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FLUOR

Memorandum

8F-000-SLF-03-015/R1

To:	S. J. Trent	Date:	June 2, 2003
From:	S. L. Fitzgerald, Manager WSCF Analytical Services	Telephone:	373-7495

cc:	W/Attachments		W/O Attachments	
	T. F. Dale	S3-28	C. M. Caprio	S3-30
	S. L. Fitzgerald	S3-30	D. L. Renberger	S3-30
	H. K. Meznarich	S3-30	L. C. Swanson	E6-35
	M. Neely	S3-30	File/LB	
	J. E. Trechter			

Subject: FINAL RESULTS FOR 200-PW-2/200-PW-4 OU- BOREHOLE SOIL SAMPLING-SAMPLE DELIVERY GROUP WSCF20030460- SAF NUMBER F03-006

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

(2) HNF-SD-CD-QAPP-017, Rev. 5, Waste Sampling and Characterization Facility Quality Assurance Plan

This letter contains a narrative (Attachment 1) for the sample delivery group (WSCF20030460), the analytical results (Attachment 2) and the sample receipt information (Attachment 3). This is a revision of the final report to correct inconsistencies with project identification.

slf/fjh

Attachments 3

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8F-000-SLF-03-015/R1

ATTACHMENT 1

NARRATIVE

Consisting of 4 pages
Including cover page

Sample Delivery Group	**WSCF20030460**
Sample Matrix	**Soil**
Sample Visual	**Brown**
SAF Number	**F03-006**
Data Deliverable	**Summary Report**

Introduction

One (1) soil samples (B16RX7) from the GPP was received at the WSCF Laboratory on April 4, 2003. The sample was analyzed for those analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Protection Program- Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 1) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 2) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information. Copies of the chain of custody and Request for Sample Analysis forms are included as Attachment 3.

Analytical Methodology for Requested Analyses

- ICP-MS Metals by EPA Method 200.8 and ICP-AES Metals by EPA SW-846 Method 6010A. Analytical work was performed with no deviations to the approved method.

- VOA's by EPA SW-846 Method 8260A. Analytical work was performed with no deviations to the approved method. The compound 1-Butanol requested under EPA SW-846 Method 8015 was reported under this method.

- Semi-VOA's by EPA SW-846 Method 8270B. Analytical work was performed with no deviations to the approved method.

- Alcohols and Glycols by EPA SW-846 Method 8015. Analytical work was performed with no deviations to the approved method. The compound 1-Butanol requested under this method was reported under EPA SW-846 Method 8260A.

- WTPH-D by WDOE Method NWTPH-Dx. Analytical work was performed with no deviations to the approved method.

- WTPH-G by WDOE Method NWTPH-Gx. Analytical work was performed with no deviations to the approved method.

- IC Anions and Ammonium by EPA SW-846 Method 300.0 and 300.7. Analytical work was performed with no deviations to the approved method for Ammonium, but a deviation was required for the Anions (see comments below).

- The pH by EPA Method 150.1. 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.

- Cyanide by EPA SW-846 Method 9010. Analytical work was performed with no deviations to the approved method.

- All RadChem analyses (TA/TB, AEA's, GEA) were run by internal WDOE accredited WSCF procedures. Analytical work was performed with no deviations to the approved method.

Comments

PCB's – This analysis was originally on the Sample Chain of Custody when received at the WSCF Laboratory, but the client later requested the analysis not be run.

ICP-MS and ICP-AES Metals – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-22, 2-23, 2-24, 2-25, and 2-40 for QC details.

VOA's – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-37, 2-38 and 2-39 for QC details. Compounds listed on the tentatively identified peak report with an "N" qualifier have been identified with the program used to interpret the raw data.

Semi-VOA's – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-28, 2-29, 2-30 and 2-31 for QC details. Compounds listed on the tentatively identified peak report with an "N" qualifier have been identified with the program used to interpret the raw data.

Alcohols and Glycols – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-33 for QC details.

WTPH-D – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-34 for details.

WTPH-G – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-36 for details.

IC Anions – The client requested hold time(s) for this analysis was not met. The client was notified and requested WSCF to continue with this analysis. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-19 and 2-20 for QC details.

NH4 – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-35 for QC details.

The pH – Per the direction of the chain of custody, the pH was completed within 24 hours of sampling.

Percent Solids – PCB's, VOA's, Semi-VOA's, Alcohols and Glycols, WTPH-G and WTPH-D analytical results were corrected for percent solids. All other analytical results were reported for the sample as received.

CN – The hold time(s) for this analysis was met. A Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-21 for QC details.

RadChem – There are no hold times associated with these WDOE accredited methods. Except for GEA, a Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-26, 2-27, and 2-32 for QC details.

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.

Troy Dale
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

8F-000-SLF-03-015/R1

ATTACHMENT 2

ANALYTICAL RESULTS

Consisting of 40 pages
including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Ground Water Protection Program

Richland, WA 99352

Attention: Steve Trent

Analytical: _____

Client Services: _____

Contract#: F03-006
Report#: WSCF20030460
Report Date: 30-may-2003
Report W004/ver. 5.1
Ground Water Protection Program

WSCF
ANALYTICAL RESULTS REPORT

2-3

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

Group #: WSCF20030460

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W030000158	B16RX7	GPP	7664-41-7	Ammonia (N) by IC	SOLID	LA-503-401		2.08	ug/g	50.00	0.20	04/18/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	57-12-5	Cyanide by Midi/Spectrophotom	SOLID	LA-695-402	U	< 0.200	mg/kg	0.98	0.20	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	TS	Percent Solids	SOLID	LA-519-412		96.3	%		0.0	04/22/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	PH	pH Soil and Waste Measurement	SOLID	LA-212-411		9.84	pH		0.010	04/22/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	12587-46-1	Alpha by liquid scintillation	SOLID	LA-508-421		9.00	pCi/g		1.7	04/09/03	04/04/03	04/04/03
W030000158	B16RX7	GPP		Alpha error by LC	SOLID	LA-508-421		55.0	%		0.0	04/09/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	12587-47-2	Beta by liquid scintillation	SOLID	LA-508-421		32.0	pCi/g		3.3	04/09/03	04/04/03	04/04/03
W030000158	B16RX7	GPP		Beta error by LC	SOLID	LA-508-421		31.0	%		0.0	04/09/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	540-51-2	2-Bromoethanol	SOLID	Organics		1.20e+04	ug/kg		5.0e+03	05/02/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	60-29-7	Diethyl ether	SOLID	Organics	U	< 5.00e+03	ug/kg		5.0e+03	05/02/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	107-21-1	Ethylene glycol	SOLID	Organics	U	< 5.00e+03	ug/kg		5.0e+03	05/02/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	67-56-1	Methanol	SOLID	Organics	U	< 1.00e+03	ug/kg		1.0e+03	05/02/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14596-10-2	Am-241 by AEA	SOLID	LA-508-471	U	-7.00e-03	pCi/g		0.024	04/18/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Am-241 by AEA Total Cntg Error	SOLID	LA-508-471		180	%		0.0	04/18/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	24959-67-9	Bromide (Br) by IC	SOLID	LA-533-410	U	< 0.900	ug/g	20.00	0.90	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	16887-00-6	Chloride (Cl) by IC	SOLID	LA-533-410		19.2	ug/g	20.00	0.28	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	16984-48-8	Fluoride (F) by IC	SOLID	LA-533-410	BE	1.62	ug/g	20.00	0.14	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	NO3-N	Nitrate (N) by IC	SOLID	LA-533-410		414	ug/g	9.98e+002	5.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	NO2-N	Nitrite (N) by IC	SOLID	LA-533-410	U	< 0.180	ug/g	20.00	0.18	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14265-44-2	Phosphate (P) by IC	SOLID	LA-533-410	B	3.19	ug/g	20.00	0.26	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14808-79-8	Sulfate (SO4) by IC	SOLID	LA-533-410	E	104	ug/g	20.00	0.48	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Ac-228 Rel.% Count Error (GEA)	SOLID	LA-508-462		16.7	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14331-83-0	Ac-228 by GEA	SOLID	LA-508-462		0.402	pCi/g		0.030	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Am-241 Rel.% Count Error (GEA)	SOLID	LA-508-462		698	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14596-10-2	Am-241 by GEA	SOLID	LA-508-462	U	-9.40e-03	pCi/g		0.10	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Bi-212 Rel.% Count Error (GEA)	SOLID	LA-508-462		27.1	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14913-49-6	Bi-212 by GEA	SOLID	LA-508-462		0.359	pCi/g		0.072	04/08/03	04/04/03	04/04/03

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (inorganic)
E - Analyte is an estimate, has potentially larger errors
U - Analyzed for but not detected above limiting criteria.
D - Analyte was identified at a secondary dilution factor
J - Estimated Value

DF=Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

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

Group #: WSCF20030460

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W030000158	B16RX7	GPP	E,T,C	Bi-214 Rel.% Count Error (GEA)	SOLID	LA-508-462		15.5	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14733-03-0	Bi-214 by GEA	SOLID	LA-508-462		0.356	pCi/g		0.018	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Ce-144 Rel.% Count Error (GEA)	SOLID	LA-508-462		271	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14762-78-8	Ce-144 by GEA	SOLID	LA-508-462	U	-0.0181	pCi/g		0.080	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Co-60 Rel.% Count Error (GEA)	SOLID	LA-508-462		230	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	10198-40-0	Co-60 by GEA	SOLID	LA-508-462	U	-2.35e-03	pCi/g		9.0e-03	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Cs-134 Rel.% Count Error (GEA)	SOLID	LA-508-462		33.8	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	13967-70-9	Cs-134 by GEA	SOLID	LA-508-462	U	0.0292	pCi/g		0.012	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Cs-137 Rel.% Count Error (GEA)	SOLID	LA-508-462		1.00e+03	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	10045-97-3	Cs-137 by GEA	SOLID	LA-508-462	U	-2.13e-04	pCi/g		9.6e-03	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Eu-152 Rel.% Count Error (GEA)	SOLID	LA-508-462		190	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14683-23-9	Eu-152 by GEA	SOLID	LA-508-462	U	-0.0100	pCi/g		0.028	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Eu-154 Rel.% Count Error (GEA)	SOLID	LA-508-462		454	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	15585-10-1	Eu-154 by GEA	SOLID	LA-508-462	U	-3.95e-03	pCi/g		0.030	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Eu-155 Rel.% Count Error (GEA)	SOLID	LA-508-462		91.4	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14391-16-3	Eu-155 by GEA	SOLID	LA-508-462	U	0.0384	pCi/g		0.045	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Nb-94 Rel.% Count Error (GEA)	SOLID	LA-508-462		282	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14681-63-1	Nb-94 by GEA	SOLID	LA-508-462	U	2.20e-03	pCi/g		9.0e-03	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Pb-212 Rel.% Count Error (GEA)	SOLID	LA-508-462		12.6	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	15092-94-1	Pb-212 by GEA	SOLID	LA-508-462		0.440	pCi/g		0.018	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Pb-214 Rel.% Count Error (GEA)	SOLID	LA-508-462		14.7	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	15067-28-4	Pb-214 by GEA	SOLID	LA-508-462		0.393	pCi/g		0.020	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Ra-226 Rel.% Count Error (GEA)	SOLID	LA-508-462		15.5	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	13982-63-3	Ra-226 by GEA	SOLID	LA-508-462		0.356	pCi/g		0.018	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Ra-228 Rel.% Count Error (GEA)	SOLID	LA-508-462		16.7	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	15262-20-1	Ra-228 by GEA	SOLID	LA-508-462		0.402	pCi/g		0.030	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Ru-103 Rel.% Count Error (GEA)	SOLID	LA-508-462		110	%		0.0	04/08/03	04/04/03	04/04/03

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (inorganic)
E - Analyte is an estimate, has potentially larger errors
U - Analyzed for but not detected above limiting criteria.
D - Analyte was identified at a secondary dilution factor
J - Estimated Value

DF=Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

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

Group #: WSCF20030460

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W030000158	B16RX7	GPP	13968-53-1	Ru-103 by GEA	SOLID	LA-508-462	U	4.46e-03	pCi/g		8.8e-03	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Ru-106 Rel.% Count Error (GEA)	SOLID	LA-508-462		1.00e+03	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	13967-48-1	Ru-106 by GEA	SOLID	LA-508-462	U	1.64e-04	pCi/g		0.080	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Sb-125 Rel.% Count Error (GEA)	SOLID	LA-508-462		283	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14234-35-6	Sb-125 by GEA	SOLID	LA-508-462	U	5.15e-03	pCi/g		0.025	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Sn-113 Rel.% Count Error (GEA)	SOLID	LA-508-462		160	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	13966-06-8	Sn-113 by GEA	SOLID	LA-508-462	U	-4.28e-03	pCi/g		0.011	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Sn-126 Rel.% Count Error (GEA)	SOLID	LA-508-462		28.2	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	15832-50-5	Sn-126 by GEA	SOLID	LA-508-462	U	0.160	pCi/g		0.16	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Th-234 Rel.% Count Error (GEA)	SOLID	LA-508-462		13.9	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	15065-10-8	Th-234 by GEA	SOLID	LA-508-462		10.2	pCi/g		0.76	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Tl-208 Rel.% Count Error (GEA)	SOLID	LA-508-462		16.3	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	14913-50-9	Tl-208 by GEA	SOLID	LA-508-462		0.140	pCi/g		9.4e-03	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	U-235 Rel.% Count Error (GEA)	SOLID	LA-508-462		52.7	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	15117-96-1	U-235 by GEA	SOLID	LA-508-462		0.131	pCi/g		0.080	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Zn-65 Rel.% Count Error (GEA)	SOLID	LA-508-462		77.6	%		0.0	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	13982-39-3	Zn-65 by GEA	SOLID	LA-508-462	U	0.0182	pCi/g		0.022	04/08/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-69-9	Bismuth by ICP	SOLID	LA-505-411	U	< 6.19	ug/g	91.00	6.2	05/06/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-50-8	Boron by ICP	SOLID	LA-505-411	E	31.21	ug/g	91.00	9.280	05/06/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7429-90-5	Aluminum by ICP-MS	SOLID	LA-505-412	E	5.27e+03	ug/g	4.96	55	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-36-0	Antimony by ICP-MS	SOLID	LA-505-412	U	< 0.248	ug/g	0.50	0.25	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-38-2	Arsenic by ICP-MS	SOLID	LA-505-412	E	3.48	ug/g	4.96	1.5	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-39-3	Barium by ICP-MS	SOLID	LA-505-412		92.7	ug/g	4.96	0.99	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-41-7	Beryllium by ICP-MS	SOLID	LA-505-412		0.231	ug/g	0.50	0.15	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-43-9	Cadmium by ICP-MS	SOLID	LA-505-412		0.186	ug/g	0.50	0.050	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-47-3	Chromium by ICP-MS	SOLID	LA-505-412		4.95	ug/g	0.50	0.15	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-48-4	Cobalt by ICP-MS	SOLID	LA-505-412		10.5	ug/g	0.50	0.099	04/15/03	04/04/03	04/04/03

