

Fluor Hanford, Inc.  
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0060762

# FLUOR

## Memorandum

To: S. J. Trent Date: T4180-03-SLF-028  
September 10, 2003

From: S. L. Fitzgerald, Manager *SLF* Telephone: 373-7495  
WSCF Analytical Services

cc: W/Attachments W/O Attachments

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

Subject: FINAL RESULTS FOR 200-PW-2/200-PW-4 OU- SAMPLE DELIVERY GROUP  
WSCF20031116 SAF NUMBER F03-007

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

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

This letter contains a narrative (Attachment 1) for the sample delivery group (WSCF20031116),  
the analytical results (Attachment 2) and the sample receipt information (Attachment 3).

slf/ddw

Attachments 3

**RECEIVED**  
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T4180-03-SLF-028

ATTACHMENT 1

**NARRATIVE**

Consisting of 2 pages  
Cover page not included

<b>Sample Delivery Group</b>	<b>WSCF20031116</b>
<b>Sample Matrix</b>	<b>Water</b>
<b>Sample Visual</b>	<b>Clear</b>
<b>SAF Number</b>	<b>F03-007</b>
<b>Data Deliverable</b>	<b>Summary Report</b>

**Introduction**

One (1) water sample (B174B6) from the GPP was received at the WSCF Laboratory on August 13, 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**

- VOA's by EPA SW-846 Method 8260A. Analytical work was performed with no deviations to the approved procedure. The Benzyl Alcohol was removed from the requested compound list per the client. See page(s) 3-3 for details.

**Comments**

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) 2-8, 2-9 and 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

AT/TB – Total Alpha/Total Beta

AEA – Alpha Energy Analysis

WTPH-G – Total Hydrocarbons-Gasoline

CN - Cyanide

Am – Americium

Cm - Curium

Pu – Plutonium

Np – Neptunium

GEA – Gamma Energy Analysis

H3 – Tritium

Sr – Strontium 89, 90

WTPH-D – Total Hydrocarbons-Diesel

Cr+6 – Hexavalent Chromium

NH4 - Ammonium

T4180-03-SLF-028

ATTACHMENT 2

**ANALYTICAL RESULTS**

Consisting of 10 pages  
Cover page not included

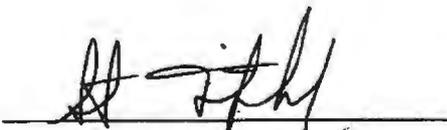
# WSCF ANALYTICAL RESULTS REPORT

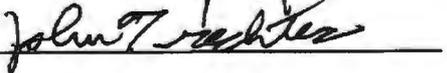
for

**Ground Water Protection Program**

**Richland, WA 99352**

**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#: F03-007  
Report#: WSCF20031116  
Report Date: 10-sep-2003  
Report WGPP/ver. 1  
Ground Water Protection Program

# WSCF ANALYTICAL RESULTS REPORT

2-2

Attention: Steve Trent  
Project: F03-007: 200-PW-2/PW-4

Group #: WSCF20031116

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive	
W030000708	B17486	GPP	TRENT	75-35-4	1,1-Dichloroethene	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	79-01-6	Trichloroethene	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	71-43-2	Benzene	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	108-88-3	Toluene	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	108-90-7	Chlorobenzene	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	75-34-3	1,1-Dichloroethane	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	100-41-4	Ethylbenzene	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	100-42-5	Styrene	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	10061-01-5	cis-1,3-Dichloropropene	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	10061-02-6	trans-1,3-Dichloropropene	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	107-06-2	1,2-Dichloroethane	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	108-10-1	4-Methyl-2-Pentanone	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	124-48-1	Dibromochloromethane	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	127-18-4	Tetrachloroethene	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	1330-20-7	Xylenes (total)	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	540-59-0	1,2-Dichloroethene(Total)	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	56-23-5	Carbon tetrachloride	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	591-78-6	2-Hexanone	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	67-64-1	Acetone	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	67-66-3	Chloroform	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	71-55-6	1,1,1-Trichloroethane	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	74-83-9	Bromomethane	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	79-34-5	1,1,2,2-Tetrachloroethane	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	74-87-3	Chloromethane	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	75-00-3	Chloroethane	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	75-01-4	Vinyl chloride	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP	TRENT	75-09-2	Methylenechloride	LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03

