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FLUOR

Memorandum

M8141-SLF-04-374

To: S. J. Trent A0-21 Date: December 7, 2004

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

cc:

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

Subject: FINAL RESULTS FOR 216-Z-9 TRENCH CHARACTERIZATION BOREHOLD - WATER – SAMPLE DELIVERY GROUP WSCF20042149 – SAF NUMBER F03-019

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

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

This letter contains a narrative (Attachment 1) for sample delivery group WSCF20042149, the analytical results (Attachment 2), and the sample receipt information (Attachment 3).

SLF/grf

Attachments 3

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M8141-SLF-04-374

ATTACHMENT 1

NARRATIVE

Consisting of 4 pages
Including cover page

Sample Delivery Group	**WSCF20042149**
Sample Matrix	**Water**
Sample Visual	**N/A**
SAF Number	**F03-019**
Data Deliverable	**Summary Report**

Introduction

Two (2) 216-Z-9 Trench Characterization Borehole - Water, C3426; 377' – 379.5', GRP samples (B19NF7 and B1B9V4) were received at the WSCF Laboratory on November 15, 2004. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

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

Analytical Methodology for Requested Analyses

Organic

- Semi-VOA by EPA Method 8270B. Analytical work was performed with no deviations to the approved method.
- VOA by EPA Method 8260B. Analytical work was performed with no deviations to the approved method.

Radiochemistry

All RadChem analyses (AEA (Americium and Plutonium), and Technitium-99) were run by internal WDOE accredited WSCF procedures. Analytical work was performed with no deviations to the approved methods.

Organic Comments

Semi-VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 14 through 19 for QC details. Analytical Notes:

- Preparation Date: 22-nov-2004.

- The blank and sample were cross contaminated with Toluene from a sample in the preparation batch. The Toluene TIC has been flagged B; analyte found in the associated blank and sample.

All QC controls are within the established limits.

VOA – The hold time for this analysis was met. A Blank, Laboratory Control Sample, Matrix Spike and Matrix Spiked Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 20 through 23 for QC details. Analytical Notes:

- Matrix Spike and Matrix Spike Duplicate QC samples were analyzed on sample# B1B9V1 (SDG# 20042119, SAF# F03-019).

- Trichloroethene - sample B19NF7 result was J flagged; result was less than the lowest calibration standard but greater than the detection limit.

All QC controls are within the established limits.

Radiochemistry Comments

RadChem – There are no hold times associated with these WDOE accredited methods. A Blank, Laboratory Control Sample, Matrix Spike (Technitium-99 only) and Duplicate were analyzed with each delivery group per the GRP Letter of Instruction. See pages 25 through 27 for QC details. Analytical Notes:

- Americium-241 – The Duplicate Relative Percent Difference exceeded established laboratory limits. All other QC samples were within limits, sample B19NF7 result was not flagged.

- Plutonium-239/240 - The Duplicate Relative Percent Difference exceeded established laboratory limits. The RPD criterion is not applicable to low level samples with high counting error.

All other QC controls are within the established limits.

Radiochemical Tracer Percent Recovery			
Sample Number	**Lab Sample ID**	**Isotope**	**Tracer Recovery (Percent)**
BLANK		Pu-242	84.5
LCS		Pu-242	91.2
B19194	W040002215	Pu-242	55.1
DUPLICATE	W040002215	Pu-242	16.6

Radiochemical Tracer Percent Recovery			
Sample Number	**Lab Sample ID**	**Isotope**	**Tracer Recovery (Percent)**
BLANK		Am-243	79.9
LCS		Am-243	93.8
B19194	W040002215	Am-243	83.4
DUPLICATE	W040002215	Am-243	89.6

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

Herlene S. Rich
WSCF Production Control

Abbreviations

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

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ATTACHMENT 2

ANALYTICAL RESULTS

Consisting of 26 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: _____

Client Services: _____

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

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

Contract#: FH-EIS-2003-MEM-001
Report#: WSCF20042149
Report Date: 7-dec-2004
Report WGPP/ver. 1.1
Groundwater Remediation Program

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-019: F03-019

Group #: WSCF20042149

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Organic															
W040002215	B19NF7	GRP	TRENT	100-02-7	4-Nitrophenol	WATER	LA-523-456	U	< 1.70	ug/L	1.00	1.7	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	106-46-7	1,4-Dichlorobenzene	WATER	LA-523-456	U	< 6.00	ug/L	1.00	6.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	108-95-2	Phenol	WATER	LA-523-456	U	< 2.00	ug/L	1.00	2.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	120-82-1	1,2,4-Trichlorobenzene	WATER	LA-523-456	U	< 3.60	ug/L	1.00	3.6	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	121-14-2	2,4-Dinitrotoluene	WATER	LA-523-456	U	< 2.10	ug/L	1.00	2.1	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	129-00-0	Pyrene	WATER	LA-523-456	U	< 2.50	ug/L	1.00	2.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	59-50-7	4-Chloro-3-methylphenol	WATER	LA-523-456	U	< 1.50	ug/L	1.00	1.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	621-64-7	N-Nitrosodi-n-dipropylamine	WATER	LA-523-456	U	< 2.00	ug/L	1.00	2.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	83-32-9	Acenaphthene	WATER	LA-523-456	U	< 2.90	ug/L	1.00	2.9	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	87-86-5	Pentachlorophenol	WATER	LA-523-456	U	< 2.00	ug/L	1.00	2.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	95-57-8	2-Chlorophenol	WATER	LA-523-456	U	< 2.00	ug/L	1.00	2.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	100-01-6	4-Nitroaniline	WATER	LA-523-456	U	< 3.50	ug/L	1.00	3.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	101-55-3	4-Bromophenylphenyl ether	WATER	LA-523-456	U	< 2.30	ug/L	1.00	2.3	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	105-67-9	2,4-Dimethylphenol	WATER	LA-523-456	U	< 5.10	ug/L	1.00	5.1	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	106-47-8	4-Chloroaniline	WATER	LA-523-456	U	< 8.60	ug/L	1.00	8.6	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	108-60-1	Bis(2-chloro-1-methylethyl)eth	WATER	LA-523-456	U	< 2.50	ug/L	1.00	2.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	111-44-4	Bis(2-chloroethyl) ether	WATER	LA-523-456	U	< 4.00	ug/L	1.00	4.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	111-91-1	Bis(2-Chloroethoxy)methane	WATER	LA-523-456	U	< 2.40	ug/L	1.00	2.4	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	117-81-7	Bis(2-ethylhexyl) phthalate	WATER	LA-523-456	U	< 3.10	ug/L	1.00	3.1	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	117-84-0	Di-n-octylphthalate	WATER	LA-523-456	U	< 3.00	ug/L	1.00	3.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	118-74-1	Hexachlorobenzene	WATER	LA-523-456	U	< 2.50	ug/L	1.00	2.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	120-12-7	Anthracene	WATER	LA-523-456	U	< 2.40	ug/L	1.00	2.4	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	120-83-2	2,4-Dichlorophenol	WATER	LA-523-456	U	< 1.70	ug/L	1.00	1.7	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	131-11-3	Dimethyl phthalate	WATER	LA-523-456	U	< 2.50	ug/L	1.00	2.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	132-64-9	Dibenzofuran	WATER	LA-523-456	U	< 2.30	ug/L	1.00	2.3	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	191-24-2	Benzo(ghi)perylene	WATER	LA-523-456	U	< 3.00	ug/L	1.00	3.0	11/30/04	11/15/04	11/15/04