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WSCF
ANALYTICAL RESULTS REPORT

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

Group #: WSCF20030460

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W030000158	B16RX7	GPP	7440-50-8	Copper by ICP-MS	SOLID	LA-505-412		13.0	ug/g	0.50	0.25	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7439-92-1	Lead by ICP-MS	SOLID	LA-505-412		2.34	ug/g	0.50	0.60	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7439-96-5	Manganese by ICP-MS	SOLID	LA-505-412		538	ug/g	4.96	1.5	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7439-97-6	Mercury by ICP-MS	SOLID	LA-505-412	U	< 0.0496	ug/g	0.50	0.050	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7439-98-7	Molybdenum by ICP-MS	SOLID	LA-505-412	EU	< 1.49	ug/g	4.96	1.5	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-02-0	Nickel by ICP-MS	SOLID	LA-505-412		8.26	ug/g	0.50	0.25	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7782-49-2	Selenium by ICP-MS	SOLID	LA-505-412	EU	< 1.49	ug/g	4.96	1.5	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-22-4	Silver by ICP-MS	SOLID	LA-505-412		0.109	ug/g	0.50	0.099	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-28-0	Thallium by ICP-MS	SOLID	LA-505-412		0.0782	ug/g	0.50	0.050	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-29-1	Thorium by ICP-MS	SOLID	LA-505-412		2.22	ug/g	0.50	0.099	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-61-1	Uranium by ICP-MS	SOLID	LA-505-412		39.6	ug/g	4.96	0.50	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-62-2	Vanadium by ICP-MS	SOLID	LA-505-412		99.6	ug/g	4.96	2.0	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7440-66-6	Zinc by ICP-MS	SOLID	LA-505-412		57.3	ug/g	4.96	20	04/15/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	TPH-G	Total Pet. Hydrocarbons Gas	SOLID	NWTPH	U	< 250	ug/kg		2.5e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	13981-16-3	Pu-238 by AEA	SOLID	LA-508-471	U	-6.60e-03	pCi/g		0.027	04/18/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Pu-238 by AEA Total Cntg Error	SOLID	LA-508-471		220	%		0.0	04/18/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	Pu-239/240 AEA Total Cntg Err	SOLID	LA-508-471		38.0	%		0.0	04/18/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	PU-239/240	Pu-239/240 by AEA	SOLID	LA-508-471		0.0350	pCi/g		2.5e-03	04/18/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	120-82-1	1,2,4-Trichlorobenzene	SOLID	LA-523-456	U	< 300	ug/kg	1.00	3.0e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	95-50-1	1,2-Dichlorobenzene (SV)	SOLID	LA-523-456	U	< 370	ug/kg	1.00	3.7e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	541-73-1	1,3-Dichlorobenzene	SOLID	LA-523-456	U	< 330	ug/kg	1.00	3.3e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	106-46-7	1,4-Dichlorobenzene (SV)	SOLID	LA-523-456	U	< 320	ug/kg	1.00	3.2e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	95-95-4	2,4,5-Trichlorophenol	SOLID	LA-523-456	U	< 690	ug/kg	1.00	6.9e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	88-06-2	2,4,6-Trichlorophenol	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	120-83-2	2,4-Dichlorophenol	SOLID	LA-523-456	U	< 82.0	ug/kg	1.00	82	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	105-67-9	2,4-Dimethylphenol	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	51-28-5	2,4-Dinitrophenol	SOLID	LA-523-456	U	< 690	ug/kg	1.00	6.9e+02	04/16/03	04/04/03	04/04/03

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WSCF
ANALYTICAL RESULTS REPORT

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

Group #: WSCF20030460

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W030000158	B16RX7	GPP	121-14-2	2,4-Dinitrotoluene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	606-20-2	2,6-Dinitrotoluene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	111-76-2	2-Butoxyethanol	SOLID	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	91-58-7	2-Chloronaphthalene	SOLID	LA-523-456	U	< 82.0	ug/kg	1.00	82	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	95-57-8	2-Chlorophenol	SOLID	LA-523-456	U	< 150	ug/kg	1.00	1.5e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	91-57-6	2-Methylnaphthalene	SOLID	LA-523-456	U	< 190	ug/kg	1.00	1.9e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	95-48-7	2-Methylphenol	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	88-74-4	2-Nitroaniline	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	88-75-5	2-Nitrophenol	SOLID	LA-523-456	U	< 180	ug/kg	1.00	1.8e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	108-39-4	3 & 4 Methylphenol Total	SOLID	LA-523-456	U	< 120	ug/kg	1.00	1.2e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	91-94-1	3,3'-Dichlorobenzidine	SOLID	LA-523-456	U	< 82.0	ug/kg	1.00	82	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	99-09-2	3-Nitroaniline	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	534-52-1	4,6-Dinitro-2-methylphenol	SOLID	LA-523-456	U	< 690	ug/kg	1.00	6.9e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	101-55-3	4-Bromophenyl-phenylether	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	59-50-7	4-Chloro-3-methylphenol	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	106-47-8	4-Chloroaniline	SOLID	LA-523-456	U	< 96.0	ug/kg	1.00	96	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	7005-72-3	4-Chlorophenyl-phenylether	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	100-01-6	4-Nitroaniline	SOLID	LA-523-456	U	< 250	ug/kg	1.00	2.5e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	100-02-7	4-Nitrophenol	SOLID	LA-523-456	U	< 670	ug/kg	1.00	6.7e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	83-32-9	Acenaphthene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	208-96-8	Acenaphthylene	SOLID	LA-523-456	U	< 82.0	ug/kg	1.00	82	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	120-12-7	Anthracene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	56-55-3	Benzo(a)anthracene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	50-32-8	Benzo(a)pyrene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	205-99-2	Benzo(b)fluoranthene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	191-24-2	Benzo(g,h,i)perylene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	207-08-9	Benzo(k)fluoranthene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03

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WSCF
ANALYTICAL RESULTS REPORT

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

Group #: WSCF20030460

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W030000158	B16RX7	GPP	100-51-6	Benzyl alcohol	SOLID	LA-523-456	U	< 75.0	ug/kg	1.00	75	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	117-81-7	Bis (2-Ethylhexyl) phthalate	SOLID	LA-523-456	J	680	ug/kg	1.00	5.8e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	108-60-1	Bis(2-Chloro-1-methylene)	SOLID	LA-523-456	U	< 260	ug/kg	1.00	2.6e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	85-68-7	Butylbenzylphthalate	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	86-74-8	Carbazole	SOLID	LA-523-456	U	< 82.0	ug/kg	1.00	82	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	218-01-9	Chrysene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	84-74-2	Di-n-butylphthalate	SOLID	LA-523-456	U	< 89.0	ug/kg	1.00	89	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	117-84-0	Di-n-octylphthalate	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	53-70-3	Dibenz(a,h)anthracene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	132-64-9	Dibenzofuran	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	84-66-2	Diethylphthalate	SOLID	LA-523-456	J	420	ug/kg	1.00	1.9e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	131-11-3	Dimethylphthalate	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	206-44-0	Fluoranthene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	86-73-7	Fluorene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	118-74-1	Hexachlorobenzene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	87-68-3	Hexachlorobutadiene	SOLID	LA-523-456	U	< 380	ug/kg	1.00	3.8e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	77-47-4	Hexachlorocyclopentadiene	SOLID	LA-523-456	U	< 320	ug/kg	1.00	3.2e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	193-39-5	Indeno(1,2,3-cd)pyrene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	78-59-1	Isophorone	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	621-64-7	N-Nitroso-di-n-propylamine	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	86-30-6	N-Nitrosodiphenylamine	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	91-20-3	Naphthalene	SOLID	LA-523-456	U	< 300	ug/kg	1.00	3.0e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	98-95-3	Nitrobenzene	SOLID	LA-523-456	U	< 270	ug/kg	1.00	2.7e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	87-86-5	Pentachlorophenol	SOLID	LA-523-456	U	< 310	ug/kg	1.00	3.1e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	85-01-8	Phenanthrene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	108-95-2	Phenol	SOLID	LA-523-456	U	< 100	ug/kg	1.00	1.0e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	129-00-0	Pyrene	SOLID	LA-523-456	U	< 69.0	ug/kg	1.00	69	04/16/03	04/04/03	04/04/03

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WSCF
ANALYTICAL RESULTS REPORT

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

Group #: WSCF20030460

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W030000158	B16RX7	GPP	126-73-8	Tri-n-butylphosphate	SOLID	LA-523-456	D	1.30e+05	ug/kg	50.00	69	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	111-44-4	bis(-2-Chloroethyl)Eth	SOLID	LA-523-456	U	< 250	ug/kg	1.00	2.5e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	111-91-1	bis(2-Chloroethoxy)methane	SOLID	LA-523-456	U	< 120	ug/kg	1.00	1.2e+02	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	13966-29-5	U-234 by AEA	SOLID	LA-508-471		1.80	pCi/g		0.026	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	U-234 by AEA Total Cntg Error	SOLID	LA-508-471		22.0	%		0.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	15117-96-1	U-235 by AEA	SOLID	LA-508-471		0.220	pCi/g		0.026	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	U-235 by AEA Total Cntg Error	SOLID	LA-508-471		30.0	%		0.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	24678-82-8	U-238 by AEA	SOLID	LA-508-471		14.0	pCi/g		6.0e-03	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	E,T,C	U-238 by AEA Total Cntg Error	SOLID	LA-508-471		20.0	%		0.10	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	71-55-6	1,1,1-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	79-34-5	1,1,2,2-Tetrachloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	79-00-5	1,1,2-Trichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	75-34-3	1,1-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	75-35-4	1,1-Dichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	107-06-2	1,2-Dichloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	540-59-0	1,2-Dichloroethene (cis & tran	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	78-87-5	1,2-Dichloropropane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	71-36-3	1-Butanol	SOLID	LA-523-455	U	< 20.0	ug/kg	1.00	20	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	78-93-3	2-Butanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	591-78-6	2-Hexanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	107-87-9	2-Pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	108-10-1	4-Methyl-2-pentanone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	67-64-1	Acetone	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	71-43-2	Benzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	75-27-4	Bromodichloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	75-25-2	Bromoform	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	74-83-9	Bromomethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (inorganic)
E - Analyte is an estimate, has potentially larger errors
U - Analyzed for but not detected above limiting criteria.
D - Analyte was identified at a secondary dilution factor
J - Estimated Value

DF=Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

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

Group #: WSCF20030460

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W030000158	B16RX7	GPP	75-15-0	Carbon Disulfide	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	56-23-5	Carbon Tetrachloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	108-90-7	Chlorobenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	75-00-3	Chloroethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	67-66-3	Chloroform	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	74-87-3	Chloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	124-48-1	Dibromochloromethane	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	100-41-4	Ethylbenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	75-09-2	Methylene Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	100-42-5	Styrene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	127-18-4	Tetrachloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	108-88-3	Toluene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	1330-20-7	Total Xylenes	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	79-01-6	Trichloroethene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	75-01-4	Vinyl Chloride	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	10061-01-5	cis-1,3-Dichloropropene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	104-51-8	n-Butylbenzene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	10061-02-6	trans-1,3-Dichloropropene	SOLID	LA-523-455	U	< 2.00	ug/kg	1.00	2.0	04/16/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	8008-20-6	Kerosene	SOLID	NWTPH	DU	< 5.00e+03	ug/kg	4.00	5.0e+03	05/01/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	68476-34-6	Total Pet. Hydrocarbons Diesel	SOLID	NWTPH	D	3.00e+05	ug/kg	4.00	4.1e+04	05/01/03	04/04/03	04/04/03
W030000158	B16RX7	GPP	84-15-1	ortho-Terphenyl	SOLID	NWTPH	D	2.00e+04	ug/kg	4.00	1.7e+03	05/01/03	04/04/03	04/04/03

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D - Analyte was identified at a secondary dilution factor
J - Estimated Value

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WSCF
ANALYTICAL COMMENT REPORT

2-11

Attention: Steve Trent
Project Number F03-006

Group #: WSCF20030460

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		IC: Fluoride detected, but at a concentration less than that of the lowest calibration level. Unknown peak(s) potentially interfering with fluoride. Phosphate-P detected but at a concentration less than that of the lowest calibration level. Four matrix spikes prepared and analyzed All four matrix spikes were consistently low for sulfate, which indicates a matrix interference from an unknown peak. Sample W030000158 (B16RX7) for GEA test: The qualitative and quantitative determinations of Sn-126 could not be performed due to peak interferences from the daughter nuclides(Pb-212, Pb-214) originating from natural radioactivity that is present in the sample. ICP-MS: The preparation blank contains 1.79 ug/L (ppb) antimony. The silver LCS result failed high according to method limits but passed according to the standard mfg. performance acceptance limits, therefore no flag is issued. Estimated aluminum results due to being beyond linear range. Estimated selenium, molybdenum, and arsenic results due to low MS and MSD recoveries. ICP-AES: Boron values estimated due to high LCS recovery and large spectral interference from iron - wwb The Pu-239 test had poor RPD but it's not applicable to low level samples. The RPD for the Am-241 test failed. RPD is not applicable to low level samples.

