Fluor Hanford, Inc.
Post Office Box 1000
Richland, Washington 99352

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FLUOR

Memorandum

W1141-04-SLF-079

To:	S. J. Trent	Date:	January 12, 2004
From:	S. L. Fitzgerald, Manager WSCF Analytical Services	Telephone:	373-7495

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

Subject: FINAL RESULTS FOR 216-B-26 CHARACTERISTIC SAMPLING – QC SAMPLING-SAMPLE DELIVERY GROUP WSCF20031618 - SAF NUMBER F03-021

References: (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 and Characterization Facility Quality Assurance Plan

This letter contains a narrative (Attachment 1) for the sample delivery group (WSCF20031618), the analytical results (Attachment 2) and the sample receipt information (Attachment 3).

slf/ddw

Attachments 3

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W1141-04-SLF-079

ATTACHMENT 1

NARRATIVE

Consisting of 2 pages
Cover page not included

Sample Delivery Group	**WSCF20031618**
Sample Matrix	**Water**
Sample Visual	**Clear**
SAF Number	**F03-021**
Data Deliverable	**Summary Report**

Introduction

One (1) water sample (B183L2) from GPP was received at the WSCF Laboratory on December 8, 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. Analytical work was performed with no deviations to the approved method.
- Semi-VOA's by EPA SW-846 Method 8270B. Analytical work was performed with no deviations to the approved method.
- IC Anions by EPA SW-846 Method 300.0. Analytical work was performed with a deviation required for the Anions (see comments below).
- All RadChem analyses (TA/TB) were run by internal WDOE accredited WSCF procedures. Analytical work was performed with no deviations to the approved method.

Comments

ICP-MS 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) 2-15 and 2-16 for QC details.

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) 2-11, 2-12, 2-13, and 2-14 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. Analytical Note: Terphenyl-d14 is out low in the sample, LCS, and MSD. Also the Spike-RPD for this compound is out of limits.

IC Anions – The regulatory 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) 2-8 and 2-9 for QC details. Analytical Note: The sample was taken on 12/04/03, but not delivered to WSCF until 12/08/03. As a result, the analytical holding times for Nitrite-N, Phosphate-P and Nitrate-N were exceeded prior to the sample arriving at the Laboratory. The client requested (see page 3-3) the analysis be performed. There were no other issues with QC for this sample.

RadChem – There are no hold times associated with these WDOE accredited methods. A Laboratory Control Sample and Duplicate were analyzed with each delivery group per the GPP Letter of Instruction. See page(s) 2-10 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
TA/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

W1141-04-SLF-079

ATTACHMENT 2

ANALYTICAL RESULTS

Consisting of 16 pages
Cover page not included

WSCF
ANALYTICAL RESULTS REPORT

for

Ground Water Protection Program

Richland, WA 99352

Attention: Steve Trent

Analytical: William H. Baird

Client Services: John Trechter

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#: WSCF20031618
Report Date: 6-jan-2004
Report WGPP/ver. 1
Ground Water Protection Program

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-021: F03-021

Group #: WSCF20031618

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Organic													
W030001116	B183L2 TRENT	100-02-7	4-Nitrophenol		LA-523-456	U	< 1.30	ug/L	1.00	1.3	12/15/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	106-46-7	1,4-Dichlorobenzene		LA-523-456	U	< 4.80	ug/L	1.00	4.8	12/15/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	108-95-2	Phenol		LA-523-456	U	< 1.60	ug/L	1.00	1.6	12/15/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	120-82-1	1,2,4-Trichlorobenzene		LA-523-456	U	< 2.90	ug/L	1.00	2.9	12/15/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	121-14-2	2,4-Dinitrotoluene		LA-523-456	U	< 1.70	ug/L	1.00	1.7	12/15/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	129-00-0	Pyrene		LA-523-456	U	< 2.00	ug/L	1.00	2.0	12/15/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	59-50-7	4-Chloro-3-methylphenol		LA-523-456	U	< 1.20	ug/L	1.00	1.2	12/15/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	621-64-7	N-Nitrosodi-n-dipropylamine		LA-523-456	U	< 1.60	ug/L	1.00	1.6	12/15/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	83-32-9	Acenaphthene		LA-523-456	U	< 2.30	ug/L	1.00	2.3	12/15/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	87-86-5	Pentachlorophenol		LA-523-456	U	< 1.60	ug/L	1.00	1.6	12/15/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	95-57-8	2-Chlorophenol		LA-523-456	U	< 1.60	ug/L	1.00	1.6	12/15/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	126-73-8	Tributyl phosphate		LA-523-456	U	< 2.40	ug/L	1.00	2.4	12/15/03	12/04/03	12/08/03