MDL=Minimum Detection Limit    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

Report WGPP/ver. 1  
Ground Water Protection Program

# WSCF ANALYTICAL RESULTS REPORT

2-3

Attention: Steve Trent  
Project: F03-007: 200-PW-2/PW-4

Group #: WSCF20031116

Sample #	Client ID	CAS #	Test Performed	Matrix	WSCF Method	RQ	Result	Unit	DF	MDL	Analyze	Sample	Receive
W030000708	B17486	GPP TRENT 75-15-0	Carbon disulfide		LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP TRENT 75-25-2	Bromoform		LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP TRENT 75-27-4	Bromodichloromethane		LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP TRENT 78-87-5	1,2-Dichloropropane		LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP TRENT 78-93-3	2-Butanone		LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP TRENT 79-00-5	1,1,2-Trichloroethane		LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP TRENT 107-87-9	2-Pentanone		LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03
W030000708	B17486	GPP TRENT 104-51-8	n-Butylbenzene		LA-523-455	U	< 1.00	ug/L	1.00	1.0	08/26/03	08/13/03	08/13/03

MDL=Minimum Detection Limit 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

Report WGPP/ver. 1

Ground Water Protection Program

**WSCF**  
**ANALYTICAL COMMENT REPORT**

2-4

**Attention:**  
**Project Number**

**Group #:** 20031116

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<b>Sample #</b>	<b>Client ID</b>	<b>Lab Area</b>	<b>Test</b>	<b>Comment</b>
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**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**

2-5

**Attention:**  
**Project Number** :

**Group #:** 20031116

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<b>Sample #</b>	<b>Client ID</b>	<b>Test Name</b>	<b>Peak Name</b>	<b>CAS#</b>	<b>RT</b>	<b>RQ</b>	<b>Result</b>	<b>Units</b>
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**RQ=Result Qualifier**

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# WSCF

## METHOD REFERENCES REPORT

2-6

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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.

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<b>LA-523-455</b>	<b>LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846</b>
<b>EPA SW-846 8000B</b>	<b>DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS</b>
<b>EPA SW-846 8260B</b>	<b>VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)</b>

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**Note:** A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at [http://apweb02/asponlinedocs/wscf/sample %20mgmt/ProcedureMethodCrossReference.pdf](http://apweb02/asponlinedocs/wscf/sample%20mgmt/ProcedureMethodCrossReference.pdf). This document includes on-line links to full-text versions of the procedures and methods, where available.

Report Date: 10-sep-2003

Report#: WSCF20031116

Report WGPPM/O

Page 1

w13qlog v1 10-sep-2003 13:00:20

W13q Worklist/Batch/QC Report for Group# WSCF20031116

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			23514	BLANK		VOA Ground Water Protection
			23514	LCS		VOA Ground Water Protection
			23514	MS	W030000708	VOA Ground Water Protection
			23514	MSD	W030000708	VOA Ground Water Protection
			23514	SAMPLE	W030000708	VOA Ground Water Protection
			23514	SPK-RPD	W030000708	VOA Ground Water Protection
			23514	SURR	W030000708	VOA Ground Water Protection

