RECEIVED JANUARY 12, 2009

Fluor Hanford
WSCF Analytical Lab
P.O. Box 1000
Richland, Washington 99352
Telephone 373-7495
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FLUOR®

M4W41-SLF-09-022

January 12, 2009

Mr. M. A. Neely, Manager
Analytical Services
CH2M HILL Plateau Remediation Contract
PO Box 1600 MSIN B6-06
Richland, WA 99352

Dear Mike:

FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20082326

Reference: (1) Memorandum of Agreement #MOA-FH-CHPRC-2008, Rev. 0, for the Performance & Payment of Services, dated October 1, 2008

(2) HNF-SD-CD-QAPP-017, Rev. 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following attachments for sample delivery group WSCF20082326:

- Cover Sheet (Attachment 1)
- Narrative (Attachment 2)
- Analytical Results (Attachment 3)
- Sample Receipt Information (Attachment 4)

Very truly yours,

S. L. Fitzgerald
WSCF Analytical Lab

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Attachments 4

cc: w/Attachments

T. F. Dale	S3-30	J. E. Trechter	S3-30
A. J. Kopriva	S3-30	S. J. Trent	B6-06
H. K. Meznarich	S3-30	File/LB	
P. D. Mix	S3-30		

M4W41-SLF-09-022

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20082326
Data Deliverable Date: 15-jan-2009
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
X09-001	B1XB11	W08P005275	WATER
	B1XB12	W08P005266	WATER
	B1XB13	W08P005267	WATER
	B1XB16	W08P005274	WATER
	B1XB17	W08P005269	WATER
	B1XB18	W08P005271	WATER
	B1XBN7	W08P005272	WATER
	B1XBP0	W08P005273	WATER
	B1XBP2	W08P005268	WATER
	B1XBP3	W08P005270	WATER
	B1XTL3	W08P005276	WATER

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ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Introduction

Eleven (11) groundwater samples were received at the WSCF Laboratory on December 2, 2008. Samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Memorandum of Agreement (MOA-FH-CHPRC-2008, Rev.0),* referenced in the cover letter.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the transport container.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report,* pages 14 through 16, for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 30 through 32 for QC details. Analytical Note(s):

- Sample results were D flagged if dilution(s) were required.
- Sample results that were less than the reportable limit, however greater than the method detection limit, were B flagged.
- Duplicates, Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1XB18 of this SDG and B1W4N7 (SDG# 20082324).

All QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 33 through 36 for QC details. Analytical Note(s):

- Sample results that were less than the reportable limit, however greater than the method detection limit, were B flagged.

- Calcium, Magnesium and Sodium – sample levels exceeded spiking levels by a factor of 4. High/Check standard was analyzed to verify linearity for analytes greater than the calibration levels.

All other QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See page 37 for QC details. Analytical Note(s):

- Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1XLL0 (SDG# 20082293), B1Y2P4 (SDG# 20082377) and B1XY43 (SDG# 20082385).

All QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. See page 38 for QC details. Analytical Note(s):

- Duplicate was analyzed on sample# B1X9X0 (SDG# 20082318).

All QC controls are within the established limits.

Organic Comments

VOA – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 57 through 60 for QC details. Analytical Note(s):

- Sample results that were less than the lowest calibration standard, however greater than the method detection limit, were J flagged.

- 1,1-Dichloroethene – Matrix Spike Duplicate recovery slightly exceeded established laboratory limits. No flags issued.

All other QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – There are no hold times associated with WSCF's radiochemical methods. A Duplicate, Matrix Spike, Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 65 through 67 for QC details. Analytical Note(s):

- Gross Alpha/Gross Beta – Duplicate QC was analyzed on sample# B1XMJ5 (SDG# 20082287).

- Tritium – Duplicate and Matrix Spike were analyzed on sample# B1W4N1 (SDG# 20082324).

All QC controls are within the established limits.

