl-d14 (7Cl)	98904-43-9	2879.1	86.400	% Recov	02/15/05	35.000	150.000	
LCS	1,2,4-Trichlorobenzene	120-82-1	3054.7	91.600	% Recov	02/15/05	46.000	107.000	
LCS	1,4-Dichlorobenzene	106-46-7	2875.0	86.300	% Recov	02/15/05	42.000	111.000	
LCS	2,4-Dinitrotoluene	121-14-2	2874.3	86.200	% Recov	02/15/05	59.000	106.000	
LCS	2-Fluorophenol	367-12-4	2896.2	86.900	% Recov	02/15/05	50.000	110.000	
LCS	Acenaphthene	83-32-9	2979.5	89.400	% Recov	02/15/05	61.000	116.000	
LCS	4-Chloro-3-methylphenol	59-50-7	4618.6	92.400	% Recov	02/15/05	61.000	106.000	
LCS	2-Chlorophenol	95-57-8	4380.0	87.600	% Recov	02/15/05	66.000	106.000	
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	3082.8	92.500	% Recov	02/15/05	71.000	114.000	
LCS	2-Fluorobiphenyl	321-60-8	2994.8	89.800	% Recov	02/15/05	58.000	109.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F04-019
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
LCS	Phenol	108-95-2	4733.9	94.700	% Recov	02/15/05	67.000	105.000	
LCS	Nitrobenzene-d5	4165-60-0	3177.9	95.300	% Recov	02/15/05	60.000	118.000	
LCS	4-Nitrophenol	100-02-7	4166.8	83.300	% Recov	02/15/05	32.000	118.000	
LCS	Pentachlorophenol	87-86-5	4198.5	84.000	% Recov	02/15/05	62.000	114.000	
LCS	Phenol-d5	4165-62-2	3070.7	92.100	% Recov	02/15/05	59.000	116.000	
LCS	Pyrene	129-00-0	2687.3	80.600	% Recov	02/15/05	66.000	118.000	
LCS	2,4,6-Tribromophenol	118-79-6	3023.3	90.700	% Recov	02/15/05	60.000	120.000	
LCS	Terphenyl-d14 (7Cl)	98904-43-9	2801.8	84.100	% Recov	02/15/05	60.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

Lab ID: W050000288

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	Kerosene	TPHKEROSENE	263360	106.000	% Recov	02/08/05	70.000	130.000	
MS	ortho-Terphenyl Surr	84-15-1	27882	112.000	% Recov	02/08/05	70.000	130.000	
MSD	Kerosene	TPHKEROSENE	126680	102.000	% Recov	02/08/05	70.000	130.000	
MSD	ortho-Terphenyl Surr	84-15-1	24542	98.400	% Recov	02/08/05	70.000	130.000	
SPK-RPD	ortho-Terphenyl Surr	84-15-1	98.400	12.928	RPD	02/08/05	0.000	20.000	
SURR	ortho-Terphenyl Surr	84-15-1	25022	94.300	% Recov	02/08/05	70.000	130.000	

BATCH QC

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Kerosene	TPHKEROSENE	< 3800	n/a	ug/Kg	02/08/05			U
BLANK	ortho-Terphenyl Surr	84-15-1	24379	97.500	% Recov	02/08/05	70.000	130.000	
BLANK	Total Pet. Hydrocarbons Diesel	TPHDIESEL	< 3800	n/a	ug/Kg	02/08/05			U
LCS	ortho-Terphenyl Surr	84-15-1	24143	96.600	% Recov	02/08/05	70.000	130.000	
LCS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	114020	91.200	% Recov	02/08/05	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: NWTPH-GX TPH Gasoline Range