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

DF=Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

2 - 3

Attention: Steve Trent
Project: F03-021: F03-021

Group #: WSCF20031618

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Inorganic													
W030001116	B183L2 TRENT	16984-48-8	Fluoride		LA-533-410	U	< 0.0230	mg/L	1.00	0.023	12/09/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	16887-00-6	Chloride		LA-533-410		0.190	mg/L	1.00	0.052	12/09/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	NO2-N	Nitrogen in Nitrite		LA-533-410	U	< 0.0190	mg/L	1.00	0.019	12/09/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	24959-67-9	Bromide		LA-533-410	U	< 0.0550	mg/L	1.00	0.055	12/09/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	NO3-N	Nitrogen in Nitrate		LA-533-410	U	< 0.0130	mg/L	1.00	0.013	12/09/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	14265-44-2	Phosphate		LA-533-410	U	< 0.0540	mg/L	1.00	0.054	12/09/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	14808-79-8	Sulfate		LA-533-410	U	< 0.100	mg/L	1.00	0.10	12/09/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	7440-43-9	Cadmium		LA-505-412	U	< 0.100	ug/L	1.00	0.10	12/31/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	7440-47-3	Chromium		LA-505-412		0.510	ug/L	1.00	0.30	12/31/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	7440-50-8	Copper		LA-505-412	B	2.16	ug/L	1.00	0.50	12/31/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	7439-92-1	Lead		LA-505-412	U	< 1.20	ug/L	1.00	1.2	12/31/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	7440-02-0	Nickel		LA-505-412		0.800	ug/L	1.00	0.50	12/31/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	7440-22-4	Silver		LA-505-412	U	< 0.200	ug/L	1.00	0.20	12/31/03	12/04/03	12/08/03
W030001116	B183L2 TRENT	7440-61-1	Uranium		LA-505-412	U	< 0.100	ug/L	1.00	0.10	12/31/03	12/04/03	12/08/03

MDL=Minimum Detection Limit
RQ=Result Qualifier

B - The analyte < the RDL but > = the IDL/MDL (inorganic)

U - Analyzed for but not detected above limiting criteria.

DF=Dilution Factor

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

WSCF
ANALYTICAL COMMENT REPORT

2 - 4

Attention: Steve Trent
Project Number F03-021

Group #: WSCF20031618

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		SVOA: Terphenyl-d14 is out low in the sample W030001116, LCS and the MSD. Also the SPK-RPD for Terphenyl-d14 is out of limits. den ICP-MS: The preparation blank contains 1.2 ug/L (ppb) copper.

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
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
Project: F03-021: F03-021

Group #: WSCF20031618

Sample #	Client ID		CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
Radiochemistry														
W030001116	B183L2	TRENT	12587-46-1	Gross alpha		LA-508-415	U	-0.0920	pCi/L	1.00	1.2	12/12/03	12/04/03	12/08/03
W030001116	B183L2	TRENT	E,T,C	Gross Alpha Method Error		LA-508-415		+- 0.63	pCi/L	1.00	0.0	12/12/03	12/04/03	12/08/03
W030001116	B183L2	TRENT	12587-47-2	Gross beta		LA-508-415	U	0.650	pCi/L	1.00	0.90	12/12/03	12/04/03	12/08/03
W030001116	B183L2	TRENT	E,T,C	Gross Beta Method Error		LA-508-415		+- 0.58	pCi/L	1.00	0.0	12/12/03	12/04/03	12/08/03

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

DF=Dilution Factor

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

WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

2-5

Attention: Steve Trent
Project Number F03-021 :F03-021

Group #: WSCF20031618

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W030001116	B183L2 TRENT	SW-846 8270B Semi-Vols	SMP 19.761 bis(2-Ethylhexyl)phtha	117-81-7	19.76131		2.7	ug/L
W030001116	B183L2 TRENT	SW-846 8270B Semi-Vols	SMP 10.924 Diethyl Phthalate	84-66-2	10.92425		2.8	ug/L
W030001116	B183L2 TRENT	SW-846 8270B Semi-Vols	SMP 7.440 Unknown	Unknown	7.4405		3.6	ug/L
W030001116	B183L2 TRENT	SW-846 8270B Semi-Vols	SMP 14.704 Di-n-butylphthalate	84-74-2	14.70426		4.3	ug/L

RQ=Result Qualifier

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WSCF
METHOD REFERENCES REPORT

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

LA-505-412	LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY	
	EPA-600/R-94-111 200.8	DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS
LA-508-415	Operation of Protean Alpha/Beta Counters	
	None	No reference to any industry method.
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

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.