I certify that this data package is in compliance with the MOA, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this data package has been authorized by the Laboratory Analytical Manager and Client Services as verified by the following signatures.

Scot L. Fitzgerald
WSCF Analytical Laboratory Manager

Pauline D. Mix
WSCF Client Services

M4W41-SLF-09-022

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 60 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

GPAP
Richland, WA 99352

Attention: Steve Trent E6-35

Analytical: S. Fitzgerald 1-9-09

Client Services: P.D. Mix 1-8-2009

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

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

Report#: WSCF20082326
Report Date: 2-jan-2009
Report WGPP/ver. 5.2
GPAP

w13qlog v4.2 02-jan-2009 12:09:52

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20082326

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
38705	2	39121	43602	BLANK		Anions by Ion Chromatography
38705	13	39121	43602	BLANK		Anions by Ion Chromatography
38705	3	39121	43602	LCS		Anions by Ion Chromatography
38705	5	39121	43602	DUP	W08P005271	Anions by Ion Chromatography
38705	6	39121	43602	MS	W08P005271	Anions by Ion Chromatography
38705	7	39121	43602	MSD	W08P005271	Anions by Ion Chromatography
38705	4	39121	43602	SAMPLE	W08P005271	Anions by Ion Chromatography
38705	7	39121	43602	SPK-RPD	W08P005271	Anions by Ion Chromatography
38704	2	39123	43603	BLANK		Anions by Ion Chromatography
38704	15	39123	43603	BLANK		Anions by Ion Chromatography
38704	3	39123	43603	LCS		Anions by Ion Chromatography
38704	7	39123	43603	DUP	W08P005264	Anions by Ion Chromatography
38704	8	39123	43603	MS	W08P005264	Anions by Ion Chromatography
38704	9	39123	43603	MSD	W08P005264	Anions by Ion Chromatography
38704	9	39123	43603	SPK-RPD	W08P005264	Anions by Ion Chromatography
38704	10	39123	43603	SAMPLE	W08P005267	Anions by Ion Chromatography
38704	11	39123	43603	SAMPLE	W08P005270	Anions by Ion Chromatography
38749	1	39166	43639	LCS		Total Alkalinity as mg/L CaCO3
38749	12	39166	43639	LCS		Total Alkalinity as mg/L CaCO3
38749	24	39166	43639	LCS		Total Alkalinity as mg/L CaCO3
38749	3	39166	43639	DUP	W08P005240	Total Alkalinity as mg/L CaCO3
38749	8	39166	43639	SAMPLE	W08P005267	Total Alkalinity as mg/L CaCO3
38749	9	39166	43639	SAMPLE	W08P005270	Total Alkalinity as mg/L CaCO3
38749	10	39166	43639	SAMPLE	W08P005271	Total Alkalinity as mg/L CaCO3
38762	1	39179	43785	BLANK		ICP Metals Analysis, Grd H20 P
38762	2	39179	43785	LCS		ICP Metals Analysis, Grd H20 P
38762	4	39179	43785	MS	W08P005266	ICP Metals Analysis, Grd H20 P
38762	5	39179	43785	MSD	W08P005266	ICP Metals Analysis, Grd H20 P
38762	3	39179	43785	SAMPLE	W08P005266	ICP Metals Analysis, Grd H20 P
38762	5	39179	43785	SPK-RPD	W08P005266	ICP Metals Analysis, Grd H20 P
38762	8	39179	43785	SAMPLE	W08P005267	ICP Metals Analysis, Grd H20 P
38762	9	39179	43785	SAMPLE	W08P005268	ICP Metals Analysis, Grd H20 P
38762	10	39179	43785	SAMPLE	W08P005269	ICP Metals Analysis, Grd H20 P
38762	11	39179	43785	SAMPLE	W08P005270	ICP Metals Analysis, Grd H20 P
38762	12	39179	43785	SAMPLE	W08P005271	ICP Metals Analysis, Grd H20 P
38935	1	39350	43885	BLANK		ICP-200.8 MS All possible meta
38935	2	39350	43885	BLANK		ICP-200.8 MS All possible meta
38935	3	39350	43885	BLANK		ICP-200.8 MS All possible meta
38935	4	39350	43885	LCS		ICP-200.8 MS All possible meta
38935	5	39350	43885	LCS		ICP-200.8 MS All possible meta
38935	6	39350	43885	LCS		ICP-200.8 MS All possible meta
38935	8	39350	43885	MS	W08P005207	ICP-200.8 MS All possible meta
38935	9	39350	43885	MSD	W08P005207	ICP-200.8 MS All possible meta
38935	9	39350	43885	SPK-RPD	W08P005207	ICP-200.8 MS All possible meta
38935	18	39350	43885	SAMPLE	W08P005267	ICP-200.8 MS All possible meta
38935	19	39350	43885	SAMPLE	W08P005270	ICP-200.8 MS All possible meta
38935	20	39350	43885	SAMPLE	W08P005271	ICP-200.8 MS All possible meta
38935	21	39350	43885	SAMPLE	W08P005272	ICP-200.8 MS All possible meta