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

2 - 12

Attention: Steve Trent
Project Number F03-006

Group #: WSCF20030460

Sample #	Client ID		Lab Area	Test	Comment
					SVOA: Sample W030000158 has a Diesel hump which elutes from 6 min. to 11 min. and a very large TBP peak. The results are reported on a dry wt. basis. The extract was diluted 50 fold so the TBP could be quantitated.The blank had some contamination in it due to the solvent used in the ASE system.The sample has matrix problems which resulted in low recoveries for Phenol-d5 and high recoveries for 1,2,4-Trichlorobenzene in the MS and MSD. Surrogate RPD for Phenol-d5 is high. The LCS and Blank were good. A J-flag is used for target compound concentrations which are below the lowest calibration standard but above the detection limit. Matrix spike 4-Nitrophenol is out of limits and is probably due to matrix effects. den
					TPHD: The MS/MSD diesel recoveries are greater than limits. The amount of the spike is about 10% of the sample diesel concentration. Consequently the measurement variability is greater than the amount of the spike and causes large variation in the calculated spike recovery. Results are moisture corrected and reported on a dry weight basis. cgc
					VOA: Sample W030000158 has Surr. 1,2-Dichloroethane out high at 136% and Surr. 4-Bromofluorobenzene out low at 79.9% . All other QC is good. den
W030000158	B16RX7	GPP	VALTEST	Ammonia (N) by IC	Low spike recoveries due to probable matrix effect and spike concentration is less than half of sample conc. -wwb

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

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

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

Group #: WSCF20030460

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W030000158	B16RX7	GPP	Gamma Energy Analysis-grd H2O	K-40 Count Error				11.465	%
W030000158	B16RX7	GPP	Gamma Energy Analysis-grd H2O	K-40				9.48	pCi/g
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 6.873 Naphthalene, decahydro	1618-22-0	6.8733	JN	1000	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 7.281 Cyclohexane, 2-butyl-1	54676-39-0	7.28195	JN	1200	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 7.496 Unknown	Unknown	7.496483	J	1300	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 7.629 Unknown	Unknown	7.6293	J	1300	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 7.384 Unknown	Unknown	7.3841	J	1400	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 9.498 Unknown	Unknown	9.498866	J	1600	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 15.935 Unknown Siloxane	Unknown	15.93511	J	1900	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 13.054 Benzenesulfonamide, N-	3622-84-2	13.05413	JN	2400	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 17.212 Unknown	Unknown	17.21215	J	3200	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 6.699 Unknown	Unknown	6.699616	J	350	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 18.397 Unknown	Unknown	18.39725	J	3700	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 19.510 Unknown Siloxane	Unknown	19.51081	J	4400	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 20.573 Unknown Siloxane	Unknown	20.5733	J	5100	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 7.220 Unknown	Unknown	7.22065	J	530	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 9.723 Unknown	Unknown	9.723633	J	790	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 7.782 Unknown	Unknown	7.782533	J	8600	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 7.149 Unknown	Unknown	7.149133	J	890	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 23.413 Unknown Siloxane	Unknown	23.41343	J	930	ug/kg
W030000158	B16RX7	GPP	SW-846 8270B Semi-Vols	SMP 7.700 Unknown	Unknown	7.700816	J	930	ug/kg

RQ=Result Qualifier J - Estimated Value

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Ground Water Protection Program

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-508-421 LA-508-421: OPERATION OF THE TRI-CARB MODEL 2500TR LIQUID SCINTILLATION ANALYZER
None No reference to any industry method.

LA-508-462 Gamma Energy Analysis -- the Genie System -- WSCF
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-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 http://apweb02/asponlinedocs/wscf/sample%20mgmt/ProcedureMethodCrossReference.pdf. This document includes on-line links to full-text versions of the procedures and methods, where available.

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-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	
	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 http://apweb02/asponlinedocs/wscf/sample%20mgmt/ProcedureMethodCrossReference.pdf. This document includes on-line links to full-text versions of the procedures and methods, where available.

w13qlog v1 30-may-2003 13:16:25

W13q Worklist/Batch/QC Report for Group# WSCF20030460

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
				SAMPLE	W030000158	Sample Screen - LAB USE ONLY
19092	2	19485		SAMPLE	W030000158	A/B by Liquid Scintillation
				SAMPLE	W030000158	Percent Solids
				SAMPLE	W030000158	pH Soil and Waste Measurement
19111	2	19506	22165	BLANK		Anions by Ion Chromatography
19111	8	19506	22165	BLANK		Anions by Ion Chromatography
19111	3	19506	22165	LCS		Anions by Ion Chromatography
19111	5	19506	22165	DUP	W030000158	Anions by Ion Chromatography
19111	6	19506	22165	MS	W030000158	Anions by Ion Chromatography
19111	7	19506	22165	MSD	W030000158	Anions by Ion Chromatography
19111	4	19506	22165	SAMPLE	W030000158	Anions by Ion Chromatography
			22196	BLANK		Cyanide by Midi/Spectrophotom
			22196	BLNK-PREP		Cyanide by Midi/Spectrophotom
			22196	DUP		Cyanide by Midi/Spectrophotom
			22196	LCS		Cyanide by Midi/Spectrophotom
			22196	LCS-2		Cyanide by Midi/Spectrophotom
			22196	MS	W030000158	Cyanide by Midi/Spectrophotom
			22196	MSD	W030000158	Cyanide by Midi/Spectrophotom
			22196	SAMPLE	W030000158	Cyanide by Midi/Spectrophotom
			22196	SPK-RPD	W030000158	Cyanide by Midi/Spectrophotom
19152	1	19546	22200	BLANK		ICP-2008 MS All possible metal
19152	3	19546	22200	LCS		ICP-2008 MS All possible metal
19152	4	19546	22200	MS	W030000157	ICP-2008 MS All possible metal
19152	5	19546	22200	MSD	W030000157	ICP-2008 MS All possible metal
19152	6	19546	22200	MS	W030000158	ICP-2008 MS All possible metal
19152	8	19546	22200	MSD	W030000158	ICP-2008 MS All possible metal
19152	7	19546	22200	SAMPLE	W030000158	ICP-2008 MS All possible metal
19152	10	19546	22200	MS	W030000159	ICP-2008 MS All possible metal
19152	11	19546	22200	MSD	W030000159	ICP-2008 MS All possible metal
19091	2	19486	22209	SAMPLE	W030000158	Gamma Energy Analysis-grd H2O
19186	1	19580	22252	BLANK		Plutonium Isotopics by AEA
19186	2	19580	22252	LCS		Plutonium Isotopics by AEA
19186	3	19580	22252	DUP	W030000158	Plutonium Isotopics by AEA
19186	4	19580	22252	SAMPLE	W030000158	Plutonium Isotopics by AEA
19186	5	19580	22252	DUP	W030000176	Plutonium Isotopics by AEA
19191	1	19585	22280	BLANK		Americium by AEA
19191	2	19585	22280	LCS		Americium by AEA
19191	3	19585	22280	DUP	W030000158	Americium by AEA
19191	4	19585	22280	SAMPLE	W030000158	Americium by AEA
19191	5	19585	22280	DUP	W030000176	Americium by AEA
			22299	BLANK		SW-846 8270B Semi-Vols
			22299	LCS		SW-846 8270B Semi-Vols
			22299	MS	W030000158	SW-846 8270B Semi-Vols
			22299	MSD	W030000158	SW-846 8270B Semi-Vols
			22299	SAMPLE	W030000158	SW-846 8270B Semi-Vols

			22299	SPK-RPD	W030000158	SW-846 8270B Semi-Vols
			22299	SURR	W030000158	SW-846 8270B Semi-Vols
19162	1	19553	22312	BLANK		Uranium Isotopics by AEA
19162	2	19553	22312	LCS		Uranium Isotopics by AEA
19162	3	19553	22312	DUP	W030000158	Uranium Isotopics by AEA
19162	4	19553	22312	SAMPLE	W030000158	Uranium Isotopics by AEA
19162	5	19553	22312	DUP	W030000176	Uranium Isotopics by AEA
19313	1	19707	22369	BLANK		Alcohols, Glycols - 8015
19313	2	19707	22369	LCS		Alcohols, Glycols - 8015
19313	4	19707	22369	MS	W030000158	Alcohols, Glycols - 8015
19313	5	19707	22369	MSD	W030000158	Alcohols, Glycols - 8015
19313	3	19707	22369	SAMPLE	W030000158	Alcohols, Glycols - 8015
19313	5	19707	22369	SPK-RPD	W030000158	Alcohols, Glycols - 8015
19313	7	19707	22369	MS	W030000159	Alcohols, Glycols - 8015
19313	8	19707	22369	MSD	W030000159	Alcohols, Glycols - 8015
19313	8	19707	22369	SPK-RPD	W030000159	Alcohols, Glycols - 8015
			22370	BLANK		WTPH-D TPH Diesel Range (Wa)
			22370	LCS		WTPH-D TPH Diesel Range (Wa)
			22370	MS	W030000158	WTPH-D TPH Diesel Range (Wa)
			22370	MSD	W030000158	WTPH-D TPH Diesel Range (Wa)
			22370	SAMPLE	W030000158	WTPH-D TPH Diesel Range (Wa)
			22370	SPK-RPD	W030000158	WTPH-D TPH Diesel Range (Wa)
			22370	SURR	W030000158	WTPH-D TPH Diesel Range (Wa)
19316	3	19709	22372	BLNK-PREP		Ammonia (N) by IC
19316	8	19709	22372	BLNK-PREP		Ammonia (N) by IC
19316	1	19709	22372	LCS		Ammonia (N) by IC
19316	5	19709	22372	DUP	W030000158	Ammonia (N) by IC
19316	6	19709	22372	MS	W030000158	Ammonia (N) by IC
19316	7	19709	22372	MSD	W030000158	Ammonia (N) by IC
19316	4	19709	22372	SAMPLE	W030000158	Ammonia (N) by IC
19318	1	19711	22375	BLANK		NWTPH-GX TPH Gasoline Range
19318	2	19711	22375	LCS		NWTPH-GX TPH Gasoline Range
19318	4	19711	22375	DUP	W030000157	NWTPH-GX TPH Gasoline Range
19318	5	19711	22375	MS	W030000157	NWTPH-GX TPH Gasoline Range
19318	6	19711	22375	MSD	W030000157	NWTPH-GX TPH Gasoline Range
19318	6	19711	22375	SPK-RPD	W030000157	NWTPH-GX TPH Gasoline Range
19318	8	19711	22375	MS	W030000158	NWTPH-GX TPH Gasoline Range
19318	9	19711	22375	MSD	W030000158	NWTPH-GX TPH Gasoline Range
19318	7	19711	22375	SAMPLE	W030000158	NWTPH-GX TPH Gasoline Range
19318	9	19711	22375	SPK-RPD	W030000158	NWTPH-GX TPH Gasoline Range
19318	11	19711	22375	MS	W030000159	NWTPH-GX TPH Gasoline Range
19318	12	19711	22375	MSD	W030000159	NWTPH-GX TPH Gasoline Range
19318	12	19711	22375	SPK-RPD	W030000159	NWTPH-GX TPH Gasoline Range
			22377	BLANK		VOA Ground Water Protection
			22377	LCS		VOA Ground Water Protection
			22377	MS	W030000157	VOA Ground Water Protection
			22377	MSD	W030000157	VOA Ground Water Protection
			22377	MS	W030000158	VOA Ground Water Protection
			22377	MSD	W030000158	VOA Ground Water Protection
			22377	SAMPLE	W030000158	VOA Ground Water Protection
			22377	SURR	W030000158	VOA Ground Water Protection
			22377	MS	W030000159	VOA Ground Water Protection
			22377	MSD	W030000159	VOA Ground Water Protection
			22377	SPK-RPD	W030000159	VOA Ground Water Protection

19334	1	19726	22387	BLANK		ICP Metals Analysis, Grd H20 P
19334	2	19726	22387	LCS		ICP Metals Analysis, Grd H20 P
19334	4	19726	22387	MS	W030000157	ICP Metals Analysis, Grd H20 P
19334	5	19726	22387	MSD	W030000157	ICP Metals Analysis, Grd H20 P
19334	7	19726	22387	MS	W030000158	ICP Metals Analysis, Grd H20 P
19334	8	19726	22387	MSD	W030000158	ICP Metals Analysis, Grd H20 P
19334	6	19726	22387	SAMPLE	W030000158	ICP Metals Analysis, Grd H20 P
19334	10	19726	22387	MS	W030000159	ICP Metals Analysis, Grd H20 P
19334	11	19726	22387	MSD	W030000159	ICP Metals Analysis, Grd H20 P
19334	0	19726	22387	SPK-RPD	W030000159	ICP Metals Analysis, Grd H20 P
19340	1	19733	22397	BLANK		ICP Metals Analysis, Grd H20 P
19340	2	19733	22397	LCS		ICP Metals Analysis, Grd H20 P
19340	4	19733	22397	MS	W030000157	ICP Metals Analysis, Grd H20 P
19340	5	19733	22397	MSD	W030000157	ICP Metals Analysis, Grd H20 P
19340	7	19733	22397	MS	W030000158	ICP Metals Analysis, Grd H20 P
19340	8	19733	22397	MSD	W030000158	ICP Metals Analysis, Grd H20 P
19334	6	19733	22397	SAMPLE	W030000158	ICP Metals Analysis, Grd H20 P
19340	10	19733	22397	MS	W030000159	ICP Metals Analysis, Grd H20 P
19340	11	19733	22397	MSD	W030000159	ICP Metals Analysis, Grd H20 P
19340	0	19733	22397	SPK-RPD	W030000159	ICP Metals Analysis, Grd H20 P

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: Anions by Ion Chromatography

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

Lab ID: W030000158

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
DUP	Bromide (Br) by IC	24959-67-9	n/a	RPD	04/08/03	0.000	20.000	
DUP	Chloride (Cl) by IC	16887-00-6	1.047	RPD	04/08/03	0.000	20.000	
DUP	Fluoride (F) by IC	16984-48-8	5.063	RPD	04/08/03	0.000	20.000	
DUP	Nitrite (N) by IC	NO2-N	n/a	RPD	04/08/03	0.000	20.000	
DUP	Nitrate (N) by IC	NO3-N	12.032	RPD	04/08/03	0.000	20.000	
DUP	Phosphate (P) by IC	14265-44-2	8.497	RPD	04/08/03	0.000	20.000	
DUP	Sulfate (SO4) by IC	14808-79-8	6.145	RPD	04/08/03	0.000	20.000	
MS	Bromide (Br) by IC	24959-67-9	90.955	% Recov	04/08/03	75.000	125.000	
MS	Chloride (Cl) by IC	16887-00-6	90.707	% Recov	04/08/03	75.000	125.000	
MS	Fluoride (F) by IC	16984-48-8	117.587	% Recov	04/08/03	75.000	125.000	
MS	Nitrite (N) by IC	NO2-N	92.262	% Recov	04/08/03	75.000	125.000	
MS	Nitrate (N) by IC	NO3-N	108.072	% Recov	04/08/03	75.000	125.000	
MS	Phosphate (P) by IC	14265-44-2	92.805	% Recov	04/08/03	75.000	125.000	
MS	Sulfate (SO4) by IC	14808-79-8	70.558	% Recov	04/08/03	75.000	125.000	*
MSD	Bromide (Br) by IC	24959-67-9	90.452	% Recov	04/08/03	75.000	125.000	
MSD	Chloride (Cl) by IC	16887-00-6	90.505	% Recov	04/08/03	75.000	125.000	
MSD	Fluoride (F) by IC	16984-48-8	119.836	% Recov	04/08/03	75.000	125.000	
MSD	Nitrite (N) by IC	NO2-N	94.246	% Recov	04/08/03	75.000	125.000	
MSD	Nitrate (N) by IC	NO3-N	113.004	% Recov	04/08/03	75.000	125.000	
MSD	Phosphate (P) by IC	14265-44-2	93.952	% Recov	04/08/03	75.000	125.000	
MSD	Sulfate (SO4) by IC	14808-79-8	70.558	% Recov	04/08/03	75.000	125.000	*