wl3qlog v1 06-jan-2004 13:01:35

Wl3q Worklist/Batch/QC Report for Group# WSCF20031618

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
20995	2	21377	24308	BLANK		Anions by Ion Chromatography
20995	8	21377	24308	BLANK		Anions by Ion Chromatography
20995	3	21377	24308	LCS		Anions by Ion Chromatography
20995	5	21377	24308	DUP	W030001116	Anions by Ion Chromatography
20995	6	21377	24308	MS	W030001116	Anions by Ion Chromatography
20995	7	21377	24308	MSD	W030001116	Anions by Ion Chromatography
20995	4	21377	24308	SAMPLE	W030001116	Anions by Ion Chromatography
20974	1	21356	24312	BLANK		Gross Alpha/Gross Beta (AB32)
20974	2	21356	24312	LCS		Gross Alpha/Gross Beta (AB32)
20974	3	21356	24312	DUP	W030001116	Gross Alpha/Gross Beta (AB32)
20974	6	21356	24312	SAMPLE	W030001116	Gross Alpha/Gross Beta (AB32)
			24380	BLANK		SW-846 8270B Semi-Vols
			24380	LCS		SW-846 8270B Semi-Vols
			24380	MS	W030001116	SW-846 8270B Semi-Vols
			24380	MSD	W030001116	SW-846 8270B Semi-Vols
			24380	SAMPLE	W030001116	SW-846 8270B Semi-Vols
			24380	SPK-RPD	W030001116	SW-846 8270B Semi-Vols
			24380	SURR	W030001116	SW-846 8270B Semi-Vols
21116	1	21495	24463	BLANK		ICP-2008 MS All possible metal
21116	2	21495	24463	LCS		ICP-2008 MS All possible metal
21116	4	21495	24463	MS	W030001116	ICP-2008 MS All possible metal
21116	5	21495	24463	MSD	W030001116	ICP-2008 MS All possible metal
21116	3	21495	24463	SAMPLE	W030001116	ICP-2008 MS All possible metal
		21495	24463	MS	W03C000346	ICP-2008 MS All possible metal
		21495	24463	MSD	W03C000346	ICP-2008 MS All possible metal

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20031618
Matrix: WATER
Test: Anions by Ion Chromatography

SAF Number: F03-021
Sample Date: 12/04/03
Receive Date: 12/08/03

Lab ID: W030001116

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
DUP	Bromide	24959-67-9	<5.50e-2	n/a	RPD	12/09/03	0.000	20.000	U
DUP	Chloride	16887-00-6	1.57e-01	19.020	RPD	12/09/03	0.000	20.000	
DUP	Fluoride	16984-48-8	<2.30e-2	n/a	RPD	12/09/03	0.000	20.000	U
DUP	Nitrogen in Nitrite	NO2-N	<1.90e-2	n/a	RPD	12/09/03	0.000	20.000	U
DUP	Nitrogen in Nitrate	NO3-N	<1.30e-2	n/a	RPD	12/09/03	0.000	20.000	U
DUP	Phosphate	14265-44-2	<5.40e-2	n/a	RPD	12/09/03	0.000	20.000	U
DUP	Sulfate	14808-79-8	<1.00e-1	n/a	RPD	12/09/03	0.000	20.000	U
MS	Bromide	24959-67-9	1.82e+00	91.457	% Recov	12/09/03	75.000	125.000	
MS	Chloride	16887-00-6	8.33e-01	84.141	% Recov	12/09/03	75.000	125.000	
MS	Fluoride	16984-48-8	4.20e-01	85.890	% Recov	12/09/03	75.000	125.000	
MS	Nitrogen in Nitrite	NO2-N	4.60e-01	91.270	% Recov	12/09/03	75.000	125.000	
MS	Nitrogen in Nitrate	NO3-N	4.41e-01	98.879	% Recov	12/09/03	75.000	125.000	
MS	Phosphate	14265-44-2	8.77e-01	91.449	% Recov	12/09/03	75.000	125.000	
MS	Sulfate	14808-79-8	1.85e+00	93.909	% Recov	12/09/03	75.000	125.000	
MSD	Bromide	24959-67-9	2.00e+00	100.503	% Recov	12/09/03	75.000	125.000	
MSD	Chloride	16887-00-6	9.05e-01	91.414	% Recov	12/09/03	75.000	125.000	
MSD	Fluoride	16984-48-8	4.57e-01	93.456	% Recov	12/09/03	75.000	125.000	
MSD	Nitrogen in Nitrite	NO2-N	5.15e-01	102.183	% Recov	12/09/03	75.000	125.000	
MSD	Nitrogen in Nitrate	NO3-N	5.00e-01	112.108	% Recov	12/09/03	75.000	125.000	
MSD	Phosphate	14265-44-2	9.48e-01	98.853	% Recov	12/09/03	75.000	125.000	
MSD	Sulfate	14808-79-8	1.83e+00	92.893	% Recov	12/09/03	75.000	125.000	