# WSCF ANALYTICAL LABORATORY QC REPORT

SDG Number: WSCF20031116  
 Matrix: WATER  
 Test: VOA Ground Water Protection

SAF Number: F03-007  
 Sample Date: 08/13/03  
 Receive Date: 08/13/03

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
Lab ID: W030000708									
BATCH QC ASSOCIATED WITH SAMPLE									
MS	1,1-Dichloroethane	75-35-4	22.000	88.000	% Recov	08/26/03	63.000	117.000	
MS	Benzene	71-43-2	27.000	108.000	% Recov	08/26/03	75.000	129.000	
MS	4-Bromofluorobenzene	480-00-4	82.000	104.000	% Recov	08/26/03	84.000	116.000	
MS	Chlorobenzene	108-90-7	26.000	104.000	% Recov	08/26/03	79.000	119.000	
MS	1,2-Dichloroethane-d4	17060-07-0	52.000	104.000	% Recov	08/26/03	82.000	138.000	
MS	Toluene-d8	2037-26-5	52.000	104.000	% Recov	08/26/03	89.000	119.000	
MS	Toluene	108-88-3	27.000	108.000	% Recov	08/26/03	78.000	120.000	
MS	Trichloroethane	79-01-6	24.000	96.000	% Recov	08/26/03	73.000	123.000	
MSD	1,1-Dichloroethane	75-35-4	22.000	88.000	% Recov	08/26/03	63.000	117.000	
MSD	Benzene	71-43-2	27.000	108.000	% Recov	08/26/03	75.000	129.000	
MSD	4-Bromofluorobenzene	480-00-4	81.000	102.000	% Recov	08/26/03	84.000	119.000	
MSD	Chlorobenzene	108-90-7	26.000	104.000	% Recov	08/26/03	79.000	119.000	
MSD	1,2-Dichloroethane-d4	17060-07-0	52.000	104.000	% Recov	08/26/03	82.000	138.000	
MSD	Toluene-d8	2037-26-5	52.000	104.000	% Recov	08/26/03	89.000	119.000	
MSD	Toluene	108-88-3	27.000	108.000	% Recov	08/26/03	78.000	120.000	
MSD	Trichloroethane	79-01-6	25.000	100.000	% Recov	08/26/03	73.000	123.000	
SPK-RPD	1,1-Dichloroethane	75-35-4	88.000	0.000	RPD	08/26/03	0.000	10.000	
SPK-RPD	Benzene	71-43-2	108.000	0.000	RPD	08/26/03	0.000	10.000	
SPK-RPD	Chlorobenzene	108-90-7	104.000	3.822	RPD	08/26/03	0.000	10.000	
SPK-RPD	1,2-Dichloroethane-d4	17060-07-0	104.000	0.000	RPD	08/26/03	0.000	25.000	
SPK-RPD	Toluene-d8	2037-26-5	104.000	0.000	RPD	08/26/03	0.000	26.000	
SPK-RPD	Toluene	108-88-3	108.000	3.774	RPD	08/26/03	0.000	10.000	
SPK-RPD	Trichloroethane	79-01-6	100.000	1.082	RPD	08/26/03	0.000	10.000	
SURR	4-Bromofluorobenzene	480-00-4	52.000	104.000	% Recov	08/26/03	84.000	116.000	
SURR	1,2-Dichloroethane-d4	17060-07-0	51.000	102.000	% Recov	08/26/03	82.000	138.000	
SURR	Toluene-d8	2037-26-5	51.000	102.000	% Recov	08/26/03	89.000	119.000	

# WSCF ANALYTICAL LABORATORY QC REPORT

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SDG Number: WSCF20031116  
 Matrix: WATER  
 Test: VOA Ground Water Protection

SAF Number: F03-007  
 Sample Date: 08/13/03  
 Receive Date: 08/13/03

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
<b>BATCH QC</b>									
BLANK	1,1-Dichloroethane	78-34-1	< 1.0	n/a	ug/L	08/26/03			U
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L	08/26/03			U
BLANK	1,1,2-Trichloroethane	78-00-5	< 1.0	n/a	ug/L	08/26/03			U
BLANK	1,1,2,2-Tetrachloroethane	78-34-5	< 1.0	n/a	ug/L	08/26/03	0.000	5.000	U
BLANK	1,1-Dichloroethane	78-34-1	< 1.0	n/a	ug/L	08/26/03			U
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L	08/26/03			U
BLANK	1,2-Dichloroethane (Total)	840-59-0	< 1.0	n/a	ug/L	08/26/03			U
BLANK	2-Hexanone	581-78-6	< 1.0	n/a	mg/L	08/26/03			U
BLANK	2-Pentanone	107-87-8	< 3.0	n/a	mg/L	08/26/03			U
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	mg/L	08/26/03			U
BLANK	Axetone	67-66-1	< 1.0	n/a	mg/L	08/26/03			U
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Benzene	71-43-2	< 1.0	n/a	mg/L	08/26/03			U
BLANK	4-Bromofluorobenzene	480-00-4	51.000	102.000	% Recov	08/26/03	84.000	116.000	U
BLANK	Bromobenzene	75-28-1	< 1.0	n/a	mg/L	08/26/03			U
BLANK	n-Butylbenzene	104-51-8	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	mg/L	08/26/03			U
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	mg/L	08/26/03			U
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Chloroform	67-66-3	< 1.0	n/a	mg/L	08/26/03			U
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L	08/26/03			U
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Chloroethane	75-10-3	< 1.0	n/a	ug/L	08/26/03			U
BLANK	1,2-Dichloroethane-d4	17080-07-0	50.000	100.000	% Recov	08/26/03	82.000	138.000	U
BLANK	1,2-Dichloropropene	75-87-8	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Bromomethane	74-83-8	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Chloromethane	74-87-3	< 1.0	n/a	ug/L	08/26/03			U