BATCH QC

BLANK	Bromide (Br) by IC	24959-67-9	<4.50e-2	mg/L	04/07/03	0.000	300.000	
BLANK	Bromide (Br) by IC	24959-67-9	<4.60e-2	mg/L	04/08/03	0.000	300.000	
BLANK	Chloride (Cl) by IC	16887-00-6	<1.40e-2	mg/L	04/08/03	0.000	300.000	
BLANK	Chloride (Cl) by IC	16887-00-6	<1.40e-2	mg/L	04/07/03	0.000	300.000	
BLANK	Fluoride (F) by IC	16984-48-8	<7.00e-3	mg/L	04/07/03	0.000	300.000	
BLANK	Fluoride (F) by IC	16984-48-8	<7.00e-3	mg/L	04/08/03	0.000	300.000	
BLANK	Nitrite (N) by IC	NO2-N	<9.00e-3	mg/L	04/07/03	0.000	300.000	
BLANK	Nitrite (N) by IC	NO2-N	<9.00e-3	mg/L	04/08/03	0.000	300.000	
BLANK	Nitrate (N) by IC	NO3-N	<5.00e-3	mg/L	04/07/03	0.000	300.000	
BLANK	Nitrate (N) by IC	NO3-N	<5.00e-3	mg/L	04/08/03	0.000	300.000	
BLANK	Phosphate (P) by IC	14265-44-2	<1.30e-2	mg/L	04/08/03	0.000	300.000	
BLANK	Phosphate (P) by IC	14265-44-2	<1.30e-2	mg/L	04/07/03	0.000	300.000	
BLANK	Sulfate (SO4) by IC	14808-79-8	<2.40e-2	mg/L	04/08/03	0.000	300.000	
BLANK	Sulfate (SO4) by IC	14808-79-8	<2.40e-2	mg/L	04/07/03	0.000	300.000	
LCS	Bromide (Br) by IC	24959-67-9	98.753	% Recov	04/08/03	80.000	120.000	
LCS	Chloride (Cl) by IC	16887-00-6	100.000	% Recov	04/08/03	80.000	120.000	
LCS	Fluoride (F) by IC	16984-48-8	107.396	% Recov	04/08/03	80.000	120.000	
LCS	Nitrite (N) by IC	NO2-N	97.647	% Recov	04/08/03	80.000	120.000	
LCS	Nitrate (N) by IC	NO3-N	97.780	% Recov	04/08/03	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: Anions by Ion Chromatography

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

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
LCS	Phosphate (P) by IC	14265-44-2	98.555	% Recov	04/08/03	80.000	120.000
LCS	Sulfate (SO4) by IC	14808-79-8	101.003	% Recov	04/08/03	80.000	120.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: Cyanide by Midi/Spectrophotom

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

Lab ID: W030000158

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
MS	Cyanide by Midi/Spectrophotom	57-12-5	90.200	% Recov	04/15/03	75.000	125.000
MSD	Cyanide by Midi/Spectrophotom	57-12-5	105.000	% Recov	04/15/03	75.000	125.000
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	15.164	Ratio	04/15/03	0.000	20.000

BATCH QC

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	0	Ratio	04/15/03	-2.000	2.000
BLNK-PREP	Cyanide by Midi/Spectrophotom	57-12-5	0	Ratio	04/15/03	-4.000	4.000
DUP	Cyanide by Midi/Spectrophotom	57-12-5	n/a	Ratio	04/15/03	0.000	20.000
LCS	Cyanide by Midi/Spectrophotom	57-12-5	97.500	% Recov	04/15/03	90.000	110.000
LCS-2	Cyanide by Midi/Spectrophotom	57-12-5	n/a	% Recov	04/15/03	80.000	120.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

Lab ID: W030000157
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
MS	Silver by ICP-MS	7440-22-4	95.674	% Recov	04/15/03	70.000	130.000	
MS	Aluminum by ICP-MS	7429-90-5	n/a	% Recov	04/15/03	70.000	130.000	
MS	Arsenic by ICP-MS	7440-38-2	55.332	% Recov	04/15/03	70.000	130.000	*
MS	Barium by ICP-MS	7440-39-3	n/a	% Recov	04/15/03	70.000	130.000	
MS	Beryllium by ICP-MS	7440-41-7	79.880	% Recov	04/15/03	70.000	130.000	
MS	Cadmium by ICP-MS	7440-43-9	93.763	% Recov	04/15/03	70.000	130.000	
MS	Cobalt by ICP-MS	7440-48-4	86.117	% Recov	04/15/03	70.000	130.000	
MS	Chromium by ICP-MS	7440-47-3	92.455	% Recov	04/15/03	70.000	130.000	
MS	Copper by ICP-MS	7440-50-8	91.046	% Recov	04/15/03	70.000	130.000	
MS	Mercury by ICP-MS	7439-97-6	112.676	% Recov	04/15/03	70.000	130.000	
MS	Manganese by ICP-MS	7439-96-5	n/a	% Recov	04/15/03	70.000	130.000	
MS	Molybdenum by ICP-MS	7439-98-7	56.640	% Recov	04/15/03	70.000	130.000	*
MS	Nickel by ICP-MS	7440-02-0	104.628	% Recov	04/15/03	70.000	130.000	
MS	Lead by ICP-MS	7439-92-1	100.604	% Recov	04/15/03	70.000	130.000	
MS	Antimony by ICP-MS	7440-36-0	99.195	% Recov	04/15/03	70.000	130.000	
MS	Selenium by ICP-MS	7782-49-2	51.911	% Recov	04/15/03	70.000	130.000	*
MS	Thorium by ICP-MS	7440-29-1	106.640	% Recov	04/15/03	70.000	130.000	
MS	Thallium by ICP-MS	7440-28-0	100.101	% Recov	04/15/03	70.000	130.000	
MS	Uranium by ICP-MS	7440-61-1	n/a	% Recov	04/15/03	70.000	130.000	
MS	Vanadium by ICP-MS	7440-62-2	n/a	% Recov	04/15/03	70.000	130.000	
MS	Zinc by ICP-MS	7440-66-6	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Silver by ICP-MS	7440-22-4	94.790	% Recov	04/15/03	70.000	130.000	
MSD	Aluminum by ICP-MS	7429-90-5	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Arsenic by ICP-MS	7440-38-2	51.703	% Recov	04/15/03	70.000	130.000	*
MSD	Barium by ICP-MS	7440-39-3	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Beryllium by ICP-MS	7440-41-7	80.060	% Recov	04/15/03	70.000	130.000	
MSD	Cadmium by ICP-MS	7440-43-9	93.387	% Recov	04/15/03	70.000	130.000	
MSD	Cobalt by ICP-MS	7440-48-4	88.878	% Recov	04/15/03	70.000	130.000	
MSD	Chromium by ICP-MS	7440-47-3	88.377	% Recov	04/15/03	70.000	130.000	
MSD	Copper by ICP-MS	7440-50-8	130.261	% Recov	04/15/03	70.000	130.000	*
MSD	Mercury by ICP-MS	7439-97-6	114.228	% Recov	04/15/03	70.000	130.000	
MSD	Manganese by ICP-MS	7439-96-5	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Molybdenum by ICP-MS	7439-98-7	56.413	% Recov	04/15/03	70.000	130.000	*
MSD	Nickel by ICP-MS	7440-02-0	81.162	% Recov	04/15/03	70.000	130.000	
MSD	Lead by ICP-MS	7439-92-1	103.206	% Recov	04/15/03	70.000	130.000	
MSD	Antimony by ICP-MS	7440-36-0	98.497	% Recov	04/15/03	70.000	130.000	
MSD	Selenium by ICP-MS	7782-49-2	50.301	% Recov	04/15/03	70.000	130.000	*
MSD	Thorium by ICP-MS	7440-29-1	141.283	% Recov	04/15/03	70.000	130.000	*
MSD	Thallium by ICP-MS	7440-28-0	101.202	% Recov	04/15/03	70.000	130.000	
MSD	Uranium by ICP-MS	7440-61-1	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Vanadium by ICP-MS	7440-62-2	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Zinc by ICP-MS	7440-66-6	n/a	% Recov	04/15/03	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

Lab ID: W030000158
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
MS	Silver by ICP-MS	7440-22-4	94.172	% Recov	04/15/03	70.000	130.000	
MS	Aluminum by ICP-MS	7429-90-5	n/a	% Recov	04/15/03	70.000	130.000	
MS	Arsenic by ICP-MS	7440-38-2	56.953	% Recov	04/15/03	70.000	130.000	*
MS	Barium by ICP-MS	7440-39-3	n/a	% Recov	04/15/03	70.000	130.000	
MS	Beryllium by ICP-MS	7440-41-7	80.470	% Recov	04/15/03	70.000	130.000	
MS	Cadmium by ICP-MS	7440-43-9	91.309	% Recov	04/15/03	70.000	130.000	
MS	Cobalt by ICP-MS	7440-48-4	73.211	% Recov	04/15/03	70.000	130.000	
MS	Chromium by ICP-MS	7440-47-3	93.047	% Recov	04/15/03	70.000	130.000	
MS	Copper by ICP-MS	7440-50-8	80.470	% Recov	04/15/03	70.000	130.000	
MS	Mercury by ICP-MS	7439-97-6	113.497	% Recov	04/15/03	70.000	130.000	
MS	Manganese by ICP-MS	7439-96-5	n/a	% Recov	04/15/03	70.000	130.000	
MS	Molybdenum by ICP-MS	7439-98-7	62.474	% Recov	04/15/03	70.000	130.000	*
MS	Nickel by ICP-MS	7440-02-0	87.014	% Recov	04/15/03	70.000	130.000	
MS	Lead by ICP-MS	7439-92-1	105.317	% Recov	04/15/03	70.000	130.000	
MS	Antimony by ICP-MS	7440-36-0	98.671	% Recov	04/15/03	70.000	130.000	
MS	Selenium by ICP-MS	7782-49-2	52.658	% Recov	04/15/03	70.000	130.000	*
MS	Thorium by ICP-MS	7440-29-1	117.587	% Recov	04/15/03	70.000	130.000	
MS	Thallium by ICP-MS	7440-28-0	99.489	% Recov	04/15/03	70.000	130.000	
MS	Uranium by ICP-MS	7440-61-1	n/a	% Recov	04/15/03	70.000	130.000	
MS	Vanadium by ICP-MS	7440-62-2	n/a	% Recov	04/15/03	70.000	130.000	
MS	Zinc by ICP-MS	7440-66-6	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Silver by ICP-MS	7440-22-4	94.657	% Recov	04/15/03	70.000	130.000	
MSD	Aluminum by ICP-MS	7429-90-5	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Arsenic by ICP-MS	7440-38-2	52.823	% Recov	04/15/03	70.000	130.000	*
MSD	Barium by ICP-MS	7440-39-3	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Beryllium by ICP-MS	7440-41-7	76.816	% Recov	04/15/03	70.000	130.000	
MSD	Cadmium by ICP-MS	7440-43-9	94.556	% Recov	04/15/03	70.000	130.000	
MSD	Cobalt by ICP-MS	7440-48-4	83.569	% Recov	04/15/03	70.000	130.000	
MSD	Chromium by ICP-MS	7440-47-3	97.984	% Recov	04/15/03	70.000	130.000	
MSD	Copper by ICP-MS	7440-50-8	82.359	% Recov	04/15/03	70.000	130.000	
MSD	Mercury by ICP-MS	7439-97-6	115.927	% Recov	04/15/03	70.000	130.000	
MSD	Manganese by ICP-MS	7439-96-5	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Molybdenum by ICP-MS	7439-98-7	59.980	% Recov	04/15/03	70.000	130.000	*
MSD	Nickel by ICP-MS	7440-02-0	113.911	% Recov	04/15/03	70.000	130.000	
MSD	Lead by ICP-MS	7439-92-1	111.895	% Recov	04/15/03	70.000	130.000	
MSD	Antimony by ICP-MS	7440-36-0	103.831	% Recov	04/15/03	70.000	130.000	
MSD	Selenium by ICP-MS	7782-49-2	48.790	% Recov	04/15/03	70.000	130.000	*
MSD	Thorium by ICP-MS	7440-29-1	122.984	% Recov	04/15/03	70.000	130.000	
MSD	Thallium by ICP-MS	7440-28-0	101.815	% Recov	04/15/03	70.000	130.000	
MSD	Uranium by ICP-MS	7440-61-1	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Vanadium by ICP-MS	7440-62-2	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Zinc by ICP-MS	7440-66-6	n/a	% Recov	04/15/03	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: ICP-2008 MS All possible metal