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050000288									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<250	n/a	RPD	02/16/05	0.000	20.000	U
MS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	1500	111.111	% Recov	02/16/05	50.000	150.000	
MSD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	1560	115.556	% Recov	02/16/05	50.000	150.000	
SPK-RPD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	115.556	3.922	RPD	02/16/05	0.000	20.000	
BATCH QC									
BLANK	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<250	n/a	mg/L	02/16/05	0.000	300.000	U
LCS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	1110	86.991	% Recov	02/16/05	85.000	115.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050000288									
BATCH QC ASSOCIATED WITH SAMPLE									
SURR	4-Bromofluorobenzene	460-00-4	49.720	99.400	% Recov	02/15/05	71.000	125.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	54.500	109.000	% Recov	02/15/05	80.000	134.000	
SURR	Toluene-d8	2037-26-5	47.720	95.400	% Recov	02/15/05	80.000	126.000	
Lab ID: W050000298									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	1,1-Dichloroethene	75-35-4	23.520	94.100	% Recov	02/15/05	63.000	117.000	
MS	Benzene	71-43-2	27.020	108.000	% Recov	02/15/05	75.000	129.000	
MS	4-Bromofluorobenzene	460-00-4	56.110	112.000	% Recov	02/15/05	84.000	116.000	
MS	Chlorobenzene	108-90-7	27.470	110.000	% Recov	02/15/05	79.000	119.000	
MS	1,2-Dichloroethane-d4	17060-07-0	57.110	114.000	% Recov	02/15/05	82.000	136.000	
MS	Toluene-d8	2037-26-5	53.530	107.000	% Recov	02/15/05	89.000	119.000	
MS	Toluene	108-88-3	26.890	108.000	% Recov	02/15/05	76.000	120.000	
MS	Trichloroethene	79-01-6	26.160	105.000	% Recov	02/15/05	73.000	123.000	
MSD	1,1-Dichloroethene	75-35-4	24.770	99.100	% Recov	02/15/05	63.000	117.000	
MSD	Benzene	71-43-2	27.710	111.000	% Recov	02/15/05	75.000	129.000	
MSD	4-Bromofluorobenzene	460-00-4	53.720	107.000	% Recov	02/15/05	84.000	116.000	
MSD	Chlorobenzene	108-90-7	27.450	110.000	% Recov	02/15/05	79.000	119.000	
MSD	1,2-Dichloroethane-d4	17060-07-0	55.610	111.000	% Recov	02/15/05	82.000	136.000	
MSD	Toluene-d8	2037-26-5	51.590	103.000	% Recov	02/15/05	89.000	119.000	
MSD	Toluene	108-88-3	25.640	103.000	% Recov	02/15/05	76.000	120.000	
MSD	Trichloroethene	79-01-6	26.530	106.000	% Recov	02/15/05	73.000	123.000	
SPK-RPD	1,1-Dichloroethene	75-35-4	99.100	5.176	RPD	02/15/05	0.000	25.000	
SPK-RPD	Benzene	71-43-2	111.000	2.740	RPD	02/15/05	0.000	25.000	
SPK-RPD	4-Bromofluorobenzene	460-00-4	107.000	4.566	RPD	02/15/05	0.000	25.000	
SPK-RPD	Chlorobenzene	108-90-7	110.000	0.000	RPD	02/15/05	0.000	25.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F04-019
Sample Date: 02/03/05
Receive Date:02/03/05