MDL = Minimum Detection Limit
RQ = Result Qualifier

J - Analyte is an estimate, has potentially larger errors

U - Analyzed for but not detected above limiting criteria.

DF = Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-019: F03-019

Group #: WSCF20042149

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W040002215	B19NF7	GRP	TRENT	193-39-5	Indeno(1,2,3-cd)pyrene	WATER	LA-523-456	U	< 3.10	ug/L	1.00	3.1	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	205-99-2	Benzo(b)fluoranthene	WATER	LA-523-456	U	< 2.00	ug/L	1.00	2.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	206-44-0	Fluoranthene	WATER	LA-523-456	U	< 2.50	ug/L	1.00	2.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	207-08-9	Benzo(k)fluoranthene	WATER	LA-523-456	U	< 3.30	ug/L	1.00	3.3	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	208-96-8	Acenaphthylene	WATER	LA-523-456	U	< 2.70	ug/L	1.00	2.7	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	218-01-9	Chrysene	WATER	LA-523-456	U	< 2.70	ug/L	1.00	2.7	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	50-32-8	Benzo(a)pyrene	WATER	LA-523-456	U	< 2.50	ug/L	1.00	2.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	51-28-5	2,4-Dinitrophenol	WATER	LA-523-456	U	< 3.90	ug/L	1.00	3.9	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	53-70-3	Dibenz[a,h]anthracene	WATER	LA-523-456	U	< 3.10	ug/L	1.00	3.1	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	534-52-1	4,6-Dinitro-2-methylphenol	WATER	LA-523-456	U	< 2.00	ug/L	1.00	2.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	541-73-1	1,3-Dichlorobenzene	WATER	LA-523-456	U	< 6.20	ug/L	1.00	6.2	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	56-55-3	Benzo(a)anthracene	WATER	LA-523-456	U	< 2.50	ug/L	1.00	2.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	606-20-2	2,6-Dinitrotoluene	WATER	LA-523-456	U	< 2.60	ug/L	1.00	2.6	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	7005-72-3	4-Chlorophenylphenyl ether	WATER	LA-523-456	U	< 2.60	ug/L	1.00	2.6	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	77-47-4	Hexachlorocyclopentadiene	WATER	LA-523-456	U	< 9.30	ug/L	1.00	9.3	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	78-59-1	Isophorone	WATER	LA-523-456	U	< 2.30	ug/L	1.00	2.3	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	84-66-2	Diethylphthalate	WATER	LA-523-456	U	< 7.50	ug/L	1.00	7.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	84-74-2	Di-n-butylphthalate	WATER	LA-523-456	U	< 2.50	ug/L	1.00	2.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	85-01-8	Phenanthrene	WATER	LA-523-456	U	< 2.60	ug/L	1.00	2.6	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	85-68-7	Butylbenzylphthalate	WATER	LA-523-456	U	< 2.40	ug/L	1.00	2.4	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	86-30-6	N-Nitrosodiphenylamine	WATER	LA-523-456	U	< 2.70	ug/L	1.00	2.7	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	86-73-7	Fluorene	WATER	LA-523-456	U	< 2.40	ug/L	1.00	2.4	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	86-74-8	Carbazole	WATER	LA-523-456	U	< 1.70	ug/L	1.00	1.7	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	87-68-3	Hexachlorobutadiene	WATER	LA-523-456	U	< 4.30	ug/L	1.00	4.3	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	88-74-4	2-Nitroaniline	WATER	LA-523-456	U	< 2.50	ug/L	1.00	2.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	88-75-5	2-Nitrophenol	WATER	LA-523-456	U	< 2.40	ug/L	1.00	2.4	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	91-20-3	Naphthalene	WATER	LA-523-456	U	< 2.90	ug/L	1.00	2.9	11/30/04	11/15/04	11/15/04

MDL = Minimum Detection Limit J - Analyte is an estimate, has potentially larger errors U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier

DF = Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-019: F03-019

Group #: WSCF20042149

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W040002215	B19NF7	GRP	TRENT	91-57-6	2-Methylnaphthalene	WATER	LA-523-456	U	< 2.30	ug/L	1.00	2.3	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	91-58-7	2-Chloronaphthalene	WATER	LA-523-456	U	< 2.70	ug/L	1.00	2.7	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	91-94-1	3,3'-Dichlorobenzidine	WATER	LA-523-456	U	< 4.90	ug/L	1.00	4.9	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	95-48-7	2-Methylphenol (cresol, o-)	WATER	LA-523-456	U	< 2.70	ug/L	1.00	2.7	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	95-50-1	1,2-Dichlorobenzene	WATER	LA-523-456	U	< 5.00	ug/L	1.00	5.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	95-95-4	2,4,5-Trichlorophenol	WATER	LA-523-456	U	< 2.30	ug/L	1.00	2.3	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	98-95-3	Nitrobenzene	WATER	LA-523-456	U	< 2.40	ug/L	1.00	2.4	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	99-09-2	3-Nitroaniline	WATER	LA-523-456	U	< 5.40	ug/L	1.00	5.4	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	65794-96-9	3 & 4 Methylphenol Total	WATER	LA-523-456	U	< 3.80	ug/L	1.00	3.8	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	67-72-1	Hexachloroethane	WATER	LA-523-456	U	< 6.50	ug/L	1.00	6.5	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	88-06-2	2,4,6-Trichlorophenol	WATER	LA-523-456	U	< 2.90	ug/L	1.00	2.9	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	126-73-8	Tributyl phosphate	WATER	LA-523-456	U	< 3.00	ug/L	1.00	3.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	108-94-1	Cyclohexanone	WATER	LA-523-456	U	< 6.00	ug/L	1.00	6.0	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	95-63-6	1,2,4-Trimethylbenzene	WATER	LA-523-456	U	< 2.10	ug/L	1.00	2.1	11/30/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	75-35-4	1,1-Dichloroethene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	79-01-6	Trichloroethene	WATER	LA-523-455	J	3.70	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	71-43-2	Benzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	108-88-3	Toluene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	108-90-7	Chlorobenzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	75-34-3	1,1-Dichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	100-41-4	Ethylbenzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	100-42-5	Styrene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	107-06-2	1,2-Dichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	124-48-1	Dibromochloromethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04