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

Lab ID: W030000159

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
MS	Silver by ICP-MS	7440-22-4	93.284	% Recov	04/15/03	70.000	130.000	
MS	Aluminum by ICP-MS	7429-90-5	n/a	% Recov	04/15/03	70.000	130.000	
MS	Arsenic by ICP-MS	7440-38-2	55.970	% Recov	04/15/03	70.000	130.000	*
MS	Barium by ICP-MS	7440-39-3	n/a	% Recov	04/15/03	70.000	130.000	
MS	Beryllium by ICP-MS	7440-41-7	76.226	% Recov	04/15/03	70.000	130.000	
MS	Cadmium by ICP-MS	7440-43-9	92.217	% Recov	04/15/03	70.000	130.000	
MS	Cobalt by ICP-MS	7440-48-4	86.567	% Recov	04/15/03	70.000	130.000	
MS	Chromium by ICP-MS	7440-47-3	91.898	% Recov	04/15/03	70.000	130.000	
MS	Copper by ICP-MS	7440-50-8	83.582	% Recov	04/15/03	70.000	130.000	
MS	Mercury by ICP-MS	7439-97-6	113.006	% Recov	04/15/03	70.000	130.000	
MS	Manganese by ICP-MS	7439-96-5	n/a	% Recov	04/15/03	70.000	130.000	
MS	Molybdenum by ICP-MS	7439-98-7	56.930	% Recov	04/15/03	70.000	130.000	*
MS	Nickel by ICP-MS	7440-02-0	86.887	% Recov	04/15/03	70.000	130.000	
MS	Lead by ICP-MS	7439-92-1	107.676	% Recov	04/15/03	70.000	130.000	
MS	Antimony by ICP-MS	7440-36-0	97.228	% Recov	04/15/03	70.000	130.000	
MS	Selenium by ICP-MS	7782-49-2	50.000	% Recov	04/15/03	70.000	130.000	*
MS	Thorium by ICP-MS	7440-29-1	118.337	% Recov	04/15/03	70.000	130.000	
MS	Thallium by ICP-MS	7440-28-0	101.706	% Recov	04/15/03	70.000	130.000	
MS	Uranium by ICP-MS	7440-61-1	n/a	% Recov	04/15/03	70.000	130.000	
MS	Vanadium by ICP-MS	7440-62-2	n/a	% Recov	04/15/03	70.000	130.000	
MS	Zinc by ICP-MS	7440-66-6	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Silver by ICP-MS	7440-22-4	92.055	% Recov	04/15/03	70.000	130.000	
MSD	Aluminum by ICP-MS	7429-90-5	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Arsenic by ICP-MS	7440-38-2	65.148	% Recov	04/15/03	70.000	130.000	*
MSD	Barium by ICP-MS	7440-39-3	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Beryllium by ICP-MS	7440-41-7	78.814	% Recov	04/15/03	70.000	130.000	
MSD	Cadmium by ICP-MS	7440-43-9	91.419	% Recov	04/15/03	70.000	130.000	
MSD	Cobalt by ICP-MS	7440-48-4	87.606	% Recov	04/15/03	70.000	130.000	
MSD	Chromium by ICP-MS	7440-47-3	90.572	% Recov	04/15/03	70.000	130.000	
MSD	Copper by ICP-MS	7440-50-8	84.640	% Recov	04/15/03	70.000	130.000	
MSD	Mercury by ICP-MS	7439-97-6	114.407	% Recov	04/15/03	70.000	130.000	
MSD	Manganese by ICP-MS	7439-96-5	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Molybdenum by ICP-MS	7439-98-7	57.627	% Recov	04/15/03	70.000	130.000	*
MSD	Nickel by ICP-MS	7440-02-0	90.254	% Recov	04/15/03	70.000	130.000	
MSD	Lead by ICP-MS	7439-92-1	103.814	% Recov	04/15/03	70.000	130.000	
MSD	Antimony by ICP-MS	7440-36-0	92.479	% Recov	04/15/03	70.000	130.000	
MSD	Selenium by ICP-MS	7782-49-2	52.331	% Recov	04/15/03	70.000	130.000	*
MSD	Thorium by ICP-MS	7440-29-1	118.644	% Recov	04/15/03	70.000	130.000	
MSD	Thallium by ICP-MS	7440-28-0	101.907	% Recov	04/15/03	70.000	130.000	
MSD	Uranium by ICP-MS	7440-61-1	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Vanadium by ICP-MS	7440-62-2	n/a	% Recov	04/15/03	70.000	130.000	
MSD	Zinc by ICP-MS	7440-66-6	n/a	% Recov	04/15/03	70.000	130.000	

BATCH QC

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: ICP-2008 MS All possible metal

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

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
BLANK	Silver by ICP-MS	7440-22-4	<0.200	ug/L	04/15/03	-0.440	0.440	
BLANK	Aluminum by ICP-MS	7429-90-5	<11.0	ug/L	04/15/03	-24.200	24.200	
BLANK	Arsenic by ICP-MS	7440-38-2	<0.300	ug/L	04/15/03	-0.660	0.660	
BLANK	Barium by ICP-MS	7440-39-3	<0.200	ug/L	04/15/03	-0.440	0.440	
BLANK	Beryllium by ICP-MS	7440-41-7	<0.300	ug/L	04/15/03	-0.660	0.660	
BLANK	Cadmium by ICP-MS	7440-43-9	<0.100	ug/L	04/15/03	-0.220	0.220	
BLANK	Cobalt by ICP-MS	7440-48-4	<0.200	ug/L	04/15/03	-0.440	0.440	
BLANK	Chromium by ICP-MS	7440-47-3	<0.300	ug/L	04/15/03	-0.660	0.660	
BLANK	Copper by ICP-MS	7440-50-8	0.766	ug/L	04/15/03	-1.100	1.100	
BLANK	Mercury by ICP-MS	7439-97-6	<0.100	ug/L	04/15/03	-0.220	0.220	
BLANK	Manganese by ICP-MS	7439-96-5	<0.300	ug/L	04/15/03	-0.660	0.660	
BLANK	Molybdenum by ICP-MS	7439-98-7	<0.300	ug/L	04/15/03	-0.660	0.660	
BLANK	Nickel by ICP-MS	7440-02-0	<0.500	ug/L	04/15/03	-1.100	1.100	
BLANK	Lead by ICP-MS	7439-92-1	<1.20	ug/L	04/15/03	-2.640	2.640	
BLANK	Antimony by ICP-MS	7440-36-0	1.79	ug/L	04/15/03	-1.100	1.100	*
BLANK	Selenium by ICP-MS	7782-49-2	<0.300	ug/L	04/15/03	-0.660	0.660	
BLANK	Thorium by ICP-MS	7440-29-1	<0.200	ug/L	04/15/03	-0.440	0.440	
BLANK	Thallium by ICP-MS	7440-28-0	<0.100	ug/L	04/15/03	-0.220	0.220	
BLANK	Uranium by ICP-MS	7440-61-1	<0.100	ug/L	04/15/03	-0.220	0.220	
BLANK	Vanadium by ICP-MS	7440-62-2	<0.400	ug/L	04/15/03	-0.880	0.880	
BLANK	Zinc by ICP-MS	7440-66-6	<4.00	ug/L	04/15/03	-8.800	8.800	
LCS	Silver by ICP-MS	7440-22-4	147.899	% Recov	04/15/03	85.000	115.000	*
LCS	Aluminum by ICP-MS	7429-90-5	112.057	% Recov	04/15/03	85.000	115.000	
LCS	Arsenic by ICP-MS	7440-38-2	107.692	% Recov	04/15/03	85.000	115.000	
LCS	Barium by ICP-MS	7440-39-3	104.847	% Recov	04/15/03	85.000	115.000	
LCS	Beryllium by ICP-MS	7440-41-7	106.242	% Recov	04/15/03	85.000	115.000	
LCS	Cadmium by ICP-MS	7440-43-9	105.394	% Recov	04/15/03	85.000	115.000	
LCS	Cobalt by ICP-MS	7440-48-4	99.075	% Recov	04/15/03	85.000	115.000	
LCS	Chromium by ICP-MS	7440-47-3	106.012	% Recov	04/15/03	85.000	115.000	
LCS	Copper by ICP-MS	7440-50-8	104.724	% Recov	04/15/03	85.000	115.000	
LCS	Mercury by ICP-MS	7439-97-6	100.744	% Recov	04/15/03	85.000	115.000	
LCS	Manganese by ICP-MS	7439-96-5	102.796	% Recov	04/15/03	85.000	115.000	
LCS	Molybdenum by ICP-MS	7439-98-7	102.303	% Recov	04/15/03	85.000	115.000	
LCS	Nickel by ICP-MS	7440-02-0	99.522	% Recov	04/15/03	85.000	115.000	
LCS	Lead by ICP-MS	7439-92-1	114.286	% Recov	04/15/03	85.000	115.000	
LCS	Antimony by ICP-MS	7440-36-0	113.768	% Recov	04/15/03	85.000	115.000	
LCS	Selenium by ICP-MS	7782-49-2	108.772	% Recov	04/15/03	85.000	115.000	
LCS	Thorium by ICP-MS	7440-29-1	n/a	% Recov	04/15/03	85.000	115.000	
LCS	Thallium by ICP-MS	7440-28-0	110.442	% Recov	04/15/03	85.000	115.000	
LCS	Uranium by ICP-MS	7440-61-1	101.523	% Recov	04/15/03	85.000	115.000	
LCS	Vanadium by ICP-MS	7440-62-2	103.659	% Recov	04/15/03	85.000	115.000	
LCS	Zinc by ICP-MS	7440-66-6	114.717	% Recov	04/15/03	85.000	115.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: Plutonium Isotopics by AEA

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
Lab ID: W030000158								
BATCH QC ASSOCIATED WITH SAMPLE								
DUP	Pu-239/240 by AEA	PU-239/240	22.222	RPD	04/18/03	0.000	20.000	*
Lab ID: W030000176								
BATCH QC ASSOCIATED WITH SAMPLE								
DUP	Pu-239/240 by AEA	PU-239/240	-64.000	RPD	04/18/03	0.000	20.000	*
BATCH QC								
BLANK	Pu-239/240 by AEA	PU-239/240	1.9e-03	PCG	04/18/03	0.000	1000.000	
LCS	Pu-239/240 by AEA	PU-239/240	92.000	% Recov	04/18/03	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: Americium by AEA

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
Lab ID: W030000158								
BATCH QC ASSOCIATED WITH SAMPLE								
DUP	Am-241 by AEA	14596-10-2	550.000	RPD	04/18/03	0.000	20.000	*
Lab ID: W030000176								
BATCH QC ASSOCIATED WITH SAMPLE								
DUP	Am-241 by AEA	14596-10-2	82.143	RPD	04/18/03	0.000	20.000	*
BATCH QC								
BLANK	Am-241 by AEA	14596-10-2	1.4e-02	PCG	04/21/03	0.000	1000.000	
LCS	Am-241 by AEA	14596-10-2	91.000	% Recov	04/18/03	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

Lab ID: W030000158
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
MS	1,2,4-Trichlorobenzene	120-82-1	111.000	% Recov	04/16/03	46.000	107.000	*
MS	1,4-Dichlorobenzene (SV)	106-46-7	86.600	% Recov	04/16/03	30.000	96.000	
MS	2,4-Dinitrotoluene	121-14-2	77.700	% Recov	04/16/03	59.000	106.000	
MS	2-Fluorophenol Surr	367-12-4	72.200	%Recove	04/16/03	42.000	105.000	
MS	Acenaphthene	83-32-9	95.500	% Recov	04/16/03	61.000	116.000	
MS	4-Chloro-3-methylphenol	59-50-7	102.000	% Recov	04/16/03	61.000	106.000	
MS	2-Chlorophenol	95-57-8	68.400	% Recov	04/16/03	66.000	106.000	
MS	N-Nitroso-di-n-propylamine	621-64-7	81.100	% Recov	04/16/03	71.000	114.000	
MS	2-Fluorobiphenyl Surr	321-60-8	103.000	%Recove	04/16/03	56.000	122.000	
MS	Phenol	108-95-2	66.500	% Recov	04/16/03	42.000	111.000	
MS	Nitrobenzene-d5 Surr	4165-60-0	107.000	%Recove	04/16/03	64.000	111.000	
MS	4-Nitrophenol	100-02-7	0.000	% Recov	04/16/03	32.000	118.000	*
MS	Pentachlorophenol	87-86-5	88.100	% Recov	04/16/03	62.000	114.000	
MS	Phenol-d5 Surr	4165-62-2	58.100	%Recove	04/16/03	54.000	120.000	
MS	Pyrene	129-00-0	95.600	% Recov	04/16/03	66.000	118.000	
MS	2,4,6-Tribromophenol Surr	118-79-6	104.000	%Recove	04/16/03	24.000	122.000	
MS	Terphenyl-d14 Surr	98904-43-9	100.000	%Recove	04/16/03	35.000	150.000	
MSD	1,2,4-Trichlorobenzene	120-82-1	108.000	% Recov	04/17/03	46.000	107.000	*
MSD	1,4-Dichlorobenzene (SV)	106-46-7	87.100	% Recov	04/17/03	30.000	96.000	
MSD	2,4-Dinitrotoluene	121-14-2	77.700	% Recov	04/17/03	59.000	106.000	
MSD	2-Fluorophenol Surr	367-12-4	71.800	%Recove	04/17/03	42.000	105.000	
MSD	Acenaphthene	83-32-9	95.400	% Recov	04/17/03	61.000	116.000	
MSD	4-Chloro-3-methylphenol	59-50-7	98.800	% Recov	04/17/03	61.000	106.000	
MSD	2-Chlorophenol	95-57-8	66.500	% Recov	04/17/03	66.000	106.000	
MSD	N-Nitroso-di-n-propylamine	621-64-7	82.400	% Recov	04/17/03	71.000	114.000	
MSD	2-Fluorobiphenyl Surr	321-60-8	102.000	%Recove	04/17/03	56.000	122.000	
MSD	Phenol	108-95-2	43.100	% Recov	04/17/03	42.000	111.000	
MSD	Nitrobenzene-d5 Surr	4165-60-0	107.000	%Recove	04/17/03	64.000	111.000	
MSD	4-Nitrophenol	100-02-7	0.000	% Recov	04/17/03	32.000	118.000	*
MSD	Pentachlorophenol	87-86-5	85.400	% Recov	04/17/03	62.000	114.000	
MSD	Phenol-d5 Surr	4165-62-2	44.800	%Recove	04/17/03	54.000	120.000	*
MSD	Pyrene	129-00-0	94.400	% Recov	04/17/03	66.000	118.000	
MSD	2,4,6-Tribromophenol Surr	118-79-6	109.000	%Recove	04/17/03	24.000	122.000	
MSD	Terphenyl-d14 Surr	98904-43-9	99.000	%Recove	04/17/03	35.000	150.000	
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	2.740	RPD	04/16/03	0.000	20.000	
SPK-RPD	1,4-Dichlorobenzene (SV)	106-46-7	0.576	RPD	04/16/03	0.000	20.000	
SPK-RPD	2,4-Dinitrotoluene	121-14-2	0.000	RPD	04/16/03	0.000	20.000	
SPK-RPD	2-Fluorophenol Surr	367-12-4	99.584	%Recove	04/16/03	42.000	105.000	
SPK-RPD	Acenaphthene	83-32-9	0.105	RPD	04/16/03	0.000	20.000	
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	2.180	RPD	04/16/03	0.000	20.000	
SPK-RPD	2-Chlorophenol	95-57-8	2.817	RPD	04/16/03	0.000	20.000	
SPK-RPD	N-Nitroso-di-n-propylamine	621-64-7	1.590	RPD	04/16/03	0.000	20.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