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	111.000	2.667	RPD	02/15/05	0.000	25.000	
SPK-RPD	Toluene-d8	2037-26-5	103.000	3.810	RPD	02/15/05	0.000	25.000	
SPK-RPD	Toluene	108-88-3	103.000	4.739	RPD	02/15/05	0.000	25.000	
SPK-RPD	Trichloroethene	79-01-6	106.000	0.948	RPD	02/15/05	0.000	25.000	
BATCH QC									
BLANK	1,1-Dichloroethane	75-34-3	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	1,1,1-Trichloroethane	71-55-6	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	1,1,2-Trichloroethane	79-00-5	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	1,1-Dichloroethene	75-35-4	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	1,2-Dichloroethane	107-06-2	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	1-Butanol	71-36-3	< 40	n/a	ug/Kg	02/15/05			U
BLANK	2-Hexanone	591-78-6	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	4-Methyl-2-Pentanone	108-10-1	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Acetone	67-64-1	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Bromodichloromethane	75-27-4	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Benzene	71-43-2	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	4-Bromofluorobenzene	460-00-4	55.000	110.000	% Recov	02/15/05	71.000	125.000	
BLANK	Bromoform	75-25-2	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	n-Butylbenzene	104-51-8	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Carbon disulfide	75-15-0	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Carbon tetrachloride	56-23-5	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Dibromochloromethane	124-48-1	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Chloroform	67-66-3	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Chlorobenzene	108-90-7	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Chloroethane	75-00-3	< 2.0	n/a	ug/Kg	02/15/05			U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F04-019
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	1,2-Dichloroethane-d4	17060-07-0	52.140	104.000	% Recov	02/15/05	80.000	134.000	
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	1,2-Dichloropropane	78-87-5	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Ethylbenzene	100-41-4	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Bromomethane	74-83-9	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Chloromethane	74-87-3	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	2-Butanone	78-93-3	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Methylenechloride	75-09-2	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Tetrachloroethene	127-18-4	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Styrene	100-42-5	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Xylenes (total)	1330-20-7	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Toluene-d8	2037-26-5	53.040	106.000	% Recov	02/15/05	80.000	126.000	
BLANK	Toluene	108-88-3	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Trichloroethene	79-01-6	< 2.0	n/a	ug/Kg	02/15/05			U
BLANK	Vinyl chloride	75-01-4	< 2.0	n/a	ug/Kg	02/15/05			U
LCS	1,1-Dichloroethene	75-35-4	22.760	91.000	% Recov	02/15/05	70.000	130.000	
LCS	Benzene	71-43-2	26.130	105.000	% Recov	02/15/05	70.000	130.000	
LCS	4-Bromofluorobenzene	460-00-4	56.050	112.000	% Recov	02/15/05	71.000	125.000	
LCS	Chlorobenzene	108-90-7	26.780	107.000	% Recov	02/15/05	70.000	130.000	
LCS	1,2-Dichloroethane-d4	17060-07-0	56.640	113.000	% Recov	02/15/05	80.000	134.000	
LCS	Toluene-d8	2037-26-5	53.060	106.000	% Recov	02/15/05	80.000	126.000	
LCS	Toluene	108-88-3	26.090	104.000	% Recov	02/15/05	70.000	130.000	
LCS	Trichloroethene	79-01-6	25.180	101.000	% Recov	02/15/05	70.000	130.000	

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-019: F04-019

Group #: WSCF20050251

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Radiochemistry															
W050000288	B1B3R1	GRP	TRENT	14596-10-2	Americium-241	SOIL	LA-508-471		2.30	pCi/g	1.00	0.061	02/28/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.60	pCi/g	1.00	0.0	02/28/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	14234-35-6	Antimony-125	SOIL	LA-508-481	U	-9.07e-03	pCi/g	1.00	0.093	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Sb-125 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.056	pCi/g	1.00	0.0	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	10198-40-0	Cobalt-60	SOIL	LA-508-481		0.180	pCi/g	1.00	9.4e-03	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Co-60 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.028	pCi/g	1.00	0.0	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	13967-70-9	Cesium-134	SOIL	LA-508-481	U	0.0238	pCi/g	1.00	0.030	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Cs-134 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.011	pCi/g	1.00	0.0	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	10045-97-3	Cesium-137	SOIL	LA-508-481		33.1	pCi/g	1.00	0.021	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Cs-137 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 5.3	pCi/g	1.00	0.0	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	14683-23-9	Europium-152	SOIL	LA-508-481		2.64	pCi/g	1.00	0.089	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Eu-152 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.35	pCi/g	1.00	0.0	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	15585-10-1	Europium-154	SOIL	LA-508-481		0.317	pCi/g	1.00	0.031	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Eu-154 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.057	pCi/g	1.00	0.0	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	14391-16-3	Europium-155	SOIL	LA-508-481	U	0.0542	pCi/g	1.00	0.11	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Eu-155 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.066	pCi/g	1.00	0.0	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	13982-63-3	Radium-226	SOIL	LA-508-481		0.395	pCi/g	1.00	0.044	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Ra-226 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.076	pCi/g	1.00	0.0	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	15262-20-1	Radium-228	SOIL	LA-508-481		0.463	pCi/g	1.00	0.041	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Ra-228 Rel. Count Error (GEA)	SOIL	LA-508-481		+- 0.088	pCi/g	1.00	0.0	02/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	13994-20-2	Neptunium-237	SOIL	LA-508-471	U	2.20e-03	pCi/g	1.00	0.010	03/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Np-237 by AEA Total Ctng Error	SOIL	LA-508-471		+- 4.4e-03	pCi/g	1.00	0.0	03/02/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	13981-16-3	Plutonium-238	SOIL	LA-508-471		0.340	pCi/g	1.00	0.067	02/28/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.11	pCi/g	1.00	0.0	02/28/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	SOIL	LA-508-471		63.0	pCi/g	1.00	4.7e-03	02/28/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	SOIL	LA-508-471		+- 16	pCi/g	1.00	0.0	02/28/05	02/02/05	02/02/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