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U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-019: F03-019

Group #: WSCF20042149

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W040002215	B19NF7	GRP	TRENT	127-18-4	Tetrachloroethene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	1330-20-7	Xylenes (total)	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	56-23-5	Carbon tetrachloride	WATER	LA-523-455		470	ug/L	1.00	10	11/18/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	591-78-6	2-Hexanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	67-64-1	Acetone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	67-66-3	Chloroform	WATER	LA-523-455		280	ug/L	1.00	10	11/18/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	74-83-9	Bromomethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	74-87-3	Chloromethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	75-00-3	Chloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	75-01-4	Vinyl chloride	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	75-09-2	Methylenechloride	WATER	LA-523-455		42.0	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	75-15-0	Carbon disulfide	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	75-25-2	Bromoform	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	75-27-4	Bromodichloromethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	78-87-5	1,2-Dichloropropane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	78-93-3	2-Butanone	WATER	LA-523-455		22.0	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	71-36-3	1-Butanol	WATER	LA-523-455	U	< 20.0	ug/L	1.00	20	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	110-54-3	Hexane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	104-51-8	n-Butylbenzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	75-05-8	Acetonitrile	WATER	LA-523-455	U	< 2.00	ug/L	1.00	2.0	11/17/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	75-35-4	1,1-Dichloroethene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04

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RQ=Result Qualifier

DF=Dilution Factor

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-019: F03-019

Group #: WSCF20042149

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W040002216	B1B9V4	GRP	TRENT	79-01-6	Trichloroethene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	71-43-2	Benzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	108-88-3	Toluene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	108-90-7	Chlorobenzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	75-34-3	1,1-Dichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	100-41-4	Ethylbenzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	100-42-5	Styrene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	10061-01-5	cis-1,3-Dichloropropene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	10061-02-6	trans-1,3-Dichloropropene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	107-06-2	1,2-Dichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	108-10-1	4-Methyl-2-Pentanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	124-48-1	Dibromochloromethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	127-18-4	Tetrachloroethene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	1330-20-7	Xylenes (total)	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	540-59-0	1,2-Dichloroethene(Total)	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	56-23-5	Carbon tetrachloride	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	591-78-6	2-Hexanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	67-64-1	Acetone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	67-66-3	Chloroform	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	71-55-6	1,1,1-Trichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	74-83-9	Bromomethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	74-87-3	Chloromethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	75-00-3	Chloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	75-01-4	Vinyl chloride	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	75-09-2	Methylenechloride	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	75-15-0	Carbon disulfide	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-019: F03-019

Group #: WSCF20042149

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W040002216	B1B9V4	GRP	TRENT	75-25-2	Bromoform	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	75-27-4	Bromodichloromethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	78-87-5	1,2-Dichloropropane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	78-93-3	2-Butanone	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	79-00-5	1,1,2-Trichloroethane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	71-36-3	1-Butanol	WATER	LA-523-455	U	< 20.0	ug/L	1.00	20	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	110-54-3	Hexane	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	104-51-8	n-Butylbenzene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	156-60-5	trans-1,2-Dichloroethylene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	75-05-8	Acetonitrile	WATER	LA-523-455	U	< 2.00	ug/L	1.00	2.0	11/17/04	11/15/04	11/15/04
W040002216	B1B9V4	GRP	TRENT	156-59-2	cis-1,2-Dichloroethylene	WATER	LA-523-455	U	< 1.00	ug/L	1.00	1.0	11/17/04	11/15/04	11/15/04

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WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: SW-846 8270B Semi-Vols

SAF Number: F03-019
Sample Date: 11/15/04
Receive Date:11/15/04

Lab ID: W040002215
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	1,2,4-Trichlorobenzene	120-82-1	45.180	75.900	% Recov	11/30/04	50.000	120.000	
MS	1,4-Dichlorobenzene	106-46-7	41.481	69.700	% Recov	11/30/04	41.000	113.000	
MS	2,4-Dinitrotoluene	121-14-2	49.094	82.500	% Recov	11/30/04	65.000	109.000	
MS	2-Fluorophenol	367-12-4	46.275	77.700	% Recov	11/30/04	50.000	110.000	
MS	Acenaphthene	83-32-9	48.903	82.200	% Recov	11/30/04	62.000	112.000	
MS	4-Chloro-3-methylphenol	59-50-7	80.015	89.600	% Recov	11/30/04	59.000	115.000	
MS	2-Chlorophenol	95-57-8	71.331	79.900	% Recov	11/30/04	69.000	111.000	
MS	N-Nitrosodi-n-dipropylamine	621-64-7	51.079	85.800	% Recov	11/30/04	69.000	115.000	
MS	2-Fluorobiphenyl	321-60-8	48.701	81.800	% Recov	11/30/04	58.000	109.000	
MS	Phenol	108-95-2	79.229	88.700	% Recov	11/30/04	59.000	115.000	
MS	Nitrobenzene-d5	4165-60-0	50.674	85.100	% Recov	11/30/04	60.000	118.000	
MS	4-Nitrophenol	100-02-7	82.151	92.000	% Recov	11/30/04	32.000	130.000	
MS	Pentachlorophenol	87-86-5	68.615	76.800	% Recov	11/30/04	51.000	121.000	
MS	Phenol-d5	4165-62-2	51.946	87.300	% Recov	11/30/04	59.000	116.000	
MS	Pyrene	129-00-0	43.157	72.500	% Recov	11/30/04	58.000	116.000	
MS	2,4,6-Tribromophenol	118-79-6	58.643	98.500	% Recov	11/30/04	60.000	120.000	
MS	Terphenyl-d14 (7Cl)	98904-43-9	38.536	64.700	% Recov	11/30/04	60.000	120.000	
MSD	1,2,4-Trichlorobenzene	120-82-1	45.014	76.500	% Recov	11/30/04	50.000	120.000	
MSD	1,4-Dichlorobenzene	106-46-7	41.483	70.500	% Recov	11/30/04	41.000	113.000	
MSD	2,4-Dinitrotoluene	121-14-2	49.804	84.700	% Recov	11/30/04	65.000	109.000	
MSD	2-Fluorophenol	367-12-4	50.236	85.400	% Recov	11/30/04	50.000	110.000	
MSD	Acenaphthene	83-32-9	48.355	82.200	% Recov	11/30/04	62.000	112.000	
MSD	4-Chloro-3-methylphenol	59-50-7	78.582	89.100	% Recov	11/30/04	59.000	115.000	
MSD	2-Chlorophenol	95-57-8	70.399	79.800	% Recov	11/30/04	69.000	111.000	
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	50.908	86.500	% Recov	11/30/04	69.000	115.000	
MSD	2-Fluorobiphenyl	321-60-8	47.134	80.100	% Recov	11/30/04	58.000	109.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: SW-846 8270B Semi-Vols