QC Type	Analyte		CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
SPK-RPD	2-Fluorobiphenyl	Surr	321-60-8	99.029	%Recove	04/16/03	56.000	122.000	
SPK-RPD	Phenol		108-95-2	42.701	RPD	04/16/03	0.000	20.000	*
SPK-RPD	Nitrobenzene-d5	Surr	4165-60-0	100.000	%Recove	04/16/03	64.000	111.000	
SPK-RPD	4-Nitrophenol		100-02-7	0.000	RPD	04/16/03	0.000	20.000	
SPK-RPD	Pentachlorophenol		87-86-5	3.112	RPD	04/16/03	0.000	20.000	
SPK-RPD	Phenol-d5	Surr	4165-62-2	77.108	%Recove	04/16/03	54.000	120.000	
SPK-RPD	Pyrene		129-00-0	1.263	RPD	04/16/03	0.000	20.000	
SPK-RPD	2,4,6-Tribromophenol	Surr	118-79-6	104.808	%Recove	04/16/03	24.000	122.000	
SPK-RPD	Terphenyl-d14	Surr	98904-43-9	99.000	%Recove	04/16/03	35.000	150.000	
SURR	2-Fluorophenol	Surr	367-12-4	69.100	%Recove	04/16/03	42.000	105.000	
SURR	2-Fluorobiphenyl	Surr	321-60-8	99.100	%Recove	04/16/03	56.000	122.000	
SURR	Nitrobenzene-d5	Surr	4165-60-0	107.000	%Recove	04/16/03	64.000	111.000	
SURR	Phenol-d5	Surr	4165-62-2	43.300	%Recove	04/16/03	54.000	120.000	*
SURR	2,4,6-Tribromophenol	Surr	118-79-6	100.000	%Recove	04/16/03	24.000	122.000	
SURR	Terphenyl-d14	Surr	98904-43-9	102.000	%Recove	04/16/03	35.000	150.000	

BATCH QC

BLANK	1,2-Dichlorobenzene (SV)		95-50-1	< 360	ug/Kg	04/16/03		
BLANK	1,2,4-Trichlorobenzene		120-82-1	< 290	ug/Kg	04/16/03		
BLANK	1,3-Dichlorobenzene		541-73-1	< 320	ug/Kg	04/16/03		
BLANK	1,4-Dichlorobenzene (SV)		106-46-7	< 310	ug/Kg	04/16/03		
BLANK	2,4-Dichlorophenol		120-83-2	< 80	ug/Kg	04/16/03		
BLANK	2,4-Dinitrotoluene		121-14-2	< 67	ug/Kg	04/16/03		
BLANK	2,4,5-Trichlorophenol		95-95-4	< 670	ug/Kg	04/16/03		
BLANK	2,4,6-Trichlorophenol		88-06-2	< 67	ug/Kg	04/16/03		
BLANK	2,4-Dimethylphenol		105-67-9	< 67	ug/Kg	04/16/03		
BLANK	2,6-Dinitrotoluene		606-20-2	< 67	ug/Kg	04/16/03		
BLANK	2-Butoxyethanol		111-76-2	< 100	ug/Kg	04/16/03		
BLANK	2-Chloronaphthalene		91-58-7	< 80	ug/Kg	04/16/03		
BLANK	2-Fluorophenol	Surr	367-12-4	70.500	%Recove	04/16/03	42.000	105.000
BLANK	2-Methylnaphthalene		91-57-6	< 180	ug/Kg	04/16/03		
BLANK	2-Methylphenol		95-48-7	< 67	ug/Kg	04/16/03		
BLANK	2-Nitroaniline		88-74-4	< 67	ug/Kg	04/16/03		
BLANK	2-Nitrophenol		88-75-5	< 170	ug/Kg	04/16/03		
BLANK	3 & 4 Methylphenol Total		108-39-4	< 110	ug/Kg	04/16/03	0.000	300.000
BLANK	3-Nitroaniline		99-09-2	< 67	ug/Kg	04/16/03		
BLANK	4,6-Dinitro-2-methylphenol		534-52-1	< 670	ug/Kg	04/16/03		
BLANK	4-Bromophenyl-phenylether		101-55-3	< 67	ug/Kg	04/16/03		
BLANK	4-Chlorophenyl-phenylether		7005-72-3	< 67	ug/Kg	04/16/03		
BLANK	Acenaphthene		83-32-9	< 67	ug/Kg	04/16/03		
BLANK	Acenaphthylene		208-96-8	< 80	ug/Kg	04/16/03		
BLANK	Anthracene		120-12-7	< 67	ug/Kg	04/16/03		
BLANK	bis(-2-Chloroethyl)Eth		111-44-4	< 250	ug/Kg	04/16/03		
BLANK	Benzo(a)anthracene		56-55-3	< 67	ug/Kg	04/16/03		
BLANK	Benzo(b)fluoranthene		205-99-2	< 67	ug/Kg	04/16/03		
BLANK	Benzo(g,h,i)perylene		191-24-2	< 67	ug/Kg	04/16/03		

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

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

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
BLANK	Benzo(a)pyrene	50-32-8	< 67	ug/Kg	04/16/03		
BLANK	bis(2-Chloroethoxy)methane	111-91-1	< 110	ug/Kg	04/16/03		
BLANK	Bis (2-Ethylhexyl) phthalate	117-81-7	< 560	ug/Kg	04/16/03		
BLANK	Bis(2-Chloro-1-methylene)	108-60-1	< 250	ug/Kg	04/16/03	0.000	10.000
BLANK	Benzyl alcohol	100-51-6	< 73	ug/Kg	04/16/03		
BLANK	Benzo(k)fluoranthene	207-08-9	< 67	ug/Kg	04/16/03		
BLANK	Butylbenzylphthalate	85-68-7	< 67	ug/Kg	04/16/03		
BLANK	Carbazole	86-74-8	< 80	ug/Kg	04/16/03		
BLANK	4-Chloroaniline	106-47-8	< 93	ug/Kg	04/16/03		
BLANK	4-Chloro-3-methylphenol	59-50-7	< 67	ug/Kg	04/16/03		
BLANK	2-Chlorophenol	95-57-8	< 150	ug/Kg	04/16/03		
BLANK	Chrysene	218-01-9	< 67	ug/Kg	04/16/03		
BLANK	3,3'-Dichlorobenzidine	91-94-1	< 80	ug/Kg	04/16/03		
BLANK	Dibenz(a,h)anthracene	53-70-3	< 67	ug/Kg	04/16/03		
BLANK	Dibenzofuran	132-64-9	< 67	ug/Kg	04/16/03		
BLANK	Di-n-butylphthalate	84-74-2	< 87	ug/Kg	04/16/03		
BLANK	Diethylphthalate	84-66-2	270	ug/Kg	04/16/03		
BLANK	Dimethylphthalate	131-11-3	< 67	ug/Kg	04/16/03		
BLANK	2,4-Dinitrophenol	51-28-5	< 670	ug/Kg	04/16/03		
BLANK	Di-n-octylphthalate	117-84-0	< 67	ug/Kg	04/16/03		
BLANK	N-Nitroso-di-n-propylamine	621-64-7	< 67	ug/Kg	04/16/03		
BLANK	2-Fluorobiphenyl Surr	321-60-8	89.800	%Recove	04/16/03	56.000	122.000
BLANK	Fluorene	86-73-7	< 67	ug/Kg	04/16/03		
BLANK	Fluoranthene	206-44-0	< 67	ug/Kg	04/16/03		
BLANK	Hexachlorobenzene	118-74-1	< 67	ug/Kg	04/16/03		
BLANK	Hexachlorobutadiene	87-68-3	< 370	ug/Kg	04/16/03		
BLANK	Hexachlorocyclopentadiene	77-47-4	< 310	ug/Kg	04/16/03		
BLANK	Indeno(1,2,3-cd)pyrene	193-39-5	< 67	ug/Kg	04/16/03		
BLANK	Isophorone	78-59-1	< 67	ug/Kg	04/16/03		
BLANK	Phenol	108-95-2	< 100	ug/Kg	04/16/03		
BLANK	Naphthalene	91-20-3	< 280	ug/Kg	04/16/03		
BLANK	Nitrobenzene-d5 Surr	4165-60-0	88.100	%Recove	04/16/03	64.000	111.000
BLANK	Nitrobenzene	98-95-3	< 260	ug/Kg	04/16/03		
BLANK	4-Nitrophenol	100-02-7	< 650	ug/Kg	04/16/03		
BLANK	4-Nitroaniline	100-01-6	< 250	ug/Kg	04/16/03		
BLANK	N-Nitrosodiphenylamine	86-30-6	< 67	ug/Kg	04/16/03		
BLANK	Pentachlorophenol	87-86-5	< 300	ug/Kg	04/16/03		
BLANK	Phenanthrene	85-01-8	< 67	ug/Kg	04/16/03		
BLANK	Phenol-d5 Surr	4165-62-2	79.900	%Recove	04/16/03	54.000	120.000
BLANK	Pyrene	129-00-0	< 67	ug/Kg	04/16/03		
BLANK	Tri-n-butylphosphate	126-73-8	540	ug/Kg	04/16/03		
BLANK	2,4,6-Tribromophenol Surr	118-79-6	73.000	%Recove	04/16/03	24.000	122.000
BLANK	Terphenyl-d14 Surr	98904-43-9	107.000	%Recove	04/16/03	35.000	150.000
LCS	1,2,4-Trichlorobenzene	120-82-1	93.400	% Recov	04/16/03	46.000	107.000
LCS	1,4-Dichlorobenzene (SV)	106-46-7	80.000	% Recov	04/16/03	42.000	111.000
LCS	2,4-Dinitrotoluene	121-14-2	76.400	% Recov	04/16/03	59.000	106.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: SW-846 8270B Semi-Vols

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

QC Type	Analyte		CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
LCS	2-Fluorophenol	Surr	367-12-4	79.300	% Recov	04/16/03	50.000	110.000
LCS	Acenaphthene		83-32-9	90.200	% Recov	04/16/03	61.000	116.000
LCS	4-Chloro-3-methylphenol		59-50-7	86.300	% Recov	04/16/03	61.000	106.000
LCS	2-Chlorophenol		95-57-8	76.200	% Recov	04/16/03	66.000	106.000
LCS	N-Nitroso-di-n-propylamine		621-64-7	84.400	% Recov	04/16/03	71.000	114.000
LCS	2-Fluorobiphenyl	Surr	321-60-8	94.200	% Recov	04/16/03	58.000	109.000
LCS	Phenol		108-95-2	74.400	% Recov	04/16/03	67.000	105.000
LCS	Nitrobenzene-d5	Surr	4165-60-0	91.200	% Recov	04/16/03	60.000	118.000
LCS	4-Nitrophenol		100-02-7	68.300	% Recov	04/16/03	32.000	118.000
LCS	Pentachlorophenol		87-86-5	74.100	% Recov	04/16/03	62.000	114.000
LCS	Phenol-d5	Surr	4165-62-2	80.900	% Recov	04/16/03	59.000	116.000
LCS	Pyrene		129-00-0	91.400	% Recov	04/16/03	66.000	118.000
LCS	2,4,6-Tribromophenol	Surr	118-79-6	93.600	% Recov	04/16/03	60.000	120.000
LCS	Terphenyl-d14	Surr	98904-43-9	98.700	% Recov	04/16/03	60.000	120.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: Uranium Isotopics by AEA

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
Lab ID: W030000158							
BATCH QC ASSOCIATED WITH SAMPLE							
DUP	U-238 by AEA	24678-82-8	2.899	RPD	04/17/03	0.000	20.000
Lab ID: W030000176							
BATCH QC ASSOCIATED WITH SAMPLE							
DUP	U-238 by AEA	24678-82-8	2.899	RPD	04/17/03	0.000	20.000
BATCH QC							
BLANK	U-238 by AEA	24678-82-8	4.3e-03	PCG	04/16/03	0.000	1000.000
LCS	U-238 by AEA	24678-82-8	109.800	% Recov	04/16/03	75.000	125.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: Alcohols, Glycols - 8015

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
Lab ID: W030000158							
BATCH QC ASSOCIATED WITH SAMPLE							
MS	2-Bromoethanol	540-51-2	112.000	%Recove	05/02/03	70.000	125.000
MS	Diethyl ether	60-29-7	114.000	%Recove	05/02/03	75.000	125.000
MS	Ethylene glycol	107-21-1	104.000	%Recove	05/02/03	75.000	125.000
MS	Methanol	67-56-1	114.000	%Recove	05/02/03	75.000	125.000
MSD	2-Bromoethanol	540-51-2	103.000	%Recove	05/02/03	70.000	125.000
MSD	Diethyl ether	60-29-7	114.000	%Recove	05/02/03	75.000	125.000
MSD	Ethylene glycol	107-21-1	118.000	%Recove	05/02/03	75.000	125.000
MSD	Methanol	67-56-1	116.000	%Recove	05/02/03	75.000	125.000
SPK-RPD	2-Bromoethanol	540-51-2	8.372	RPD	05/02/03	0.000	20.000
SPK-RPD	Diethyl ether	60-29-7	0.000	RPD	05/02/03	0.000	20.000
SPK-RPD	Ethylene glycol	107-21-1	12.613	RPD	05/02/03	0.000	20.000
SPK-RPD	Methanol	67-56-1	1.739	RPD	05/02/03	0.000	20.000
Lab ID: W030000159							
BATCH QC ASSOCIATED WITH SAMPLE							
MS	2-Bromoethanol	540-51-2	100.000	%Recove	05/02/03	70.000	125.000
MS	Diethyl ether	60-29-7	105.000	%Recove	05/02/03	75.000	125.000
MS	Ethylene glycol	107-21-1	100.000	%Recove	05/02/03	75.000	125.000
MS	Methanol	67-56-1	107.000	%Recove	05/02/03	75.000	125.000
MSD	2-Bromoethanol	540-51-2	97.000	%Recove	05/02/03	70.000	125.000
MSD	Diethyl ether	60-29-7	100.000	%Recove	05/02/03	75.000	125.000
MSD	Ethylene glycol	107-21-1	116.000	%Recove	05/02/03	75.000	125.000
MSD	Methanol	67-56-1	114.000	%Recove	05/02/03	75.000	125.000
SPK-RPD	2-Bromoethanol	540-51-2	3.046	RPD	05/02/03	0.000	20.000
SPK-RPD	Diethyl ether	60-29-7	4.878	RPD	05/02/03	0.000	20.000
SPK-RPD	Ethylene glycol	107-21-1	14.815	RPD	05/02/03	0.000	20.000
SPK-RPD	Methanol	67-56-1	6.335	RPD	05/02/03	0.000	20.000
BATCH QC							
BLANK	2-Bromoethanol	540-51-2	100	ug/Kg	05/02/03	0.000	10.000
BLANK	Diethyl ether	60-29-7	<5000	ug/Kg	05/02/03	0.000	10.000
BLANK	Ethylene glycol	107-21-1	<5000	ug/Kg	05/02/03	0.000	5.000
BLANK	Methanol	67-56-1	<1000	ug/Kg	05/02/03	0.000	10.000
LCS	2-Bromoethanol	540-51-2	92.000	%Recove	05/02/03	70.000	130.000
LCS	Diethyl ether	60-29-7	92.000	%Recove	05/02/03	70.000	130.000
LCS	Ethylene glycol	107-21-1	116.000	%Recove	05/02/03	70.000	130.000
LCS	Methanol	67-56-1	102.000	%Recove	05/02/03	70.000	130.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: WTPH-D TPH Diesel Range (Wa)