38935	22	39350	43885	SAMPLE	W08P005273	ICP-200.8	MS	All	possible	meta
38935	23	39350	43885	SAMPLE	W08P005274	ICP-200.8	MS	All	possible	meta
38935	24	39350	43885	SAMPLE	W08P005275	ICP-200.8	MS	All	possible	meta
38935	11	39350	43885	MS	W08P005540	ICP-200.8	MS	All	possible	meta
38935	12	39350	43885	MSD	W08P005540	ICP-200.8	MS	All	possible	meta
38935	12	39350	43885	SPK-RPD	W08P005540	ICP-200.8	MS	All	possible	meta
38935	14	39350	43885	MS	W08P005622	ICP-200.8	MS	All	possible	meta
38935	15	39350	43885	MSD	W08P005622	ICP-200.8	MS	All	possible	meta
38935	15	39350	43885	SPK-RPD	W08P005622	ICP-200.8	MS	All	possible	meta

w13qlog v4.2 02-jan-2009 12:09:52

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20082326

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			43814	BLANK		VOA Ground Water Protection
			43814	LCS		VOA Ground Water Protection
			43814	MS	W08P005267	VOA Ground Water Protection
			43814	MSD	W08P005267	VOA Ground Water Protection
			43814	SAMPLE	W08P005267	VOA Ground Water Protection
			43814	SPK-RPD	W08P005267	VOA Ground Water Protection
			43814	SURR	W08P005267	VOA Ground Water Protection
			43814	SAMPLE	W08P005270	VOA Ground Water Protection
			43814	SURR	W08P005270	VOA Ground Water Protection
			43814	SAMPLE	W08P005271	VOA Ground Water Protection
			43814	SURR	W08P005271	VOA Ground Water Protection
			43814	SAMPLE	W08P005272	VOA Ground Water Protection
			43814	SURR	W08P005272	VOA Ground Water Protection
			43814	SAMPLE	W08P005273	VOA Ground Water Protection
			43814	SURR	W08P005273	VOA Ground Water Protection
			43814	SAMPLE	W08P005274	VOA Ground Water Protection
			43814	SURR	W08P005274	VOA Ground Water Protection
			43814	SAMPLE	W08P005275	VOA Ground Water Protection
			43814	SURR	W08P005275	VOA Ground Water Protection
			43814	SAMPLE	W08P005276	VOA Ground Water Protection
			43814	SURR	W08P005276	VOA Ground Water Protection