SAF Number: F03-019
Sample Date: 11/15/04
Receive Date:11/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	Phenol	108-95-2	78.224	88.700	% Recov	11/30/04	59.000	115.000	
MSD	Nitrobenzene-d5	4165-60-0	49.176	83.600	% Recov	11/30/04	60.000	118.000	
MSD	4-Nitrophenol	100-02-7	81.460	92.300	% Recov	11/30/04	32.000	130.000	
MSD	Pentachlorophenol	87-86-5	68.972	78.200	% Recov	11/30/04	51.000	121.000	
MSD	Phenol-d5	4165-62-2	54.457	92.600	% Recov	11/30/04	59.000	116.000	
MSD	Pyrene	129-00-0	43.216	73.500	% Recov	11/30/04	58.000	116.000	
MSD	2,4,6-Tribromophenol	118-79-6	58.752	99.900	% Recov	11/30/04	60.000	120.000	
MSD	Terphenyl-d14 (7Cl)	98904-43-9	37.127	63.100	% Recov	11/30/04	60.000	120.000	
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	76.500	0.787	RPD	11/30/04	0.000	25.000	
SPK-RPD	1,4-Dichlorobenzene	106-46-7	70.500	1.141	RPD	11/30/04	0.000	25.000	
SPK-RPD	2,4-Dinitrotoluene	121-14-2	84.700	2.632	RPD	11/30/04	0.000	25.000	
SPK-RPD	2-Fluorophenol	367-12-4	85.400	9.442	RPD	11/30/04	0.000	25.000	
SPK-RPD	Acenaphthene	83-32-9	82.200	0.000	RPD	11/30/04	0.000	25.000	
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	89.100	0.560	RPD	11/30/04	0.000	25.000	
SPK-RPD	2-Chlorophenol	95-57-8	79.800	0.125	RPD	11/30/04	0.000	25.000	
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	86.500	0.813	RPD	11/30/04	0.000	25.000	
SPK-RPD	2-Fluorobiphenyl	321-60-8	80.100	2.100	RPD	11/30/04	0.000	25.000	
SPK-RPD	Phenol	108-95-2	88.700	0.000	RPD	11/30/04	0.000	16.000	
SPK-RPD	Nitrobenzene-d5	4165-60-0	83.600	1.778	RPD	11/30/04	0.000	25.000	
SPK-RPD	4-Nitrophenol	100-02-7	92.300	0.326	RPD	11/30/04	0.000	25.000	
SPK-RPD	Pentachlorophenol	87-86-5	78.200	1.806	RPD	11/30/04	0.000	25.000	
SPK-RPD	Phenol-d5	4165-62-2	92.600	5.892	RPD	11/30/04	0.000	25.000	
SPK-RPD	Pyrene	129-00-0	73.500	1.370	RPD	11/30/04	0.000	25.000	
SPK-RPD	2,4,6-Tribromophenol	118-79-6	99.900	1.411	RPD	11/30/04	0.000	25.000	
SPK-RPD	Terphenyl-d14 (7Cl)	98904-43-9	63.100	2.504	RPD	11/30/04	0.000	25.000	
SURR	2-Fluorophenol	367-12-4	49.709	83.500	% Recov	11/30/04	50.000	110.000	
SURR	2-Fluorobiphenyl	321-60-8	53.917	90.600	% Recov	11/30/04	58.000	109.000	
SURR	Nitrobenzene-d5	4165-60-0	56.398	94.700	% Recov	11/30/04	60.000	118.000	
SURR	Phenol-d5	4165-62-2	52.875	88.800	% Recov	11/30/04	59.000	116.000	
SURR	2,4,6-Tribromophenol	118-79-6	59.084	99.300	% Recov	11/30/04	60.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: SW-846 8270B Semi-Vols

SAF Number: F03-019
Sample Date: 11/15/04
Receive Date:11/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
SURR	Terphenyl-d14 (7Cl)	98904-43-9	42.831	72.000	% Recov	11/30/04	60.000	120.000	
BATCH QC									
BLANK	1,2-Dichlorobenzene	95-50-1	< 4.2	n/a	ug/L	11/30/04			U
BLANK	1,2,4-Trimethylbenzene	95-63-6	< 1.8	n/a	ug/L	11/30/04			U
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 3.0	n/a	ug/L	11/30/04			U
BLANK	1,3-Dichlorobenzene	541-73-1	< 5.2	n/a	ug/L	11/30/04			U
BLANK	1,4-Dichlorobenzene	106-46-7	< 5.0	n/a	ug/L	11/30/04			U
BLANK	2,4-Dichlorophenol	120-83-2	< 1.4	n/a	ug/L	11/30/04			U
BLANK	2,4-Dinitrotoluene	121-14-2	< 1.8	n/a	ug/L	11/30/04			U
BLANK	2,4,5-Trichlorophenol	95-95-4	< 1.9	n/a	ug/L	11/30/04			U
BLANK	2,4,6-Trichlorophenol	88-06-2	< 2.4	n/a	ug/L	11/30/04			U
BLANK	2,4-Dimethylphenol	105-67-9	< 4.3	n/a	ug/L	11/30/04			U
BLANK	2,6-Dinitrotoluene	606-20-2	< 2.2	n/a	ug/L	11/30/04			U
BLANK	2-Chloronaphthalene	91-58-7	< 2.3	n/a	ug/L	11/30/04			U
BLANK	2-Fluorophenol	367-12-4	37.241	74.500	% Recov	11/30/04	50.000	110.000	
BLANK	2-Methylnaphthalene	91-57-6	< 1.9	n/a	ug/L	11/30/04			U
BLANK	2-Methylphenol (cresol, o-)	95-48-7	< 2.3	n/a	ug/L	11/30/04			U
BLANK	2-Nitroaniline	88-74-4	< 2.1	n/a	ug/L	11/30/04			U
BLANK	2-Nitrophenol	88-75-5	< 2.0	n/a	ug/L	11/30/04			U
BLANK	3 & 4 Methylphenol Total	65794-96-9	< 3.2	n/a	ug/L	11/30/04	0.000	5.000	U
BLANK	3-Nitroaniline	99-09-2	< 4.5	n/a	ug/L	11/30/04			U
BLANK	4,6-Dinitro-2-methylphenol	534-52-1	< 1.7	n/a	ug/L	11/30/04			U
BLANK	4-Bromophenylphenyl ether	101-55-3	< 1.9	n/a	ug/L	11/30/04			U
BLANK	4-Chlorophenylphenyl ether	7005-72-3	< 2.2	n/a	ug/L	11/30/04			U
BLANK	Acenaphthene	83-32-9	< 2.4	n/a	ug/L	11/30/04			U
BLANK	Acenaphthylene	208-96-8	< 2.3	n/a	ug/L	11/30/04			U
BLANK	Anthracene	120-12-7	< 2.0	n/a	ug/L	11/30/04			U
BLANK	Bis(2-chloroethyl) ether	111-44-4	< 3.4	n/a	ug/L	11/30/04			U
BLANK	Benzo(a)anthracene	56-55-3	< 2.1	n/a	ug/L	11/30/04			U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: SW-846 8270B Semi-Vols