BATCH QC

BLANK	Bromide	24959-67-9	<5.50e-2	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Bromide	24959-67-9	<5.50e-2	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Chloride	16887-00-6	<5.20e-2	n/a	mg/L	12/09/03	0.000	300.000	U

WSCF ANALYTICAL LABORATORY QC REPORT

2-9

SDG Number: WSCF20031618
Matrix: WATER
Test: Anions by Ion Chromatography

SAF Number: F03-021
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Chloride	16887-00-6	<5.20e-2	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Fluoride	16984-48-8	<2.30e-2	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Nitrogen in Nitrite	NO2-N	<1.90e-2	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Nitrogen in Nitrite	NO2-N	<1.90e-2	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Nitrogen in Nitrate	NO3-N	<1.30e-2	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Nitrogen in Nitrate	NO3-N	<1.30e-2	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Phosphate	14265-44-2	<5.40e-2	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Phosphate	14265-44-2	<5.40e-2	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	12/09/03	0.000	300.000	U
BLANK	Sulfate	14808-79-8	<1.00e-1	n/a	mg/L	12/09/03	0.000	300.000	U
LCS	Bromide	24959-67-9	3.72e+02	92.768	% Recov	12/09/03	80.000	120.000	
LCS	Chloride	16887-00-6	1.94e+02	97.000	% Recov	12/09/03	80.000	120.000	
LCS	Fluoride	16984-48-8	9.18e+01	93.009	% Recov	12/09/03	80.000	120.000	
LCS	Nitrogen in Nitrite	NO2-N	9.78e+01	97.800	% Recov	12/09/03	80.000	120.000	
LCS	Nitrogen in Nitrate	NO3-N	8.88e+01	98.557	% Recov	12/09/03	80.000	120.000	
LCS	Phosphate	14265-44-2	1.79e+02	92.363	% Recov	12/09/03	80.000	120.000	
LCS	Sulfate	14808-79-8	3.73e+02	93.484	% Recov	12/09/03	80.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20031618
Matrix: WATER
Test: Gross Alpha/Gross Beta (AB32)

SAF Number: F03-021
Sample Date: 12/04/03
Receive Date: 12/08/03

Lab ID: W030001116

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
DUP	Gross alpha	12587-46-1	-5.5e-01	-142.679	RPD	12/12/03	0.000	20.000	*
DUP	Gross beta	12587-47-2	4.3e-01	40.741	RPD	12/12/03	0.000	20.000	*

BATCH QC

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	Gross alpha	12587-46-1	-1.8e-01	-0.180	pCi/L	12/12/03	-10.000	10.000	
BLANK	Gross beta	12587-47-2	8.6e-02	0.086	pCi/L	12/12/03	-10.000	10.000	
LCS	Gross alpha	12587-46-1	63.7	104.977	%rec	12/12/03	75.000	125.000	
LCS	Gross beta	12587-47-2	66.2	116.508	%rec	12/12/03	75.000	125.000	