# WSCF ANALYTICAL LABORATORY QC REPORT

2-10

SDG Number: WSCF20031116  
 Matrix: WATER  
 Test: VOA Ground Water Protection

SAF Number: F03-007  
 Sample Date:  
 Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Analysis Date	Lower Limit	Upper Limit	RQ
BLANK	2-Butanone	78-93-3	< 1.0	n/a	mg/L	08/26/03			U
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	08/26/03	0.000	8.000	U
BLANK	Toluene-d8	2037-26-5	51.000	102.000	% Recov	08/26/03	89.000	119.000	
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L	08/26/03			U
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L	08/26/03			U
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	mg/L	08/26/03			U
LCS	1,1-Dichloroethene	75-35-4	22.000	89.000	% Recov	08/26/03	70.000	130.000	
LCS	Benzene	71-43-2	26.000	104.000	% Recov	08/26/03	70.000	130.000	
LCS	1,4-Dimethylbenzene	106-48-4	51.000	102.000	% Recov	08/26/03	89.000	119.000	
LCS	Chlorobenzene	108-90-7	26.000	104.000	% Recov	08/26/03	70.000	130.000	
LCS	1,2-Dichloroethene-d4	17680-07-0	52.000	104.000	% Recov	08/26/03	82.000	138.000	
LCS	Toluene-d8	2037-26-5	51.000	102.000	% Recov	08/26/03	89.000	119.000	
LCS	Toluene	108-88-3	26.000	104.000	% Recov	08/26/03	70.000	130.000	
LCS	Trichloroethene	79-01-6	25.000	100.000	% Recov	08/26/03	70.000	130.000	

T4180-03-SLF-028

ATTACHMENT 3

**SAMPLE RECEIPT INFORMATION**

Consisting of 3 pages  
Cover page not included

VIS  
9/10/03

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Ground Water Protection Program

Richland, WA 99352  
Attn: Steve Trent

Customer Code: GPP  
PO#: 117504/ES20  
Group#: 20031116  
Project#: F03-007  
Proj Mgr: STEVE TRENT  
Phone: 373-5869

The following samples were received from you on 08/13/03. 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
W030000708	B174B6	GPP @VOA-GPP	TRENT Water	08/13/03