w13qlog v4.2 02-jan-2009 12:09:52

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20082326

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
38728	1	39146	43769	BLANK		Tritium by Liq Sct column prep
38728	2	39146	43769	LCS		Tritium by Liq Sct column prep
38728	3	39146	43769	DUP	W08P005261	Tritium by Liq Sct column prep
38728	4	39146	43769	MS	W08P005261	Tritium by Liq Sct column prep
38728	8	39146	43769	SAMPLE	W08P005267	Tritium by Liq Sct column prep
38728	9	39146	43769	SAMPLE	W08P005270	Tritium by Liq Sct column prep
38728	10	39146	43769	SAMPLE	W08P005271	Tritium by Liq Sct column prep
38889	1	39304	43822	BLANK		Gross Alpha/Gross Beta (AB32)
38889	2	39304	43822	LCS		Gross Alpha/Gross Beta (AB32)
38889	3	39304	43822	DUP	W08P005122	Gross Alpha/Gross Beta (AB32)
38889	15	39304	43822	SAMPLE	W08P005267	Gross Alpha/Gross Beta (AB32)
38889	16	39304	43822	SAMPLE	W08P005270	Gross Alpha/Gross Beta (AB32)
38889	17	39304	43822	SAMPLE	W08P005271	Gross Alpha/Gross Beta (AB32)
38892	1	39307	43861	BLANK		Gross Alpha on Alpha Plateau
38892	2	39307	43861	LCS		Gross Alpha on Alpha Plateau
38892	3	39307	43861	DUP	W08P005122	Gross Alpha on Alpha Plateau
38892	14	39307	43861	SAMPLE	W08P005267	Gross Alpha on Alpha Plateau
38892	15	39307	43861	SAMPLE	W08P005270	Gross Alpha on Alpha Plateau
38892	16	39307	43861	SAMPLE	W08P005271	Gross Alpha on Alpha Plateau

WSCF
METHOD REFERENCES REPORT

Department: Inorganic

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-505-411 LA-505-411: ELEMENTAL ANALYSIS BY INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPE

HEIS 6010_METALS_ICP	Inductively Coupled Plasma-Atomic Emmision Spectrometry

LA-505-412 LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY

EPA-600/R-94-111 200.8	DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS
HEIS 200.8_METALS_ICPMS	Inductively Coupled Plasma - Mass Spectrometry
HEIS RADISOTOPES_ICPMS	Radioisotopes by ICP/MS

LA-531-411 LA-531-411: ALKALINITY (TITRIMETRIC)

HEIS 2320B	Alkalinity
Standard Methods 2320B	Alkalinity

LA-533-410 LA-533-410: ANION ANALYSIS BY ION CHROMATOGRAPHY

EPA-600/R-94-111 300.0	DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY
HEIS 300.0_ANIONS_IC	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 http://www2.rl.gov/phmc/as-dol.

WSCF
METHOD REFERENCES REPORT

Department: Organic

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

LA-523-455	LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846	
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8260B	VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
	HEIS 8260_VOA_GCMS	Volatile 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 http://www2.rl.gov/phmc/as-dol.

WSCF
METHOD REFERENCES REPORT

Department: Radiochemistry

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-508-415 LA-508-415: OPERATION OF THE PROTEAN 2-INCH ALPHA/BETA COUNTING SYSTEM FOR GROSS

HEIS ALPHA_GPC	GROSS ALPHA GPC
HEIS BETA_GPC	GROSS BETA GPC
HEIS SRTOT_SEP_PRECIP_GP	Strontium 89/90

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

HEIS ALPHA_LSC	A/B Liquid Scintilillation
HEIS BETA_LSC	A/B Liquid Scintilallation
HEIS TC99_3MDSK_LSC	TC99 by Liquid Scintillation
HEIS TRITIUM_EIE_LSC	Tritium Liquid Scintillation

Note: A complete list of WSCF analytical procedures and referenced regulatory or industry methods is available online at http://www2.rl.gov/phmc/as-dol.