WSCF ANALYTICAL LABORATORY QC REPORT

2 - 11

SDG Number: WSCF20031618
Matrix: WATER
Test: SW-846 8270B Semi-Vols

SAF Number: F03-021
Sample Date: 12/04/03
Receive Date:12/08/03

Lab ID: W030001116
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	46.956	92.500	% Recov	12/15/03	50.000	120.000	
MS	1,4-Dichlorobenzene	106-46-7	42.598	83.900	% Recov	12/15/03	41.000	113.000	
MS	2,4-Dinitrotoluene	121-14-2	48.009	94.600	% Recov	12/15/03	65.000	109.000	
MS	2-Fluorophenol	367-12-4	47.757	94.100	% Recov	12/15/03	50.000	110.000	
MS	Acenaphthene	83-32-9	49.223	97.000	% Recov	12/15/03	62.000	112.000	
MS	4-Chloro-3-methylphenol	59-50-7	77.966	102.000	% Recov	12/15/03	59.000	115.000	
MS	2-Chlorophenol	95-57-8	71.482	93.900	% Recov	12/15/03	69.000	111.000	
MS	N-Nitrosodi-n-dipropylamine	621-64-7	53.101	105.000	% Recov	12/15/03	69.000	115.000	
MS	2-Fluorobiphenyl	321-60-8	48.399	95.300	% Recov	12/15/03	58.000	109.000	
MS	Phenol	108-95-2	72.709	95.500	% Recov	12/15/03	59.000	115.000	
MS	Nitrobenzene-d5	4165-60-0	54.622	108.000	% Recov	12/15/03	60.000	118.000	
MS	4-Nitrophenol	100-02-7	65.449	86.000	% Recov	12/15/03	32.000	130.000	
MS	Pentachlorophenol	87-86-5	57.678	75.800	% Recov	12/15/03	51.000	121.000	
MS	Phenol-d5	4165-62-2	49.337	97.200	% Recov	12/15/03	59.000	116.000	
MS	Pyrene	129-00-0	48.140	94.800	% Recov	12/15/03	58.000	116.000	
MS	2,4,6-Tribromophenol	118-79-6	53.552	105.000	% Recov	12/15/03	60.000	120.000	
MS	Terphenyl-d14 (7Cl)	98904-43-9	40.486	79.800	% Recov	12/15/03	60.000	120.000	
MSD	1,2,4-Trichlorobenzene	120-82-1	44.404	90.600	% Recov	12/15/03	50.000	120.000	
MSD	1,4-Dichlorobenzene	106-46-7	44.371	90.500	% Recov	12/15/03	41.000	113.000	
MSD	2,4-Dinitrotoluene	121-14-2	47.475	96.800	% Recov	12/15/03	65.000	109.000	
MSD	2-Fluorophenol	367-12-4	45.006	91.800	% Recov	12/15/03	50.000	110.000	
MSD	Acenaphthene	83-32-9	48.468	98.900	% Recov	12/15/03	62.000	112.000	
MSD	4-Chloro-3-methylphenol	59-50-7	71.814	97.700	% Recov	12/15/03	59.000	115.000	
MSD	2-Chlorophenol	95-57-8	68.518	93.200	% Recov	12/15/03	69.000	111.000	
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	51.650	105.000	% Recov	12/15/03	69.000	115.000	
MSD	2-Fluorobiphenyl	321-60-8	47.848	97.600	% Recov	12/15/03	58.000	109.000	

WSCF ANALYTICAL LABORATORY QC REPORT

2-12

SDG Number: WSCF20031618
Matrix: WATER
Test: SW-846 8270B Semi-Vols

SAF Number: F03-021
Sample Date: 12/04/03
Receive Date:12/08/03

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	Phenol	108-95-2	70.994	96.600	% Recov	12/15/03	59.000	115.000	
MSD	Nitrobenzene-d5	4165-60-0	47.351	96.600	% Recov	12/15/03	60.000	118.000	
MSD	4-Nitrophenol	100-02-7	60.181	81.800	% Recov	12/15/03	32.000	130.000	
MSD	Pentachlorophenol	87-86-5	60.341	82.100	% Recov	12/15/03	51.000	121.000	
MSD	Phenol-d5	4165-62-2	47.466	96.800	% Recov	12/15/03	59.000	116.000	
MSD	Pyrene	129-00-0	47.072	96.000	% Recov	12/15/03	58.000	116.000	
MSD	2,4,6-Tribromophenol	118-79-6	50.041	102.000	% Recov	12/15/03	60.000	120.000	
MSD	Terphenyl-d14 (7Cl)	98904-43-9	22.608	46.100	% Recov	12/15/03	60.000	120.000	
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	90.600	2.075	RPD	12/15/03	0.000	25.000	
SPK-RPD	1,4-Dichlorobenzene	106-46-7	90.500	7.569	RPD	12/15/03	0.000	25.000	
SPK-RPD	2,4-Dinitrotoluene	121-14-2	96.800	2.299	RPD	12/15/03	0.000	25.000	
SPK-RPD	2-Fluorophenol	367-12-4	91.800	2.474	RPD	12/15/03	0.000	25.000	
SPK-RPD	Acenaphthene	83-32-9	98.900	1.940	RPD	12/15/03	0.000	25.000	
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	97.700	4.306	RPD	12/15/03	0.000	25.000	
SPK-RPD	2-Chlorophenol	95-57-8	93.200	0.748	RPD	12/15/03	0.000	25.000	
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	105.000	0.000	RPD	12/15/03	0.000	25.000	
SPK-RPD	2-Fluorobiphenyl	321-60-8	97.600	2.385	RPD	12/15/03	0.000	25.000	
SPK-RPD	Phenol	108-95-2	96.600	1.145	RPD	12/15/03	0.000	16.000	
SPK-RPD	Nitrobenzene-d5	4165-60-0	96.600	11.144	RPD	12/15/03	0.000	25.000	
SPK-RPD	4-Nitrophenol	100-02-7	81.800	5.006	RPD	12/15/03	0.000	25.000	
SPK-RPD	Pentachlorophenol	87-86-5	82.100	7.980	RPD	12/15/03	0.000	25.000	
SPK-RPD	Phenol-d5	4165-62-2	96.800	0.412	RPD	12/15/03	0.000	25.000	
SPK-RPD	Pyrene	129-00-0	96.000	1.258	RPD	12/15/03	0.000	25.000	
SPK-RPD	2,4,6-Tribromophenol	118-79-6	102.000	2.899	RPD	12/15/03	0.000	25.000	
SPK-RPD	Terphenyl-d14 (7Cl)	98904-43-9	46.100	53.535	RPD	12/15/03	0.000	25.000	
SURR	2-Fluorophenol	367-12-4	41.640	87.000	% Recov	12/15/03	50.000	110.000	
SURR	2-Fluorobiphenyl	321-60-8	45.068	94.200	% Recov	12/15/03	58.000	109.000	
SURR	Nitrobenzene-d5	4165-60-0	50.202	105.000	% Recov	12/15/03	60.000	118.000	
SURR	Phenol-d5	4165-62-2	42.422	88.700	% Recov	12/15/03	59.000	116.000	
SURR	2,4,6-Tribromophenol	118-79-6	47.627	99.500	% Recov	12/15/03	60.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20031618
Matrix: WATER
Test: SW-846 8270B Semi-Vols