Test Acronym Description

Test Acronym	Description
@VOA-GPP	VOA Ground Water Protection

MAN  
3-1

9/19/03

<b>FH-Central Plateau Project</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>				F03-007-015	Page 1 of 1	
Collector Johansen/Pfister/Popo/Hughes		Company Contact LC Hulstrom		Telephone No. 373-3928		Project Coordinator TRENT, SJ		
Project Designation 200-PW-2/200-PW-4 OU - QC Sampling		Sampling Location 200-PW-2		SAF No. F03-007		Price Code 7N	Data Turnaround 30 Days	
Ice Chest No.		Field Logbook No. HNF-N-3361		COA 117504ES10		Method of Shipment Government Vehicle		
Shipped To Waste Sampling & Characterization		Offsite Property No.				Bill of Lading/Air Bill No.		
POSSIBLE SAMPLE HAZARDS/REMARKS  Special Handling and/or Storage		Preservation		HCl to pH <2 Cool 4C				
		Type of Container		gGs*				
		No. of Container(s)		3				
		Volume		40mL				
SAMPLE ANALYSIS				See item (1) in Special Instructions.				
20031116								
Sample No.	Matrix *	Sample Date	Sample Time					
B17486	W030000708	8/13/03	1:30 PM	X				
<b>CHAIN OF POSSESSION</b>				<b>SPECIAL INSTRUCTIONS</b>			<b>Matrix *</b>	
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time	(1) VOA - 8260A (TCL); VOA - 8260A (Add-On) (2-Pentanone, Benzyl alcohol, n-Butylbenzene)	S=Soil SD=Soil/Debris SL=Sludge W=Water O=Oil A=Air DS=Dryness Solids DL=Dryness Liquids T=Trace W=Wipe L=Liquid V=Vegetation X=Other	
JSP/PE/AG/...		8/13/03 1:50	K... K...		8/13/03 1:50			
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			
<b>LABORATORY SECTION</b>	Received By		Title			Date/Time		
<b>FINAL SAMPLE DISPOSITION</b>	Disposal Method		Disposed By			Date/Time		

3-2

**Sims, Vic T**

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**From:** Ayres, Doris E  
**Sent:** Thursday, August 14, 2003 9:10 AM  
**To:** Neely, Michael; Trent, Stephen J  
**Cc:** Dale, Troy F; Trechter, John E Jr.; Beebe, Kevin L; Sims, Vic T  
**Subject:** RE: SDGs 20031112, 20031116, and 20031117 Sample Receipt Issues

See my comments below.

Doris

-----Original Message-----

**From:** Neely, Michael  
**Sent:** Thursday, August 14, 2003 5:31 AM  
**To:** Trent, Stephen J; Ayres, Doris E  
**Cc:** Dale, Troy F; Trechter, John E Jr.; Beebe, Kevin L; Sims, Vic T  
**Subject:** SDGs 20031112, 20031116, and 20031117 Sample Receipt Issues  
**Importance:** High

Steve:

Three (3) of the five (5) GPP sample delivery groups (SDGs) that were received at WSCF yesterday (08-13-03) are depicted below:

1. SDG 20031112 - Samples B17C41, B17C42, B17C43 - Under SAF F03-012
2. SDG 20031116 - Sample B174B6 - Under SAF F03-007
3. SDG 20031117 - Sample B173V6 - Under SAF F03-006

There are several issues associated with these SDGs that will require resolution by GPP prior to WSCF proceeding with the analyses. The issues requiring GPP resolution are briefly summarized below.

1. SDG 20031112 - On the chain of custody (COC), GPP is requesting TPH-Diesel Range - WTPH-D. However, there are no "special instructions" on the COC requesting kerosene. Is GPP interested in WSCF reporting kerosene and diesel range compounds from the WTPH-D analyses? **Please proceed and report kerosene and the diesel range compounds.**
2. SDG 20031116 - On the COC, GPP is requesting benzyl alcohol as part of the VOA - 8260A Add-On list. However, benzyl alcohol is actually part of the WSCF Semi-VOA - 8270A Add-On list. There is insufficient sample [i.e., VOA protocol requires only three (3) 40-mL samples] to analyze for the benzyl alcohol using the Semi-VOA protocol, which would require at least a 1-L sample [assuming that no QC is required, and four (4) 1-L samples if full QC is required]. Therefore, does GPP want WSCF to remove benzyl alcohol from the list of requested analytes on the COC (i.e., no analyses for benzyl alcohol will be performed by WSCF)? Or, would GPP like to provide WSCF with the additional sample volume in order for WSCF to perform the Semi-VOA analyses for benzyl alcohol? **Please remove benzyl alcohol from the list of requested analytes on the COC.**
3. SDG 20031117 - On the COC, GPP is requesting ICP-MS 200.8 "Complete". WSCF assumes that GPP is not really requesting the "complete" WSCF library for ICP-MS method 200.8, and is only requesting the specific metals that are listed after the word "complete". Are these valid assumptions? **Please report only the specific metals that are listed after the word "complete".**

Thank you for your help with this. Your expeditious reply would be greatly appreciated.