SAF Number: F03-019
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Benzo(b)fluoranthene	205-99-2	< 1.7	n/a	ug/L	11/30/04			U
BLANK	Benzo(ghi)perylene	191-24-2	< 2.5	n/a	ug/L	11/30/04			U
BLANK	Benzo(a)pyrene	50-32-8	< 2.1	n/a	ug/L	11/30/04			U
BLANK	Bis(2-Chloroethoxy)methane	111-91-1	< 2.0	n/a	ug/L	11/30/04			U
BLANK	Bis(2-ethylhexyl) phthalate	117-81-7	< 2.6	n/a	ug/L	11/30/04			U
BLANK	Bis(2-chloro-1-methylethyl)eth	108-60-1	< 2.1	n/a	ug/L	11/30/04	0.000	10.000	U
BLANK	Benzo(k)fluoranthene	207-08-9	< 2.8	n/a	ug/L	11/30/04			U
BLANK	Butylbenzylphthalate	85-68-7	< 2.0	n/a	ug/L	11/30/04			U
BLANK	Carbazole	86-74-8	< 1.4	n/a	ug/L	11/30/04			U
BLANK	4-Chloroaniline	106-47-8	< 7.2	n/a	ug/L	11/30/04			U
BLANK	4-Chloro-3-methylphenol	59-50-7	< 1.3	n/a	ug/L	11/30/04			U
BLANK	2-Chlorophenol	95-57-8	< 1.7	n/a	ug/L	11/30/04			U
BLANK	Chrysene	218-01-9	< 2.3	n/a	ug/L	11/30/04			U
BLANK	Cyclohexanone	108-94-1	< 5.0	n/a	ug/L	11/30/04	0.000	10.000	U
BLANK	3,3'-Dichlorobenzidine	91-94-1	< 4.1	n/a	ug/L	11/30/04			U
BLANK	Dibenz[a,h]anthracene	53-70-3	< 2.6	n/a	ug/L	11/30/04			U
BLANK	Dibenzofuran	132-64-9	< 1.9	n/a	ug/L	11/30/04			U
BLANK	Di-n-butylphthalate	84-74-2	< 2.1	n/a	ug/L	11/30/04			U
BLANK	Diethylphthalate	84-66-2	< 6.3	n/a	ug/L	11/30/04			U
BLANK	Dimethyl phthalate	131-11-3	< 2.1	n/a	ug/L	11/30/04			U
BLANK	2,4-Dinitrophenol	51-28-5	< 3.3	n/a	ug/L	11/30/04			U
BLANK	Di-n-octylphthalate	117-84-0	< 2.5	n/a	ug/L	11/30/04			U
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 1.7	n/a	ug/L	11/30/04			U
BLANK	2-Fluorobiphenyl	321-60-8	36.220	72.400	% Recov	11/30/04	58.000	109.000	
BLANK	Fluorene	86-73-7	< 2.0	n/a	ug/L	11/30/04			U
BLANK	Fluoranthene	206-44-0	< 2.1	n/a	ug/L	11/30/04			U
BLANK	Hexachlorobenzene	118-74-1	< 2.1	n/a	ug/L	11/30/04			U
BLANK	Hexachlorobutadiene	87-68-3	< 3.6	n/a	ug/L	11/30/04			U
BLANK	Hexachlorocyclopentadiene	77-47-4	< 7.8	n/a	ug/L	11/30/04			U
BLANK	Hexachloroethane	67-72-1	< 5.5	n/a	ug/L	11/30/04			U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: SW-846 8270B Semi-Vols

SAF Number: F03-019
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Indeno(1,2,3-cd)pyrene	193-39-5	< 2.6	n/a	ug/L	11/30/04			U
BLANK	Isophorone	78-59-1	< 1.9	n/a	ug/L	11/30/04			U
BLANK	Phenol	108-95-2	< 1.7	n/a	ug/L	11/30/04			U
BLANK	Naphthalene	91-20-3	< 2.4	n/a	ug/L	11/30/04			U
BLANK	Nitrobenzene-d5	4165-60-0	41.275	82.600	% Recov	11/30/04	60.000	118.000	
BLANK	Nitrobenzene	98-95-3	< 2.0	n/a	ug/L	11/30/04			U
BLANK	4-Nitrophenol	100-02-7	< 1.4	n/a	ug/L	11/30/04			U
BLANK	4-Nitroaniline	100-01-6	< 2.9	n/a	ug/L	11/30/04			U
BLANK	N-Nitrosodiphenylamine	86-30-6	< 2.3	n/a	ug/L	11/30/04			U
BLANK	Pentachlorophenol	87-86-5	< 1.7	n/a	ug/L	11/30/04			U
BLANK	Phenanthrene	85-01-8	< 2.2	n/a	ug/L	11/30/04			U
BLANK	Phenol-d5	4165-62-2	38.194	76.400	% Recov	11/30/04	59.000	116.000	
BLANK	Pyrene	129-00-0	< 2.1	n/a	ug/L	11/30/04			U
BLANK	Tributyl phosphate	126-73-8	< 2.5	n/a	ug/L	11/30/04			U
BLANK	2,4,6-Tribromophenol	118-79-6	35.759	71.500	% Recov	11/30/04	60.000	120.000	
BLANK	Terphenyl-d14 (7Cl)	98904-43-9	46.592	93.200	% Recov	11/30/04	60.000	120.000	
LCS	1,2,4-Trichlorobenzene	120-82-1	42.465	84.900	% Recov	11/30/04	46.000	107.000	
LCS	1,4-Dichlorobenzene	106-46-7	37.500	75.000	% Recov	11/30/04	42.000	111.000	
LCS	2,4-Dinitrotoluene	121-14-2	43.213	86.400	% Recov	11/30/04	59.000	106.000	
LCS	2-Fluorophenol	367-12-4	42.527	85.100	% Recov	11/30/04	50.000	110.000	
LCS	Acenaphthene	83-32-9	48.736	97.500	% Recov	11/30/04	61.000	116.000	
LCS	4-Chloro-3-methylphenol	59-50-7	69.629	92.800	% Recov	11/30/04	61.000	106.000	
LCS	2-Chlorophenol	95-57-8	65.870	87.800	% Recov	11/30/04	66.000	106.000	
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	48.471	96.900	% Recov	11/30/04	71.000	114.000	
LCS	2-Fluorobiphenyl	321-60-8	46.866	93.700	% Recov	11/30/04	58.000	109.000	
LCS	Phenol	108-95-2	69.979	93.300	% Recov	11/30/04	67.000	105.000	
LCS	Nitrobenzene-d5	4165-60-0	47.580	95.200	% Recov	11/30/04	60.000	118.000	
LCS	4-Nitrophenol	100-02-7	59.305	79.100	% Recov	11/30/04	32.000	118.000	
LCS	Pentachlorophenol	87-86-5	49.564	66.100	% Recov	11/30/04	62.000	114.000	
LCS	Phenol-d5	4165-62-2	43.444	86.900	% Recov	11/30/04	59.000	116.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: SW-846 8270B Semi-Vols