SAF Number: F03-021
Sample Date: 12/04/03
Receive Date:12/08/03

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
SURR	Terphenyl-d14 (7Cl)	98904-43-9	22.109	46.200	% Recov	12/15/03	60.000	120.000	*
BATCH QC									
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 3.0	n/a	ug/L	12/15/03			U
BLANK	1,4-Dichlorobenzene	106-46-7	< 5.0	n/a	ug/L	12/15/03			U
BLANK	2,4-Dinitrotoluene	121-14-2	< 1.8	n/a	ug/L	12/15/03			U
BLANK	2-Fluorophenol	367-12-4	44.117	88.200	% Recov	12/15/03	50.000	110.000	
BLANK	Acenaphthene	83-32-9	< 2.4	n/a	ug/L	12/15/03			U
BLANK	4-Chloro-3-methylphenol	59-50-7	< 1.3	n/a	ug/L	12/15/03			U
BLANK	2-Chlorophenol	95-57-8	< 1.7	n/a	ug/L	12/15/03			U
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 1.7	n/a	ug/L	12/15/03			U
BLANK	2-Fluorobiphenyl	321-60-8	49.544	99.100	% Recov	12/15/03	58.000	109.000	
BLANK	Phenol	108-95-2	< 1.7	n/a	ug/L	12/15/03			U
BLANK	Nitrobenzene-d5	4165-60-0	50.356	101.000	% Recov	12/15/03	60.000	118.000	
BLANK	4-Nitrophenol	100-02-7	< 1.4	n/a	ug/L	12/15/03			U
BLANK	Pentachlorophenol	87-86-5	< 1.7	n/a	ug/L	12/15/03			U
BLANK	Phenol-d5	4165-62-2	47.689	95.400	% Recov	12/15/03	59.000	116.000	
BLANK	Pyrene	129-00-0	< 2.1	n/a	ug/L	12/15/03			U
BLANK	Tributyl phosphate	126-73-8	< 2.5	n/a	ug/L	12/15/03			U
BLANK	2,4,6-Tribromophenol	118-79-6	43.490	87.000	% Recov	12/15/03	60.000	120.000	
BLANK	Terphenyl-d14 (7Cl)	98904-43-9	45.372	90.700	% Recov	12/15/03	60.000	120.000	
LCS	1,2,4-Trichlorobenzene	120-82-1	44.145	88.300	% Recov	12/15/03	46.000	107.000	
LCS	1,4-Dichlorobenzene	106-46-7	40.299	80.600	% Recov	12/15/03	42.000	111.000	
LCS	2,4-Dinitrotoluene	121-14-2	47.191	94.400	% Recov	12/15/03	59.000	106.000	
LCS	2-Fluorophenol	367-12-4	45.578	91.200	% Recov	12/15/03	50.000	110.000	
LCS	Acenaphthene	83-32-9	49.217	98.400	% Recov	12/15/03	61.000	116.000	
LCS	4-Chloro-3-methylphenol	59-50-7	72.167	96.200	% Recov	12/15/03	61.000	106.000	
LCS	2-Chlorophenol	95-57-8	67.172	89.600	% Recov	12/15/03	66.000	106.000	
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	53.208	106.000	% Recov	12/15/03	71.000	114.000	
LCS	2-Fluorobiphenyl	321-60-8	47.603	95.200	% Recov	12/15/03	58.000	109.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20031618
Matrix: WATER
Test: SW-846 8270B Semi-Vols