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

DF = Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F04-019: F04-019

Group #: WSCF20050251

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W050000288	B1B3R1	GRP	TRENT	SR-RAD	Strontium-89/90	SOIL	LA-508-415		49.0	pCi/g	1.00	0.30	02/23/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	Sr-89/90 Rel. Count Error	SOIL	LA-508-415		+- 7.4	pCi/g	1.00	0.0	02/23/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	U-233/234	Uranium-233/234	SOIL	LA-508-471		0.940	pCi/g	1.00	0.016	02/28/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	U-233/234 AEA Total Cntg Error	SOIL	LA-508-471		+- 0.25	pCi/g	1.00	0.0	02/28/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	15117-96-1	Uranium-235	SOIL	LA-508-471		0.0840	pCi/g	1.00	6.3e-03	02/28/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	U-235 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.035	pCi/g	1.00	0.0	02/28/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	U-238	Uranium-238	SOIL	LA-508-471		0.800	pCi/g	1.00	0.016	02/28/05	02/02/05	02/02/05
W050000288	B1B3R1	GRP	TRENT	E,T,C	U-238 by AEA Total Cntg Error	SOIL	LA-508-471		+- 0.22	pCi/g	1.00	0.10	02/28/05	02/02/05	02/02/05

MDL = Minimum Detection Limit
RQ = Result Qualifier

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

DF = Dilution Factor

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

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: Gamma Energy Analysis-grd H2O

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

Lab ID: W050000288

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	1.69e-01	6.304	RPD	02/03/05	0.000	20.000	
DUP	Cesium-134	13967-70-9	3.99e-02	n/a	RPD	02/03/05	0.000	20.000	
DUP	Cesium-137	10045-97-3	3.24e+01	2.137	RPD	02/03/05	0.000	20.000	
DUP	Europium-152	14683-23-9	2.69e+00	1.876	RPD	02/03/05	0.000	20.000	
DUP	Europium-154	15585-10-1	2.89e-01	9.241	RPD	02/03/05	0.000	20.000	
DUP	Europium-155	14391-16-3	U-2.29e-2	n/a	RPD	02/03/05	0.000	20.000	
DUP	Radium-226	13982-63-3	5.09e-01	25.221	RPD	02/03/05	0.000	20.000	
DUP	Radium-228	15262-20-1	4.88e-01	5.258	RPD	02/03/05	0.000	20.000	
DUP	Antimony-125	14234-35-6	U-2.12e-2	n/a	RPD	02/03/05	0.000	20.000	

BATCH QC

BLANK	Cobalt-60	10198-40-0	U1.11e-3	n/a	pCi/g	02/02/05	-10.000	1000.000	
BLANK	Cesium-134	13967-70-9	U1.84e-3	n/a	pCi/g	02/02/05	-10.000	1000.000	
BLANK	Cesium-137	10045-97-3	U-2.1e-3	n/a	pCi/g	02/02/05	-10.000	1000.000	
BLANK	Europium-152	14683-23-9	U-9.7e-3	n/a	pCi/g	02/02/05	-10.000	1000.000	
BLANK	Europium-154	15585-10-1	U-4.6e-3	n/a	pCi/g	02/02/05	-10.000	1000.000	
BLANK	Europium-155	14391-16-3	U-6.1e-3	n/a	pCi/g	02/02/05	-10.000	1000.000	
BLANK	Radium-226	13982-63-3	6.43e-02	0.064	pCi/g	02/02/05	-10.000	1000.000	
BLANK	Radium-228	15262-20-1	5.57e-02	0.056	pCi/g	02/02/05	-10.000	1000.000	
BLANK	Antimony-125	14234-35-6	U-7.5e-4	n/a	pCi/g	02/02/05	-10.000	1000.000	
LCS	Cobalt-60	10198-40-0	4.40e+03	105.012	% Recov	02/03/05	80.000	120.000	
LCS	Cesium-137	10045-97-3	3.90e+03	108.939	% Recov	02/03/05	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: Strontium 89/90