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

Lab ID: W030000158

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
MS	ortho-Terphenyl	84-15-1	101.000	% Recov	05/01/03	70.000	130.000	
MS	Total Pet. Hydrocarbons Diesel	68476-34-6	149.000	% Recov	05/01/03	75.000	125.000	*
MSD	Kerosene	8008-20-6	n/a	%Recove	05/01/03	70.000	130.000	
MSD	ortho-Terphenyl	84-15-1	106.000	% Recov	05/01/03	70.000	130.000	
MSD	Total Pet. Hydrocarbons Diesel	68476-34-6	178.000	% Recov	05/01/03	75.000	125.000	*
SPK-RPD	ortho-Terphenyl	84-15-1	4.831	RPD	05/01/03	0.000	20.000	
SPK-RPD	Total Pet. Hydrocarbons Diesel	68476-34-6	17.737	RPD	05/01/03	0.000	20.000	
SURR	ortho-Terphenyl	84-15-1	97.800	% Recov	05/01/03	70.000	130.000	

BATCH QC

BLANK	Kerosene	8008-20-6	< 5000	ug/Kg	05/01/03	0.000	100.000	
BLANK	ortho-Terphenyl	84-15-1	22655	ug/Kg	05/01/03	70.000	130.000	
BLANK	Total Pet. Hydrocarbons Diesel	68476-34-6	< 5000	ug/Kg	05/01/03	0.000	300.000	
LCS	Kerosene	8008-20-6	88.800	%Recove	05/01/03	70.000	130.000	
LCS	ortho-Terphenyl	84-15-1	99.500	% Recov	05/01/03	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: Ammonia (N) by IC

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
Lab ID: W030000158								
BATCH QC ASSOCIATED WITH SAMPLE								
DUP	Ammonia (N) by IC	7664-41-7	2.927	RPD	04/18/03	0.000	20.000	
MS	Ammonia (N) by IC	7664-41-7	52.364	% Recov	04/18/03	75.000	125.000	*
MSD	Ammonia (N) by IC	7664-41-7	57.152	% Recov	04/18/03	75.000	125.000	*
BATCH QC								
BLNK-PREP	Ammonia (N) by IC	7664-41-7	<4.00e-3	Ratio	04/18/03			
BLNK-PREP	Ammonia (N) by IC	7664-41-7	<4.00e-3	Ratio	04/18/03			
LCS	Ammonia (N) by IC	7664-41-7	97.949	% Recov	04/18/03	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: NWTPH-GX TPH Gasoline Range

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
Lab ID: W030000157							
BATCH QC ASSOCIATED WITH SAMPLE							
DUP	Total Pet. Hydrocarbons Gas	TPH-G	n/a	RPD	04/16/03	0.000	20.000
MS	Total Pet. Hydrocarbons Gas	TPH-G	97.000	% Recov	04/16/03	50.000	150.000
MSD	Total Pet. Hydrocarbons Gas	TPH-G	98.000	% Recov	04/16/03	50.000	150.000
SPK-RPD	Total Pet. Hydrocarbons Gas	TPH-G	1.026	RPD	04/16/03	0.000	20.000
Lab ID: W030000158							
BATCH QC ASSOCIATED WITH SAMPLE							
MS	Total Pet. Hydrocarbons Gas	TPH-G	87.000	% Recov	04/16/03	50.000	150.000
MSD	Total Pet. Hydrocarbons Gas	TPH-G	106.000	% Recov	04/16/03	50.000	150.000
SPK-RPD	Total Pet. Hydrocarbons Gas	TPH-G	19.689	RPD	04/16/03	0.000	20.000
Lab ID: W030000159							
BATCH QC ASSOCIATED WITH SAMPLE							
MS	Total Pet. Hydrocarbons Gas	TPH-G	101.000	% Recov	04/16/03	50.000	150.000
MSD	Total Pet. Hydrocarbons Gas	TPH-G	103.000	% Recov	04/16/03	50.000	150.000
SPK-RPD	Total Pet. Hydrocarbons Gas	TPH-G	1.961	RPD	04/16/03	0.000	20.000
BATCH QC							
BLANK	Total Pet. Hydrocarbons Gas	TPH-G	<50	mg/L	04/16/03	0.000	300.000
LCS	Total Pet. Hydrocarbons Gas	TPH-G	89.000	% Recov	04/16/03	85.000	115.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
Lab ID: W030000157							
BATCH QC ASSOCIATED WITH SAMPLE							
MS	1,1-Dichloroethene	75-35-4	85.400	% Recov	04/16/03	63.000	117.000
MS	Benzene	71-43-2	120.000	% Recov	04/16/03	75.000	129.000
MS	4-Bromofluorobenzene Surr	460-00-4	91.200	% Recov	04/16/03	84.000	116.000
MS	Chlorobenzene	108-90-7	108.000	% Recov	04/16/03	79.000	119.000
MS	1,2-Dichloroethane-d4 Surr	17060-07-0	110.000	% Recov	04/16/03	82.000	136.000
MS	Toluene-d8 Surr	2037-26-5	108.000	% Recov	04/16/03	89.000	119.000
MS	Toluene	108-88-3	118.000	% Recov	04/16/03	76.000	120.000
MS	Trichloroethene	79-01-6	95.500	% Recov	04/16/03	73.000	123.000
MSD	1,1-Dichloroethene	75-35-4	89.000	% Recov	04/16/03	63.000	117.000
MSD	Benzene	71-43-2	115.000	% Recov	04/16/03	75.000	129.000
MSD	4-Bromofluorobenzene Surr	460-00-4	79.800	% Recov	04/16/03	84.000	116.000
MSD	Chlorobenzene	108-90-7	106.000	% Recov	04/16/03	79.000	119.000
MSD	1,2-Dichloroethane-d4 Surr	17060-07-0	115.000	% Recov	04/16/03	82.000	136.000
MSD	Toluene-d8 Surr	2037-26-5	99.600	% Recov	04/16/03	89.000	119.000
MSD	Toluene	108-88-3	110.000	% Recov	04/16/03	76.000	120.000
MSD	Trichloroethene	79-01-6	88.300	% Recov	04/16/03	73.000	123.000
Lab ID: W030000158							
BATCH QC ASSOCIATED WITH SAMPLE							
MS	1,1-Dichloroethene	75-35-4	77.100	% Recov	04/16/03	63.000	117.000
MS	Benzene	71-43-2	113.000	% Recov	04/16/03	75.000	129.000
MS	4-Bromofluorobenzene Surr	460-00-4	86.300	% Recov	04/16/03	84.000	116.000
MS	Chlorobenzene	108-90-7	105.000	% Recov	04/16/03	79.000	119.000
MS	1,2-Dichloroethane-d4 Surr	17060-07-0	120.000	% Recov	04/16/03	82.000	136.000
MS	Toluene-d8 Surr	2037-26-5	103.000	% Recov	04/16/03	89.000	119.000
MS	Toluene	108-88-3	113.000	% Recov	04/16/03	76.000	120.000
MS	Trichloroethene	79-01-6	95.900	% Recov	04/16/03	73.000	123.000
MSD	1,1-Dichloroethene	75-35-4	81.500	% Recov	04/16/03	63.000	117.000
MSD	Benzene	71-43-2	108.000	% Recov	04/16/03	75.000	129.000
MSD	4-Bromofluorobenzene Surr	460-00-4	85.600	% Recov	04/16/03	84.000	116.000
MSD	Chlorobenzene	108-90-7	104.000	% Recov	04/16/03	79.000	119.000
MSD	1,2-Dichloroethane-d4 Surr	17060-07-0	124.000	% Recov	04/16/03	82.000	136.000
MSD	Toluene-d8 Surr	2037-26-5	99.800	% Recov	04/16/03	89.000	119.000
MSD	Toluene	108-88-3	104.000	% Recov	04/16/03	76.000	120.000
MSD	Trichloroethene	79-01-6	86.600	% Recov	04/16/03	73.000	123.000
SURR	4-Bromofluorobenzene Surr	460-00-4	93.200	% Recov	04/16/03	71.000	125.000
SURR	1,2-Dichloroethane-d4 Surr	17060-07-0	113.000	% Recov	04/16/03	80.000	134.000
SURR	Toluene-d8 Surr	2037-26-5	106.000	% Recov	04/16/03	80.000	126.000
Lab ID: W030000159							
BATCH QC ASSOCIATED WITH SAMPLE							
MS	1,1-Dichloroethene	75-35-4	86.000	% Recov	04/16/03	63.000	117.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: VOA Ground Water Protection

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
MS	Benzene	71-43-2	118.000	% Recov	04/16/03	75.000	129.000
MS	4-Bromofluorobenzene Surr	460-00-4	86.400	% Recov	04/16/03	84.000	116.000
MS	Chlorobenzene	108-90-7	104.000	% Recov	04/16/03	79.000	119.000
MS	1,2-Dichloroethane-d4 Surr	17060-07-0	118.000	% Recov	04/16/03	82.000	136.000
MS	Toluene-d8 Surr	2037-26-5	101.000	% Recov	04/16/03	89.000	119.000
MS	Toluene	108-88-3	109.000	% Recov	04/16/03	76.000	120.000
MS	Trichloroethene	79-01-6	96.400	% Recov	04/16/03	73.000	123.000
MSD	1,1-Dichloroethene	75-35-4	81.000	% Recov	04/16/03	63.000	117.000
MSD	Benzene	71-43-2	116.000	% Recov	04/16/03	75.000	129.000
MSD	4-Bromofluorobenzene Surr	460-00-4	96.100	% Recov	04/16/03	84.000	116.000
MSD	Chlorobenzene	108-90-7	110.000	% Recov	04/16/03	79.000	119.000
MSD	1,2-Dichloroethane-d4 Surr	17060-07-0	120.000	% Recov	04/16/03	82.000	136.000
MSD	Toluene-d8 Surr	2037-26-5	106.000	% Recov	04/16/03	89.000	119.000
MSD	Toluene	108-88-3	109.000	% Recov	04/16/03	76.000	120.000
MSD	Trichloroethene	79-01-6	96.800	% Recov	04/16/03	73.000	123.000
SPK-RPD	1,1-Dichloroethene	75-35-4	5.988	RPD	04/16/03	0.000	25.000
SPK-RPD	Benzene	71-43-2	1.709	RPD	04/16/03	0.000	25.000
SPK-RPD	4-Bromofluorobenzene Surr	460-00-4	10.630	RPD	04/16/03	0.000	25.000
SPK-RPD	Chlorobenzene	108-90-7	5.607	RPD	04/16/03	0.000	25.000
SPK-RPD	1,2-Dichloroethane-d4 Surr	17060-07-0	1.681	RPD	04/16/03	0.000	25.000
SPK-RPD	Toluene-d8 Surr	2037-26-5	4.831	RPD	04/16/03	0.000	25.000
SPK-RPD	Toluene	108-88-3	0.000	RPD	04/16/03	0.000	25.000
SPK-RPD	Trichloroethene	79-01-6	0.414	RPD	04/16/03	0.000	25.000

BATCH QC

BLANK	1,1-Dichloroethane	75-34-3	< 1.0	ug/Kg	04/16/03		
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	ug/Kg	04/16/03		
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	ug/Kg	04/16/03		
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	ug/Kg	04/16/03		
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	ug/Kg	04/16/03		
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	ug/Kg	04/16/03		
BLANK	1,2-Dichloroethene (cis & tran	540-59-0	< 1.0	ug/Kg	04/16/03		
BLANK	1-Butanol	71-36-3	< 10	ug/Kg	04/16/03		
BLANK	2-Hexanone	591-78-6	< 1.0	ug/Kg	04/16/03		
BLANK	2-Pentanone	107-87-9	< 1.0	ug/Kg	04/16/03		
BLANK	4-Methyl-2-pentanone	108-10-1	< 1.0	ug/Kg	04/16/03		
BLANK	Acetone	67-64-1	< 1.0	ug/Kg	04/16/03		
BLANK	Bromodichloromethane	75-27-4	< 1.0	ug/Kg	04/16/03		
BLANK	Benzene	71-43-2	< 1.0	ug/Kg	04/16/03		
BLANK	4-Bromofluorobenzene Surr	460-00-4	93.400	% Recov	04/16/03	71.000	125.000
BLANK	Bromoform	75-25-2	< 1.0	ug/Kg	04/16/03		
BLANK	n-Butylbenzene	104-51-8	< 1.0	ug/Kg	04/16/03		
BLANK	Carbon Disulfide	75-15-0	< 1.0	ug/Kg	04/16/03		
BLANK	Carbon Tetrachloride	56-23-5	< 1.0	ug/Kg	04/16/03		
BLANK	Dibromochloromethane	124-48-1	< 1.0	ug/Kg	04/16/03		
BLANK	Chloroform	67-66-3	< 1.0	ug/Kg	04/16/03		

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: VOA Ground Water Protection