SAF Number: F03-021
Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
LCS	Phenol	108-95-2	68.814	91.800	% Recov	12/15/03	67.000	105.000	
LCS	Nitrobenzene-d5	4165-60-0	51.034	102.000	% Recov	12/15/03	60.000	118.000	
LCS	4-Nitrophenol	100-02-7	57.312	76.400	% Recov	12/15/03	32.000	118.000	
LCS	Pentachlorophenol	87-86-5	57.766	77.000	% Recov	12/15/03	62.000	114.000	
LCS	Phenol-d5	4165-62-2	45.250	90.500	% Recov	12/15/03	59.000	116.000	
LCS	Pyrene	129-00-0	47.287	94.600	% Recov	12/15/03	66.000	118.000	
LCS	2,4,6-Tribromophenol	118-79-6	49.621	99.200	% Recov	12/15/03	60.000	120.000	
LCS	Terphenyl-d14 (7Cl)	98904-43-9	19.355	38.700	% Recov	12/15/03	60.000	120.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20031618
Matrix: WATER
Test: ICP-2008 MS All possible metal

SAF Number: F03-021
Sample Date: 12/04/03
Receive Date:12/08/03

Lab ID: W030001116
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	Silver	7440-22-4	40.69	101.725	% Recov	12/31/03	70.000	130.000	
MS	Cadmium	7440-43-9	38.55	96.375	% Recov	12/31/03	70.000	130.000	
MS	Chromium	7440-47-3	40.62	101.550	% Recov	12/31/03	70.000	130.000	
MS	Copper	7440-50-8	39.16	97.900	% Recov	12/31/03	70.000	130.000	
MS	Nickel	7440-02-0	39.17	97.925	% Recov	12/31/03	70.000	130.000	
MS	Lead	7439-92-1	40.68	101.700	% Recov	12/31/03	70.000	130.000	
MS	Uranium	7440-61-1	41.96	104.900	% Recov	12/31/03	70.000	130.000	
MSD	Silver	7440-22-4	40.85	102.125	% Recov	12/31/03	70.000	130.000	
MSD	Cadmium	7440-43-9	38.94	97.350	% Recov	12/31/03	70.000	130.000	
MSD	Chromium	7440-47-3	40.68	101.700	% Recov	12/31/03	70.000	130.000	
MSD	Copper	7440-50-8	39.87	99.675	% Recov	12/31/03	70.000	130.000	
MSD	Nickel	7440-02-0	39.64	99.100	% Recov	12/31/03	70.000	130.000	
MSD	Lead	7439-92-1	40.72	101.800	% Recov	12/31/03	70.000	130.000	
MSD	Uranium	7440-61-1	42.31	105.775	% Recov	12/31/03	70.000	130.000	

Lab ID: W03C000346
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MS	Cadmium	7440-43-9	38.15	95.375	% Recov	12/31/03	70.000	130.000	
MS	Chromium	7440-47-3	39.88	99.700	% Recov	12/31/03	70.000	130.000	
MS	Copper	7440-50-8	37.4	93.500	% Recov	12/31/03	70.000	130.000	
MS	Lead	7439-92-1	41.01	102.525	% Recov	12/31/03	70.000	130.000	
MS	Uranium	7440-61-1	43.88	109.700	% Recov	12/31/03	70.000	130.000	
MSD	Cadmium	7440-43-9	38.48	96.200	% Recov	12/31/03	70.000	130.000	
MSD	Chromium	7440-47-3	39.96	99.900	% Recov	12/31/03	70.000	130.000	
MSD	Copper	7440-50-8	39.16	97.900	% Recov	12/31/03	70.000	130.000	
MSD	Lead	7439-92-1	40.97	102.425	% Recov	12/31/03	70.000	130.000	

WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20031618
Matrix: WATER
Test: ICP-2008 MS All possible metal

SAF Number: F03-021
Sample Date: 12/08/03
Receive Date:12/08/03

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
MSD	Uranium	7440-61-1	43.75	109.375	% Recov	12/31/03	70.000	130.000	

BATCH QC

BLANK	Silver	7440-22-4	<0.2	n/a	ug/L	12/31/03	-0.440	0.440	U
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L	12/31/03	-0.220	0.220	U
BLANK	Chromium	7440-47-3	0.34	0.340	ug/L	12/31/03	-0.660	0.660	
BLANK	Copper	7440-50-8	0.94	0.940	ug/L	12/31/03	-1.100	1.100	
BLANK	Nickel	7440-02-0	<0.5	n/a	ug/L	12/31/03	-1.100	1.100	U
BLANK	Lead	7439-92-1	<1.2	n/a	ug/L	12/31/03	-2.640	2.640	U
BLANK	Uranium	7440-61-1	<0.1	n/a	ug/L	12/31/03	-0.220	0.220	U
LCS	Silver	7440-22-4	41.51	103.775	% Recov	12/31/03	85.000	115.000	
LCS	Cadmium	7440-43-9	39.16	97.900	% Recov	12/31/03	85.000	115.000	
LCS	Chromium	7440-47-3	41.2	103.000	% Recov	12/31/03	85.000	115.000	
LCS	Copper	7440-50-8	39.46	98.650	% Recov	12/31/03	85.000	115.000	
LCS	Nickel	7440-02-0	39.29	98.225	% Recov	12/31/03	85.000	115.000	
LCS	Lead	7439-92-1	40.77	101.925	% Recov	12/31/03	85.000	115.000	
LCS	Uranium	7440-61-1	42.91	107.275	% Recov	12/31/03	85.000	115.000	