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050000288									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Strontium-89/90	SR-RAD	5.2e+01	5.941	RPD	02/23/05	0.000	20.000	
BATCH QC									
BLANK	Strontium-89/90	10098-97-2	1.3e-01	0.130	pCi/g	02/23/05	-10.000	300.000	
LCS	Strontium-89/90	10098-97-2	71.5	100.563	% Recov	02/23/05	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: Neptunium by AEA

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050000288									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Neptunium-237	13994-20-2	U6.5E-03	n/a	RPD	03/02/05	0.000	25.000	
BATCH QC									
BLANK	Neptunium-237	13994-20-2	U-4.0e-03	n/a	pCi/g	03/02/05	-10.000	1000.000	
LCS	Neptunium-237	13994-20-2	44.3	44.300	% Recov	03/02/05	75.000	125.000	*

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: Americium by AEA

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050000288									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Americium-241	14596-10-2	2.4e+00	4.255	RPD	02/28/05	0.000	20.000	
BATCH QC									
BLANK	Americium-241	14596-10-2	1.8e-02	0.018	pCi/g	02/28/05	-10.000	1000.000	
LCS	Americium-241	14596-10-2	4.2e+01	87.318	% Recov	02/28/05	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: Plutonium Isotopics by AEA

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050000288									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Pu-239/240 by AEA	PU-239/240	6.0e+01	4.878	RPD	02/28/05	0.000	20.000	
BATCH QC									
BLANK	Pu-239/240 by AEA	PU-239/240	1.4e-02	0.014	pCi/g	02/28/05	-10.000	1000.000	
LCS	Pu-239/240 by AEA	PU-239/240	4.7e+01	95.528	% Recov	02/28/05	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20050251
Matrix: SOLID
Test: Uranium Isotopics by AEA

SAF Number: F04-019
Sample Date: 02/02/05
Receive Date:02/02/05

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W050000288									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Uranium-238	U-238	8.1e-01	1.242	RPD	02/28/05	0.000	20.000	
BATCH QC									
BLANK	Uranium-238	24678-82-8	2.6e-02	0.026	pCi/g	02/28/05	-10.000	1000.000	
LCS	Uranium-238	24678-82-8	9.3e+01	122.659	% Recov	02/28/05	75.000	125.000	

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F04-019

Group #: WSCF20050251

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		W050000288/Ra226 from the GEA dup is flagged because the sample is not homogeneous. lmh Am-241 from the GEA = 1.4 pCi/grams with +/-20 error. lmh ICP-MS: -Preparation blank values have no effect on sample results -wb -LCS: Antimony recovery biased high; however, sample results <MDL and matrix spikes acceptable -wb IC Anions: -Matrix Spikes biased high for nitrate-N and low for phosphate-P indicating sample non-homogeneity and/or possible matrix interference for phosphate-P; E-flag ORGANICS: Sample concentrations have been corrected for percent moisture and reported in dry weight basis. gar SVOA: A J-flag is used for target compounds which have concentrations less than the lowest calibration standard but greater than the detection limit. Sample W050000288 has a chromatographic lump of unknown organic material elute from about 10 min. to 30 min. den

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

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WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F04-019

Group #: WSCF20050251

Sample #	Client ID	Lab Area	Test	Comment
				Samples B1B3R1, B19PM5, B19PM6, and B19PM7 all contained extended motor oil. The results for extended oil are added to the analyte list and reported for these samples.cgc
				Np237 LCS recovery is low so the sample result is an estimated value. lmh
				Cyanide: Spike recoveries do not meet laboratory acceptance criteria; however, sample results < MDL. U flag