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

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit
BLANK	Chlorobenzene	108-90-7	< 1.0	ug/Kg	04/16/03		
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 1.0	ug/Kg	04/16/03		
BLANK	Chloroethane	75-00-3	< 1.0	ug/Kg	04/16/03		
BLANK	1,2-Dichloroethane-d4 Surr	17060-07-0	119.000	% Recov	04/16/03	80.000	134.000
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	ug/Kg	04/16/03		
BLANK	Ethylbenzene	100-41-4	< 1.0	ug/Kg	04/16/03		
BLANK	Bromomethane	74-83-9	< 1.0	ug/Kg	04/16/03		
BLANK	Chloromethane	74-87-3	< 1.0	ug/Kg	04/16/03		
BLANK	2-Butanone	78-93-3	< 1.0	ug/Kg	04/16/03		
BLANK	Methylene Chloride	75-09-2	< 1.0	ug/Kg	04/16/03		
BLANK	Tetrachloroethene	127-18-4	< 1.0	ug/Kg	04/16/03		
BLANK	Styrene	100-42-5	< 1.0	ug/Kg	04/16/03		
BLANK	Total Xylenes	1330-20-7	< 1.0	ug/Kg	04/16/03	0.000	300.000
BLANK	Toluene-d8 Surr	2037-26-5	103.000	% Recov	04/16/03	80.000	126.000
BLANK	Toluene	108-88-3	< 1.0	ug/Kg	04/16/03		
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	ug/Kg	04/16/03		
BLANK	Trichloroethene	79-01-6	< 1.0	ug/Kg	04/16/03		
BLANK	Vinyl Chloride	75-01-4	< 1.0	ug/Kg	04/16/03		
LCS	1,1-Dichloroethene	75-35-4	86.900	% Recov	04/16/03	70.000	130.000
LCS	Benzene	71-43-2	121.000	% Recov	04/16/03	70.000	130.000
LCS	4-Bromofluorobenzene Surr	460-00-4	91.900	% Recov	04/16/03	71.000	125.000
LCS	Chlorobenzene	108-90-7	97.500	% Recov	04/16/03	70.000	130.000
LCS	1,2-Dichloroethane-d4 Surr	17060-07-0	136.000	% Recov	04/16/03	80.000	134.000 *
LCS	Toluene-d8 Surr	2037-26-5	105.000	% Recov	04/16/03	80.000	126.000
LCS	Toluene	108-88-3	104.000	% Recov	04/16/03	70.000	130.000
LCS	Trichloroethene	79-01-6	99.700	% Recov	04/16/03	70.000	130.000

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20030460
Matrix: SOLID
Test: ICP Metals Analysis, Grd H20 P

SAF Number: F03-006
Sample Date: 04/04/03
Receive Date: 04/04/03

QC Type	Analyte	CAS #	Results	Units	Analysis Date	Lower Limit	Upper Limit	
Lab ID: W030000157								
BATCH QC ASSOCIATED WITH SAMPLE								
MS	Bismuth by ICP	7440-69-9	94.800	% Recov	05/06/03	75.000	125.000	
MSD	Bismuth by ICP	7440-69-9	94.540	% Recov	05/06/03	75.000	125.000	
Lab ID: W030000158								
BATCH QC ASSOCIATED WITH SAMPLE								
MS	Bismuth by ICP	7440-69-9	94.780	% Recov	05/06/03	75.000	125.000	
MSD	Bismuth by ICP	7440-69-9	95.040	% Recov	05/06/03	75.000	125.000	
Lab ID: W030000159								
BATCH QC ASSOCIATED WITH SAMPLE								
MS	Bismuth by ICP	7440-69-9	94.260	% Recov	05/06/03	75.000	125.000	
MSD	Bismuth by ICP	7440-69-9	93.540	% Recov	05/06/03	75.000	125.000	
SPK-RPD	Bismuth by ICP	7440-69-9	0.767	RPD	05/06/03	0.000	20.000	
BATCH QC								
BLANK	Bismuth by ICP	7440-69-9	<6.8e-2	ug/L	05/06/03	-1.000	0.068	
LCS	Bismuth by ICP	7440-69-9	115.200	% Recov	05/06/03	80.000	120.000	
Lab ID: W030000157								
BATCH QC ASSOCIATED WITH SAMPLE								
MS	Boron by ICP	7440-50-8	102.780	% Recov	05/06/03	70.000	130.000	
MSD	Boron by ICP	7440-50-8	101.300	% Recov	05/06/03	75.000	125.000	
Lab ID: W030000158								
BATCH QC ASSOCIATED WITH SAMPLE								
MS	Boron by ICP	7440-50-8	101.160	% Recov	05/06/03	70.000	130.000	
MSD	Boron by ICP	7440-50-8	100.840	% Recov	05/06/03	75.000	125.000	
Lab ID: W030000159								
BATCH QC ASSOCIATED WITH SAMPLE								
MS	Boron by ICP	7440-50-8	100.820	% Recov	05/06/03	70.000	130.000	
MSD	Boron by ICP	7440-50-8	100.040	% Recov	05/06/03	75.000	125.000	
SPK-RPD	Boron by ICP	7440-50-8	-0.135	RPD	05/06/03	0.000	20.000	*
BATCH QC								
BLANK	Boron by ICP	7440-50-8	<9.5	ug/L	05/06/03	-10.000	10.000	
LCS	Boron by ICP	7440-50-8	217.163	% Recov	05/06/03	52.000	84.200	*

8F-000-SLF-03-015/R1

ATTACHMENT 3

SAMPLE RECEIPT INFORMATION

Consisting of 7 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

V1
File
N104 4/8/03

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Ra-226-out
Ra-228-out
PCB-out
Totalab-in

Ground Water Protection Program

Richland, WA 99352
Attn: Steve Trent

Customer Code: GPP
PO#: 117504/ES20
Group#: 20030460
Project#: CPP 200 AREA
Proj Mgr: STEVE TRENT A0-21
Phone: 373-5869

The following samples were received from you on 04/04/03. 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
W030000158	B16RX7	GPP Solid, or handle as if solid	04/04/03

@2008	@8015GPP	@AEA-30	@AEA-31	@AEA-32	
@GEA-GPP	@IC-30	@ICP-GPP	@LABSCRN	@SVOCGPP	@TOTA
@TPHD-WA	@TPHG-WA	@VOA-GPP	B-31	CN-02	NH4-I
PERSOLID	PH-30				

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
@GEA-GPP	Gamma Energy Analysis-grd H2O
@IC-30	Anions by Ion Chromatography
@ICP-GPP	ICP Metals Analysis, Grd H20 P
@LABSCRN	Sample Screen - LAB USE ONLY
@SVOCGPP	SW-846 8270B Semi-Vols
@TOTALAB	A/B by Liquid Scintillation
@TPHD-WA	WTPH-D TPH Diesel Range (Wa)
@TPHG-WA	NWTPH-GX TPH Gasoline Range
@VOA-GPP	VOA Ground Water Protection
B-31	Boron by ICP
CN-02	Cyanide by Midi/Spectrophotom
NH4-IC	Ammonia (N) by IC
PERSOLID	Percent Solids
PH-30	pH Soil and Waste Measurement

COPY

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3-2

5/5/03

FH-Central Plateau Project	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F03-006-013	Page 1 of 1
Collector: Johansen/Pope/Pfister	Company Contact: LC Hulstrom; Telephone No.: 373-3928	Project Coordinator: TRENT, SJ	Price Code: 8N; Data Turnaround: 30 Days
Project Designation: 200-PW-2/200-PW-4 OU - Borehole Soil Sampling	Sampling Location: 216-A-19 (C3245) 17.5-20 ft	SAF No.: F03-006	Air Quality ☐
Ice Chest No.: SMC-69	Field Logbook No.: HNF-N-3361; COA: 117504ES10	Method of Shipment: Government Vehicle	
Shipped To: Waste Sampling & Characterization	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: N/A	

POSSIBLE SAMPLE HAZARDS/REMARKS

Special Handling and/or Storage

Preservation	Cool 4C	Cool 4C	Cool 4C	None	None						
Type of Container	Gs*	aG	Gs*	P	Snap Vial						
No. of Container(s)	3	1	3	1	1						
Volume	40mL	250mL	40mL	500mL	60mL						
SAMPLE ANALYSIS 20030460	See item (1) in Special Instructions.	See item (2) in Special Instructions.	See item (3) in Special Instructions.	See item (4) in Special Instructions.	Activity Scan						

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Sample No.	Matrix *	Sample Date	Sample Time										
B16RX7 W030022158	SOIL	4-4-03	1212	X	X	X	X	X					

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: [signature]	Date/Time: 4-4-03 1450	Received By/Stored In: [signature]	Date/Time: 4/4/03 1450
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

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

(1) VOA - 8260A (TCL); VOA - 8260A (Add-On) {2-Pentanone, Benzyl alcohol, n-Butylbenzene}
(2) Semi-VOA - 8270A (TCL); Semi-VOA -- 8270A (Add-On) {2-Butoxyethanol, Tributyl phosphate}; TPH-Diesel Range - WTPH-D; TPH-Gasoline Range - WTPH-G; PCBs - 8082
(3) Alcohols, Glycols, & Ketones - 8015 {1-Butanol, Diethyl ether, Ethylene glycol, Methanol}
(4) Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155}; Gamma Spec - Add-on {Antimony-125, Cesium-134, Tin-126}; Isotopic Radium {Radium-226, Radium-228}; Isotopic Plutonium; Americium-241; Isotopic Uranium; Trace Elements ICP/MS - 200.8 (Complete) {Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Silver, Uranium}; ICP Metals - 6010A (Add-on) {Bismuth, Boron}; IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}; Cyanide (Total) - 335.2; Cations (IC) - 300.7 {Nitrogen in ammonium}; pH (Soil) - 9045

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

EE-011 (03/01/2002)

Sims, Vic T

From: Trechter, John E Jr.
Sent: Tuesday, April 08, 2003 8:25 AM
To: Beebe, Kevin L; Sims, Vic T
Cc: Neely, Michael; Fitzgerald, Scot L; Dale, Troy F; Stauffer, Markus; Christensen, Craig G
Subject: FW: PCB Analysis

Kevin and Vic,

Please see the note below. These samples are in SDGs # 459, 460, and 461. I have already given this information to Craig Chrstensen. Please remove the PCBs requested for these SDGs.

Thanks

John

-----Original Message-----
From: Lynch, Sherry A
Sent: Tuesday, April 08, 2003 6:48 AM
To: Trechter, John E Jr.; Ayres, Doris E; Trent, Stephen J
Subject: PCB Analysis

Hello:

On 4/4/03 you received samples: B16RX6, B16RX7, B16RX8, and B16RX9 on SAF F03-006. PCB analysis was indicated on the chain of custody for these samples. This analysis is not wanted for these samples at this time.

Thank you,

Sherry Lynch
Fluor Hanford
Sample Management
373-5586

COPY

Sims, Vic T

From: Trechter, John E Jr.
Sent: Tuesday, April 08, 2003 9:22 AM
To: Beebe, Kevin L; Sims, Vic T
Cc: Neely, Michael
Subject: FW: Total Activities

-----Original Message-----
From: Trechter, John E Jr.
Sent: Monday, April 07, 2003 2:54 PM
To: Ayres, Doris E
Cc: Gale, Stuart J (Jeff); Trent, Stephen J
Subject: FW: Total Activities

Doris,

According to our information, the sample numbers listed by Jeff below have not been received at WSCF. Our records show that the following samples have been submitted to WSCF requesting Total Activity: B16HB4-A on 3-24-03; B16RY6 on 4-4-03; B16T46 on 4-4-03; B16RX6 on 4-4-03; B16RX7 on 4-4-03; B16RX8 and B16RX9 on 4-4-03.

As I mentioned on the phone, one of the disconnects we are having is you requesting total activity, which we run as a rad-screen as a lab requirement to determine the samples are below our rad acceptance limits, when in fact you require a "total alpha/beta" for shipping samples off site. The other problem is that no accelerated turn around times were indicated on the chain of custody for the alpha/beta, so they were logged in with the turnaround times listed for the other analytes shown. We agree that submitting separate chains of custody for total alpha/beta, indicating 24 hour turnaround time, would be the best thing to do. Our sample custodians suggested that, if possible, you should use a different number for the total alpha/beta than used on a chain requesting additional analysis. Even using a suffix A or B added to the original sample number would work. This would help eliminate confusion in the lab.

Thanks

John Trechter
WSCF Client Services
373-7046

COPY

-----Original Message-----
From: Ayres, Doris E
Sent: Monday, April 07, 2003 12:16 PM
To: Trechter, John E Jr.
Cc: Dale, Troy F
Subject: FW: Total Activities

Can you guys help me. I can find a copy of our sample B16NF8 (W030000136) that I have forwarded to Jeff. I do not find copies of the others. It could be that Steve has them on his e-mail, but of course I can't get to it.

Thanks

4/8/03

Sims, Vic T

From: Trechter, John E Jr.
Sent: Tuesday, April 08, 2003 11:48 AM
To: Sims, Vic T; Beebe, Kevin L
Cc: Neely, Michael; Dale, Troy F; Rice, Andrew D; Iwatate, Kenneth
Subject: Rad Screens For GPP

Vic and Kevin,

As we discussed this morning, when GPP requests a "Rad Screen" they will require a total alpha/beta with a 24 hr turnaround time. If you would, please change the lab requirements for the samples currently in house to reflect this.

Thank You

John

COPY

Sims, Vic T

From: Trechter, John E Jr.
Sent: Tuesday, April 08, 2003 11:42 AM
To: Trent, Stephen J
Cc: Ayres, Doris E; Dale, Troy F; Beebe, Kevin L; Sims, Vic T; Neely, Michael; Fitzgerald, Scot L; Rice, Andrew D; Iwatate, Kenneth
Subject: Ra 226/228

Steve,

In the last week and a half, we have received several soil samples requesting Ra-226 and Ra-228. WSCF does not currently have a method in place to perform a separation for these nuclides in soil. We can run them on a straight GEA without separation, however, this will yield a less sensitive result. On the "Analytical Services Capabilities" list that was set up on Oct 7, 2002, it was noted that these nuclides were set up for water, but not soil. When the SAFs were reviewed this was overlooked. I apologize for this over sight.

In the future WSCF will review SAFs in a more formal way, by gathering the lab Team Leads into a room and going over the SAF point by point. This should help eliminate the over sights we have in the samples that have recently been submitted to the lab.

If you have any questions on this, please call me.

Thanks

John Trechter
WSCF Client Services
373-7046

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