SAF Number: F03-019
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
LCS	Pyrene	129-00-0	44.154	88.300	% Recov	11/30/04	66.000	118.000	
LCS	2,4,6-Tribromophenol	118-79-6	49.345	98.700	% Recov	11/30/04	60.000	120.000	
LCS	Terphenyl-d14 (7Cl)	98904-43-9	44.940	89.900	% Recov	11/30/04	60.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: VOA Ground Water Protection

SAF Number: F03-019
Sample Date: 11/10/04
Receive Date:11/11/04

Lab ID: W040002204
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	1,1-Dichloroethene	75-35-4	23.190	92.800	% Recov	11/17/04	63.000	117.000	
MS	Benzene	71-43-2	27.080	108.000	% Recov	11/17/04	75.000	129.000	
MS	4-Bromofluorobenzene	460-00-4	49.240	98.500	% Recov	11/17/04	84.000	116.000	
MS	Chlorobenzene	108-90-7	27.310	109.000	% Recov	11/17/04	79.000	119.000	
MS	1,2-Dichloroethane-d4	17060-07-0	60.000	120.000	% Recov	11/17/04	82.000	136.000	
MS	Toluene-d8	2037-26-5	53.450	107.000	% Recov	11/17/04	89.000	119.000	
MS	Toluene	108-88-3	26.640	107.000	% Recov	11/17/04	76.000	120.000	
MS	Trichloroethene	79-01-6	25.460	102.000	% Recov	11/17/04	73.000	123.000	
MSD	1,1-Dichloroethene	75-35-4	24.860	99.400	% Recov	11/17/04	63.000	117.000	
MSD	Benzene	71-43-2	27.850	111.000	% Recov	11/17/04	75.000	129.000	
MSD	4-Bromofluorobenzene	460-00-4	49.210	98.400	% Recov	11/17/04	84.000	116.000	
MSD	Chlorobenzene	108-90-7	27.680	111.000	% Recov	11/17/04	79.000	119.000	
MSD	1,2-Dichloroethane-d4	17060-07-0	58.860	118.000	% Recov	11/17/04	82.000	136.000	
MSD	Toluene-d8	2037-26-5	53.490	107.000	% Recov	11/17/04	89.000	119.000	
MSD	Toluene	108-88-3	27.740	111.000	% Recov	11/17/04	76.000	120.000	
MSD	Trichloroethene	79-01-6	26.520	106.000	% Recov	11/17/04	73.000	123.000	
SPK-RPD	1,1-Dichloroethene	75-35-4	99.400	6.868	RPD	11/17/04	0.000	10.000	
SPK-RPD	Benzene	71-43-2	111.000	2.740	RPD	11/17/04	0.000	10.000	
SPK-RPD	Chlorobenzene	108-90-7	111.000	1.818	RPD	11/17/04	0.000	10.000	
SPK-RPD	1,2-Dichloroethane-d4	17060-07-0	118.000	1.681	RPD	11/17/04	0.000	25.000	
SPK-RPD	Toluene-d8	2037-26-5	107.000	0.000	RPD	11/17/04	0.000	25.000	
SPK-RPD	Toluene	108-88-3	111.000	3.670	RPD	11/17/04	0.000	10.000	
SPK-RPD	Trichloroethene	79-01-6	106.000	3.846	RPD	11/17/04	0.000	10.000	

Lab ID: W040002215
BATCH QC ASSOCIATED WITH SAMPLE

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: VOA Ground Water Protection

SAF Number: F03-019
Sample Date: 11/15/04
Receive Date:11/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
SURR	4-Bromofluorobenzene	460-00-4	49.000	98.000	% Recov	11/17/04	84.000	116.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	59.580	119.000	% Recov	11/17/04	82.000	136.000	
SURR	Toluene-d8	2037-26-5	54.040	108.000	% Recov	11/17/04	89.000	119.000	

Lab ID: W040002216
BATCH QC ASSOCIATED WITH SAMPLE

SURR	4-Bromofluorobenzene	460-00-4	45.830	91.700	% Recov	11/17/04	84.000	116.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	59.840	120.000	% Recov	11/17/04	82.000	136.000	
SURR	Toluene-d8	2037-26-5	52.610	105.000	% Recov	11/17/04	89.000	119.000	

BATCH QC

BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L	11/17/04			U
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L	11/17/04			U
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L	11/17/04			U
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	n/a	ug/L	11/17/04	0.000	5.000	U
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L	11/17/04			U
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L	11/17/04			U
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 1.0	n/a	ug/L	11/17/04			U
BLANK	1-Butanol	71-36-3	< 20	n/a	ug/L	11/17/04			U
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/L	11/17/04			U
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L	11/17/04			U
BLANK	4-Bromofluorobenzene	460-00-4	50.090	100.000	% Recov	11/17/04	84.000	116.000	
BLANK	Bromoform	75-25-2	< 1.0	n/a	ug/L	11/17/04			U
BLANK	n-Butylbenzene	104-51-8	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/L	11/17/04			U

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: VOA Ground Water Protection