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 F04-019 :F04-019

Group #: WSCF20050251

Sample #	Client ID			Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error				17	%
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	AM-241 Count Error				18	%
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	AC-228 Count Error				19	%
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error				19	%
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	TL-208 Count Error				21	%
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error				21	%
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	ZN-65 Count Error				31	%
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	BI-212 Count Error				35	%
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	SN-126 Count Error				36	%
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	ZN-65				0.11	pCi/g
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	SN-126				0.13	pCi/g
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	TL-208				0.14	pCi/g
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	BI-212				0.26	pCi/g
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	PB-214				0.36	pCi/g
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	BI-214				0.40	pCi/g
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	PB-212				0.46	pCi/g
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	AC-228				0.46	pCi/g
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	AM-241				1.4	pCi/g
W050000288	B1B3R1	GRP	TRENT	Gamma Energy Analysis-grd H2O	K-40				12	pCi/g
W050000288	B1B3R1	GRP	TRENT	SW-846 8270B Semi-Vols	SMP 11.645 Unknown Hydrocarbon	Unknown	11.64586	J	1.2e+03	ug/kg
W050000288	B1B3R1	GRP	TRENT	SW-846 8270B Semi-Vols	SMP 12.259 Unknown Hydrocarbon	Unknown	12.259	J	4.6e+03	ug/kg
W050000288	B1B3R1	GRP	TRENT	SW-846 8270B Semi-Vols	SMP 13.342 Unknown Hydrocarbon	Unknown	13.34218	J	9.3e+03	ug/kg
W050000288	B1B3R1	GRP	TRENT	SW-846 8270B Semi-Vols	SMP 14.854 Di-n-butylphthalate	84-74-2	14.85455		1.1e+02	ug/kg
W050000288	B1B3R1	GRP	TRENT	SW-846 8270B Semi-Vols	SMP 5.902 Benzyl Alcohol	100-51-6	5.90295		1.0e+02	ug/kg

RQ=Result Qualifier J - Analyte is an estimate, has potentially larger errors

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F04-019 :F04-019

Group #: WSCF20050251

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

RQ=Result Qualifier J - Analyte is an estimate, has potentially larger errors

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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-508-415	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

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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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)
	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	

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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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 04-mar-2005 13:30:33

W13q Worklist/Batch/QC Report for Group# WSCF20050251

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
				SAMPLE	W050000288	Percent Solids
				SAMPLE	W050000288	pH Soil and Waste Measurement
24911	1	25265	28643	BLANK		Gamma Energy Analysis-grd H2O
24911	2	25265	28643	LCS		Gamma Energy Analysis-grd H2O
24911	3	25265	28643	DUP	W050000288	Gamma Energy Analysis-grd H2O
24911	4	25265	28643	SAMPLE	W050000288	Gamma Energy Analysis-grd H2O
25015	12	25372	28725	BLANK		ICP-2008 MS All possible metal
25015	13	25372	28725	LCS		ICP-2008 MS All possible metal
25015	15	25372	28725	MS	W050000288	ICP-2008 MS All possible metal
25015	16	25372	28725	MSD	W050000288	ICP-2008 MS All possible metal
25015	14	25372	28725	SAMPLE	W050000288	ICP-2008 MS All possible metal
25015	0	25372	28725	SPK-RPD	W050000288	ICP-2008 MS All possible metal
			28823	BLANK		SW-846 8270B Semi-Vols
			28823	LCS		SW-846 8270B Semi-Vols
			28823	MS	W050000288	SW-846 8270B Semi-Vols
			28823	MSD	W050000288	SW-846 8270B Semi-Vols
			28823	SAMPLE	W050000288	SW-846 8270B Semi-Vols
			28823	SPK-RPD	W050000288	SW-846 8270B Semi-Vols
			28823	SURR	W050000288	SW-846 8270B Semi-Vols
25122	2	25477	28860	BLANK		Anions by Ion Chromatography
25122	8	25477	28860	BLANK		Anions by Ion Chromatography
25122	3	25477	28860	LCS		Anions by Ion Chromatography
25122	5	25477	28860	DUP	W050000288	Anions by Ion Chromatography
25122	6	25477	28860	MS	W050000288	Anions by Ion Chromatography
25122	7	25477	28860	MSD	W050000288	Anions by Ion Chromatography
25122	4	25477	28860	SAMPLE	W050000288	Anions by Ion Chromatography
			28864	BLANK		Cyanide by Midi/Spectrophotom
			28864	BLNK-PREP		Cyanide by Midi/Spectrophotom
			28864	LCS		Cyanide by Midi/Spectrophotom
			28864	SAMPLE	W050000288	Cyanide by Midi/Spectrophotom
			28864	MS	W050000296	Cyanide by Midi/Spectrophotom
			28864	MSD	W050000296	Cyanide by Midi/Spectrophotom
			28864	SPK-RPD	W050000296	Cyanide by Midi/Spectrophotom
			28869	BLANK		WTPH-D TPH Diesel Range (Wa)
			28869	LCS		WTPH-D TPH Diesel Range (Wa)
			28869	MS	W050000288	WTPH-D TPH Diesel Range (Wa)
			28869	MSD	W050000288	WTPH-D TPH Diesel Range (Wa)
			28869	SAMPLE	W050000288	WTPH-D TPH Diesel Range (Wa)
			28869	SPK-RPD	W050000288	WTPH-D TPH Diesel Range (Wa)
			28869	SURR	W050000288	WTPH-D TPH Diesel Range (Wa)
			28878	BLANK		PCBs complete list
			28878	LCS		PCBs complete list
			28878	SAMPLE	W050000288	PCBs complete list
			28878	SURR	W050000288	PCBs complete list
			28878	MS	W050000300	PCBs complete list
			28878	MSD	W050000300	PCBs complete list
			28878	SPK-RPD	W050000300	PCBs complete list