W1141-04-SLF-079

ATTACHMENT 3

SAMPLE RECEIPT INFORMATION

Consisting of 3 pages
Cover page not included

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

1/4/04
File KB

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Ground Water Protection Program

Richland, WA 99352
Attn: Steve Trent

Customer Code: GPP
PO#: 119142/ES10
Group#: 20031618
Project#: F03-021
Proj Mgr: Steve Trent AO-21
Phone: 373-5869

The following samples were received from you on 12/08/03. 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	Tests Scheduled	Matrix	Sample Date
W030001116	B183L2	TRENT @2008 @AB-32 @IC-30 @SVOCGPP	Water	12/04/03

Test Acronym Description

Test Acronym	Description
@2008	ICP-2008 MS All possible metal
@AB-32	Gross Alpha/Gross Beta (AB32)
@IC-30	Anions by Ion Chromatography
@SVOCGPP	SW-846 8270B Semi-Vols

3/1

11/7/09

FLUOR Hanford Inc.	CENTRAL PLATEAU CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F03-021-001	Page 1 of 1

Collector: Pope / Pfister / Hughes	Company Contact: Steve Trent; Telephone No.: 373-5869	Project Coordinator: TRENT, SJ	Price Code: 7N; Data Turnaround: 45 Days
Project Designation: 216-B-26 Characterization Sampling - QC Sampling	Sampling Location: 216-B-26	SAF No.: F03-021	Air Quality
Ice Chest No.: GPP-03-011	Field Logbook No.: HNF-N-3560-1; COA: 119142ES10	Method of Shipment: Govt. 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

20031618

Preservation	Cool 4C	HNO3 to pH <2	Cool 4C	HNO3 to pH <2							
Type of Container	aG	G/P	P	G/P							
No. of Container(s)	4	2	1	1							
Volume	1000mL	1000mL	1000mL	1000mL							
SAMPLE ANALYSIS	Semi-VOA -- 8270A (Add-On) {Tributyl phosphate}	See item (1) in Special Instructions.	See item (2) in Special Instructions.	Gross Alpha; Gross Beta							
Sample No.	Matrix *	Sample Date	Sample Time								
B183L2	WATER	12-4-3	18:18:00	✓	—	—	—				
W03000116											

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Kevin D. Hughes	10:22 12-8-3	Received By/Stored In: [illegible]	1022 12/8/03
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) ICP/MS - 200.8 (TAL) {Cadmium, Chromium, Copper, Nickel, Silver}; ICP/MS - 200.8 (Add-on) {Lead, Uranium}
(2) IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}

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

618(03/03)

Beebe, Kevin L

From: Trent, Stephen J
Sent: Monday, December 08, 2003 3:51 PM
To: Dale, Troy F
Cc: Neely, Michael; Trechter, John E Jr.; Fitzgerald, Scot L; Beebe, Kevin L; Sims, Vic T
Subject: RE: Samples Received on 12-8-03

Troy,

If volume is an issue for these added analyses, please pull material for the PCB analysis from one of the other bottles, and make sure you don't use this sample for your batch QC.

Steve

-----Original Message-----
From: Trent, Stephen J
Sent: Monday, December 08, 2003 2:51 PM
To: Dale, Troy F
Cc: Neely, Michael; Trechter, John E Jr.; Fitzgerald, Scot L; Beebe, Kevin L; Sims, Vic T
Subject: RE: Samples Received on 12-8-03

Troy,

Acknowledged....

Steve

-----Original Message-----
From: Dale, Troy F
Sent: Monday, December 08, 2003 2:40 PM
To: Trent, Stephen J
Cc: Neely, Michael; Trechter, John E Jr.; Fitzgerald, Scot L; Beebe, Kevin L; Sims, Vic T
Subject: Samples Received on 12-8-03

Steve

Per our phone conversation after reviewing the samples we received today:

- At your request we will add Methods 8082, 8015 and 8260 to the COC for B183L5, SAF# F03-025. The sample will more than likely come out of the Semi-VOA container for this sample.
- The sample date for B183L2, SAF# F03-021, is 12-4-03. Given this we have missed the hold time for NO2/NO3, but you have requested we run the analyses regardless.

Any additions or corrections to the above let me know. Thanks

Troy