SAF Number: F03-019
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L	11/17/04			U
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/L	11/17/04			U
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Chloroethane	75-00-3	< 1.0	n/a	ug/L	11/17/04			U
BLANK	1,2-Dichloroethane-d4	17060-07-0	59.860	120.000	% Recov	11/17/04	82.000	136.000	
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L	11/17/04			U
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Hexane	110-54-3	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Bromomethane	74-83-9	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Chloromethane	74-87-3	< 1.0	n/a	ug/L	11/17/04			U
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	11/17/04	0.000	5.000	U
BLANK	Toluene-d8	2037-26-5	53.980	108.000	% Recov	11/17/04	89.000	119.000	
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L	11/17/04			U
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L	11/17/04			U
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L	11/17/04			U
LCS	1,1-Dichloroethene	75-35-4	24.360	97.400	% Recov	11/17/04	70.000	130.000	
LCS	Benzene	71-43-2	28.270	113.000	% Recov	11/17/04	70.000	130.000	
LCS	4-Bromofluorobenzene	460-00-4	48.700	97.400	% Recov	11/17/04	84.000	116.000	
LCS	Chlorobenzene	108-90-7	28.930	116.000	% Recov	11/17/04	70.000	130.000	
LCS	1,2-Dichloroethane-d4	17060-07-0	57.920	116.000	% Recov	11/17/04	82.000	136.000	
LCS	Toluene-d8	2037-26-5	54.510	109.000	% Recov	11/17/04	89.000	119.000	
LCS	Toluene	108-88-3	28.020	112.000	% Recov	11/17/04	70.000	130.000	
LCS	Trichloroethene	79-01-6	26.440	106.000	% Recov	11/17/04	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: VOA Ground Water Protection

SAF Number: F03-019
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L	11/18/04			U
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L	11/18/04			U

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-019: F03-019

Group #: WSCF20042149

Sample #	Client ID			CAS #	Test Performed	Matrix	WSCF Method	RQ		Result	Unit	DF	MDL	Analyze	Sample	Receive
Radiochemistry																
W040002215	B19NF7	GRP	TRENT	14596-10-2	Americium-241	WATER	LA-508-471			5.00	pCi/L	1.00	0.60	11/19/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	E,T,C	Am-241 by AEA Total Cntg Error	WATER	LA-508-471		+-	1.7	pCi/L	1.00	0.0	11/19/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	13981-16-3	Plutonium-238	WATER	LA-508-471	U		0.280	pCi/L	1.00	4.2	11/19/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	E,T,C	Pu-238 by AEA Total Cntg Error	WATER	LA-508-471		+-	2.4	pCi/L	1.00	0.0	11/19/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	PU-239/240	Pu-239/240 by AEA	WATER	LA-508-471			4.60	pCi/L	1.00	1.5	11/19/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	E,T,C	Pu-239/240 AEA Total Cntg Err	WATER	LA-508-471		+-	2.1	pCi/L	1.00	0.0	11/19/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	14133-76-7	Technetium-99	WATER	LA-508-421			16.0	pCi/L	1.00	2.4	11/23/04	11/15/04	11/15/04
W040002215	B19NF7	GRP	TRENT	E,T,C	Tc-99 Counting Error	WATER	LA-508-421		+-	4.0	pCi/L	1.00	0.0	11/23/04	11/15/04	11/15/04

MDL=Minimum Detection Limit J - Analyte is an estimate, has potentially larger errors U - Analyzed for but not detected above limiting criteria.
RQ=Result Qualifier

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

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: Americium by AEA

SAF Number: F03-019
Sample Date: 11/15/04
Receive Date:11/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002215									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Americium-241	14596-10-2	3.9e+00	24.719	RPD	11/19/04	0.000	20.000	*
BATCH QC									
BLANK	Americium-241	14596-10-2	4.1e+00	4.100	pCi/L	11/19/04	-10.000	1000.000	
LCS	Americium-241	14596-10-2	10.38	86.320	% Recov	11/19/04	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: Plutonium Isotopics by AEA

SAF Number: F03-019
Sample Date: 11/15/04
Receive Date:11/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002215									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Pu-239/240 by AEA	PU-239/240	2.1e+00	74.627	RPD	11/22/04	0.000	20.000	
BATCH QC									
BLANK	Pu-239/240 by AEA	PU-239/240	U4.6e-01	n/a	pCi/L	11/19/04	-10.000	1000.000	
LCS	Pu-239/240 by AEA	PU-239/240	1.2e+01	97.561	% Recov	11/19/04	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20042149
Matrix: WATER
Test: TC99 by Liquid Scin.

SAF Number: F03-019
Sample Date: 11/15/04
Receive Date:11/15/04

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W040002215									
BATCH QC ASSOCIATED WITH SAMPLE									
DUP	Technetium-99	14133-76-7	14.5	7.947	RPD	11/23/04	0.000	20.000	
MS	Technetium-99	14133-76-7	47.8	106.222	% Recov	11/23/04	75.000	125.000	
BATCH QC									
BLANK	Technetium-99	14133-76-7	-2.3	-2.300	pCi/L	11/23/04	-10.000	10.000	
LCS	Technetium-99	14133-76-7	118.7	123.775	% Recov	11/23/04	75.000	125.000	

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F03-019

Group #: WSCF20042149

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		W040002215/Pu/Am duplicate is flagged but the Pu239 is low level and the Am241 is slightly out of range. Since all other QC checks came out fine for Am dup, this batch has been accepted. The RPD criterion does not apply to the low level Pu239 duplicate.lmh SVOA: The blank and sample were contaminated with Toluene from a sample which was prepared at the same time. The Toluene TIC has been flagged with a B. den VOA: A J-flag of a target compound indicates that it was found at a concentration less than that of the lowest calibration standard but greater than the detection limit. gar

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 F03-019 :F03-019

Group #: WSCF20042149

Sample #	Client ID			Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W040002215	B19NF7	GRP	TRENT	SW-846 8270B Semi-Vols	SMP 14.781 n-Hexadecanoic acid	57-10-3	14.78166	J	7.8	ug/L
W040002215	B19NF7	GRP	TRENT	SW-846 8270B Semi-Vols	SMP 16.467 9-Octadecenoic acid, (	112-79-8	16.46776	J	25	ug/L
W040002215	B19NF7	GRP	TRENT	SW-846 8270B Semi-Vols	SMP 3.868 Toluene	108-88-3	3.868066	BJ	38	ug/L
W040002215	B19NF7	GRP	TRENT	SW-846 8270B Semi-Vols	SMP 5.870 2-Pyrrolidinone, 1-met	872-50-4	5.870933	J	48	ug/L