25049	1	25403	28884	BLANK		Strontium 89/90
25049	2	25403	28884	LCS		Strontium 89/90
25049	3	25403	28884	DUP	W050000288	Strontium 89/90
25049	4	25403	28884	SAMPLE	W050000288	Strontium 89/90
25202	2	25562	28932	BLANK		Ammonia (N) by IC
25202	8	25562	28932	BLANK		Ammonia (N) by IC
25202	3	25562	28932	LCS		Ammonia (N) by IC
25202	5	25562	28932	DUP	W050000288	Ammonia (N) by IC
25202	6	25562	28932	MS	W050000288	Ammonia (N) by IC
25202	7	25562	28932	MSD	W050000288	Ammonia (N) by IC
25202	4	25562	28932	SAMPLE	W050000288	Ammonia (N) by IC
25211	1	25571	28950	BLANK		Neptunium by AEA
25211	2	25571	28950	LCS		Neptunium by AEA
25211	3	25571	28950	DUP	W050000288	Neptunium by AEA
25211	4	25571	28950	SAMPLE	W050000288	Neptunium by AEA
25179	1	25539	28954	BLANK		Americium by AEA
25179	2	25539	28954	LCS		Americium by AEA
25179	3	25539	28954	DUP	W050000288	Americium by AEA
25179	4	25539	28954	SAMPLE	W050000288	Americium by AEA
25180	1	25540	28955	BLANK		Plutonium Isotopics by AEA
25180	2	25540	28955	LCS		Plutonium Isotopics by AEA
25180	3	25540	28955	DUP	W050000288	Plutonium Isotopics by AEA
25180	4	25540	28955	SAMPLE	W050000288	Plutonium Isotopics by AEA
25178	1	25538	28956	BLANK		Uranium Isotopics by AEA
25178	2	25538	28956	LCS		Uranium Isotopics by AEA
25178	3	25538	28956	DUP	W050000288	Uranium Isotopics by AEA
25178	4	25538	28956	SAMPLE	W050000288	Uranium Isotopics by AEA
25238	1	25599	28971	BLANK		ICP Metals Analysis, Grd H20 P
25238	2	25599	28971	LCS		ICP Metals Analysis, Grd H20 P
25238	6	25599	28971	SAMPLE	W050000288	ICP Metals Analysis, Grd H20 P
25238	4	25599	28971	MS	W050000473	ICP Metals Analysis, Grd H20 P
25238	5	25599	28971	MSD	W050000473	ICP Metals Analysis, Grd H20 P
25238	0	25599	28971	SPK-RPD	W050000473	ICP Metals Analysis, Grd H20 P
			29006	BLANK		VOA Ground Water Protection
			29006	LCS		VOA Ground Water Protection
			29006	SAMPLE	W050000288	VOA Ground Water Protection
			29006	SURR	W050000288	VOA Ground Water Protection
			29006	MS	W050000298	VOA Ground Water Protection
			29006	MSD	W050000298	VOA Ground Water Protection
			29006	SPK-RPD	W050000298	VOA Ground Water Protection
25267	1	25633	29015	BLANK		NWTPH-GX TPH Gasoline Range
25267	2	25633	29015	LCS		NWTPH-GX TPH Gasoline Range
25267	4	25633	29015	DUP	W050000288	NWTPH-GX TPH Gasoline Range
25267	5	25633	29015	MS	W050000288	NWTPH-GX TPH Gasoline Range
25267	6	25633	29015	MSD	W050000288	NWTPH-GX TPH Gasoline Range
25267	3	25633	29015	SAMPLE	W050000288	NWTPH-GX TPH Gasoline Range
25267	6	25633	29015	SPK-RPD	W050000288	NWTPH-GX TPH Gasoline Range