RQ=Result Qualifier B - The Analyte detected in both the BLANK and the SAMPLE (org.) J - Analyte is an estimate, has potentially larger errors

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WSCF
METHOD REFERENCES REPORT

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

LA-508-421 LA-508-421: OPERATION OF THE TRI-CARB MODEL 2500TR LIQUID SCINTILLATION ANALYZER

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-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)

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

w13qlog v1 07-dec-2004 09:53:28

W13q Worklist/Batch/QC Report for Group# WSCF20042149

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
24098	1	24454	27794	BLANK		TC99 by Liquid Scin.
24098	2	24454	27794	LCS		TC99 by Liquid Scin.
24098	4	24454	27794	DUP	W040002215	TC99 by Liquid Scin.
24098	3	24454	27794	MS	W040002215	TC99 by Liquid Scin.
24098	5	24454	27794	SAMPLE	W040002215	TC99 by Liquid Scin.
24092	1	24452	27801	BLANK		Americium by AEA
24092	2	24452	27801	LCS		Americium by AEA
24092	3	24452	27801	DUP	W040002215	Americium by AEA
24092	4	24452	27801	SAMPLE	W040002215	Americium by AEA
24093	1	24451	27802	BLANK		Plutonium Isotopics by AEA
24093	2	24451	27802	LCS		Plutonium Isotopics by AEA
24093	3	24451	27802	DUP	W040002215	Plutonium Isotopics by AEA
24093	4	24451	27802	SAMPLE	W040002215	Plutonium Isotopics by AEA
			27866	BLANK		SW-846 8270B Semi-Vols
			27866	LCS		SW-846 8270B Semi-Vols
			27866	MS	W040002215	SW-846 8270B Semi-Vols
			27866	MSD	W040002215	SW-846 8270B Semi-Vols
			27866	SAMPLE	W040002215	SW-846 8270B Semi-Vols
			27866	SPK-RPD	W040002215	SW-846 8270B Semi-Vols
			27866	SURR	W040002215	SW-846 8270B Semi-Vols
			27945	BLANK		VOA Ground Water Protection
			27945	LCS		VOA Ground Water Protection
			27945	MS	W040002204	VOA Ground Water Protection
			27945	MSD	W040002204	VOA Ground Water Protection
			27945	SPK-RPD	W040002204	VOA Ground Water Protection
			27945	SAMPLE	W040002215	VOA Ground Water Protection
			27945	SURR	W040002215	VOA Ground Water Protection
			27945	SAMPLE	W040002216	VOA Ground Water Protection
			27945	SURR	W040002216	VOA Ground Water Protection
			27946	BLANK		VOA Ground Water Protection
			27946	SAMPLE	W040002215	VOA Ground Water Protection

M8141-SLF-04-374

ATTACHMENT 3

SAMPLE RECEIPT INFORMATION

Consisting of 4 pages
Including cover page

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

File
12/15/04

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program
Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 119325/ES10
Group#: 20042149
Project#: F03-019
Proj Mgr: Steve Trent A0-21
Phone: 373-5869

The following samples were received from you on 11/15/04. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W040002215	B19NF7	GRP @AEA-30 @AEA-31 @SVOCGPP @TC99-30 @VOA-GPP	TRENT Water	11/15/04
W040002216	B1B9V4	GRP @VOA-GPP	TRENT Water	11/15/04

Test Acronym Description

Test Acronym	Description
@AEA-30	Plutonium Isotopics by AEA
@AEA-31	Americium by AEA
@SVOCGPP	SW-846 8270B Semi-Vols
@TC99-30	TC99 by Liquid Scin.
@VOA-GPP	VOA Ground Water Protection

12/15/04

FLUOR Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F03-019-013	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 7N	DATA TURNAROUND
Pope/Pfister/Wiberg/Tyra	Steve Trent	373-5869	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-Z-9/C3426; Interval 377FT - 379.5FT	216-Z-9 Trench Characterization Borehole - Water		F03-019		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-360 1	119325ES10	Government Vehicle		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Waste Sampling & Characterization	N/A		N/A		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
RADIOACTIVE TIE TO: B19PH9

SPECIAL HANDLING AND/OR STORAGE
N/A

Z 0042199

PRESERVATION	HCl or H2SO4 to pH <2/Cool 4C	Cool 4C	HNO3 to pH <2	HNO3 to pH <2	None					
TYPE OF CONTAINER	aGs*	aG	P	P	P					
NO. OF CONTAINER(S)	3	4	1	1	2					
VOLUME	40mL	1000mL	1000mL	1000mL	1L					
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Isotopic Plutonium;	Americium-241;	Technetium-99;					

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B19NF7 (F)	WATER W04000215	11/15/04	0915	X	X	X	X	X					

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	11/15/04 1010	[signature]	11/15/04 1010
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
(1)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, Acetonitrile, Hexane, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene}
(2)Semi-VOA - 8270A (TCL); Semi-VOA – 8270A (Add-On) {1,2,4-Trimethylbenzene, Cyclohexanone, Tributyl phosphate}

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

A-6003-618(03/03)

FLUOR Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F03-019-095	PAGE 1 OF 1

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 7N	DATA TURNAROUND
Pope/Pfister/Wiberg/Tyra	Steve Trent	373-5869	TRENT, SJ	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
216-Z-9/C3426	216-Z-9 Trench Characterization Borehole - Water		F03-019		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**COA**	**METHOD OF SHIPMENT**		
	~~HNF N-3361~~ HNF N-3601	119325ES10	Government Vehicle		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Waste Sampling & Characterization	N/A		N/A		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS

SPECIAL HANDLING AND/OR STORAGE
N/A

PRESERVATION	HCl or H2SO4 to pH <2/Cool 4C										
TYPE OF CONTAINER	aGs*										
NO. OF CONTAINER(S)	3										
VOLUME	40mL										
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS										

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	[redacted]								
B1B9V4 W04002216	WATER	11/15/04	0900	X								

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	11/16/04 1010	[signature]	11/15/04 1010

SPECIAL INSTRUCTIONS
(1)VOA - 8260A (TCL); VOA - 8260A (Add-On) {1-Butanol, Acetonitrile, Hexane, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene}

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

ADMINISTRATIVE VERIFICATION FORM

VERIFICATION DATE: 12-13-04	VERIFIER: PC LEE
SAF NO.: F03-019	SAF TITLE: 216-Z-9 TRENCH CHARACTERIZATION BOREHOLE – WATER
SDG NO.: WSCF20042149	SDR NO(s): NONE
DATA PACKAGE DEFICIENCIES: NONE	
DATE SENT TO LAB: NA	DATE LAB RESPONDED: NA
DATE VERIFICATION CLOSED: 12-13-04	