M8141-SLF-05-112

ATTACHMENT 3

SAMPLE RECEIPT INFORMATION

Consisting of 3 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

3/4/05

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program
Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 119144/ES10
Group#: 20050251
Project#: F04-019
Proj Mgr: Steve Trent A0-21
Phone: 373-5869

The following samples were received from you on 02/02/05. 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	Tests Scheduled					Sample Date
W050000288	B1B3R1	GRP	TRENT Solid, or handle as if solid					02/02/05
			@2008	@AEA-30	@AEA-31	@AEA-32	@AEA-33	
			@GEA-GPP	@GPP6010	@IC-30	@PCBGPP	@SR89_90	@SVOC
			@TPHD-WA	@TPHG-WA	@VOA-GPP	CN-02	NH4-IC	PERSO
			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
@GPP6010	ICP Metals Analysis, Grd H20 P
@IC-30	Anions by Ion Chromatography
@PCBGPP	PCBs complete list
@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

3/4/05

FLUOR Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F04-019-009	PAGE 1 OF 1
COLLECTOR: Pope/Pfister/Hughes/Wiberg	COMPANY CONTACT: CS Cearlock; TELEPHONE NO.: 372-9638	PROJECT COORDINATOR: TRENT, SJ	PRICE CODE: 8N; AIR QUALITY: ☐; DATA TURNAROUND: 45 Days / 45 Days
SAMPLING LOCATION: 216-T-33; 12.5FT-15FT	PROJECT DESIGNATION: 200-MW-1 Characterization Sampling and Analysis - Waste Management	SAF NO.: F04-019	
ICE CHEST NO.:	FIELD LOGBOOK NO.: HNF-N-386 1; COA: 119144ES10	METHOD OF SHIPMENT: Government Vehicle	
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A	BILL OF LADING/AIR BILL NO.: N/A	

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: N/A

SPECIAL HANDLING AND/OR STORAGE: Radioactive Tie To: B1B3R2
20050251

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

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1B3R1 W0500302SS	SOIL	2-2-05	1300	X	X	X	X	X	X				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JSPfister/JSPfister	2-2-05 14:15	Victor Binns / Victor Binns	2/4/05 14:15

SPECIAL INSTRUCTIONS

(1)IC Anions - 300.0 {Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate} Total Cyanide - 9010; Cations (IC) - 300.7 {Nitrogen in ammonium} pH (Soil) - 9045;
(2)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Copper, Nickel, Silver} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Selenium} 200.8_HG - ICPMS {Mercury} ICP Metals - 6010A (Add-on) {Bismuth, Boron}
(3)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene}
(4)Semi-VOA – 8270A (Add-On) {Tributyl phosphate} TPH-Gasoline Range - WTPH-G; TPH-Diesel Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Gamma Spec - Add-on {Antimony-125, Cesium-134, Radium-226, Radium-228} Isotopic Plutonium; Isotopic Uranium; Americium-241; Strontium-89,90 – Total Sr; Neptunium-237; EXPEDITE GEA - 24 hour TURNAROUND

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