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005266
Client ID: B1XB12 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**12/03/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		12/08/08
Magnesium	7439-95-4	LA-505-411		6.57e+03	ug/L			1.00	50		12/08/08
Manganese	7439-96-5	LA-505-411		87.6	ug/L			1.00	4.0		12/08/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Potassium	7440-09-7	LA-505-411		4.59e+03	ug/L			1.00	1.7e+02		12/08/08
Silver	7440-22-4	LA-505-411	B	7.00	ug/L			1.00	5.0		12/08/08
Sodium	7440-23-5	LA-505-411		1.92e+04	ug/L			1.00	51		12/08/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		12/08/08
Barium	7440-39-3	LA-505-411		41.4	ug/L			1.00	4.0		12/08/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		12/08/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		12/08/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		12/08/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		12/08/08
Calcium	7440-70-2	LA-505-411		2.85e+04	ug/L			1.00	73		12/08/08
Strontium	7440-24-6	LA-505-411		201	ug/L			1.00	4.0		12/08/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005267
Client ID: B1XB13 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	D	0.539	mg/L			2.00	0.046		12/02/08
Chloride	16887-00-6	LA-533-410	D	7.64	mg/L			2.00	0.094		12/02/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		12/02/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	2.65	mg/L			2.00	0.024		12/02/08
Sulfate	14808-79-8	LA-533-410	D	27.2	mg/L			2.00	0.26		12/02/08
ICP Metals Analysis, Grd H20 P Prep											**12/03/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		1.96e+03	ug/L			1.00	25		12/08/08
Magnesium	7439-95-4	LA-505-411		6.63e+03	ug/L			1.00	50		12/08/08
Manganese	7439-96-5	LA-505-411		195	ug/L			1.00	4.0		12/08/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Potassium	7440-09-7	LA-505-411		4.17e+03	ug/L			1.00	1.7e+02		12/08/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		12/08/08
Sodium	7440-23-5	LA-505-411		1.90e+04	ug/L			1.00	51		12/08/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		12/08/08
Barium	7440-39-3	LA-505-411		96.6	ug/L			1.00	4.0		12/08/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Chromium	7440-47-3	LA-505-411	B	17.6	ug/L			1.00	13		12/08/08
Cobalt	7440-48-4	LA-505-411	B	4.50	ug/L			1.00	4.0		12/08/08
Copper	7440-50-8	LA-505-411	B	6.90	ug/L			1.00	6.0		12/08/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		12/08/08
Zinc	7440-66-6	LA-505-411	B	19.5	ug/L			1.00	9.0		12/08/08
Calcium	7440-70-2	LA-505-411		2.80e+04	ug/L			1.00	73		12/08/08
Strontium	7440-24-6	LA-505-411		198	ug/L			1.00	4.0		12/08/08

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
DF = Dilution Factor

8 - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005267
Client ID: B1XB13 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
ICP-200.8 MS All possible meta Prep											**12/30/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		134	ug/L			1.00	0.0500		12/30/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		89.0	mg/L			1.00	1.0		12/05/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but >= the IDL/MDL (inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005268
Client ID: B1XBP2 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**12/03/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		12/08/08
Magnesium	7439-95-4	LA-505-411		5.45e+03	ug/L			1.00	50		12/08/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Potassium	7440-09-7	LA-505-411		2.13e+03	ug/L			1.00	1.7e+02		12/08/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		12/08/08
Sodium	7440-23-5	LA-505-411		9.25e+03	ug/L			1.00	51		12/08/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		12/08/08
Barium	7440-39-3	LA-505-411		34.3	ug/L			1.00	4.0		12/08/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		12/08/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		12/08/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		12/08/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		12/08/08
Calcium	7440-70-2	LA-505-411		2.53e+04	ug/L			1.00	73		12/08/08
Strontium	7440-24-6	LA-505-411		166	ug/L			1.00	4.0		12/08/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but >= the IDL/MDL (inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005269
Client ID: B1XB17 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**12/03/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		12/08/08
Magnesium	7439-95-4	LA-505-411		6.54e+03	ug/L			1.00	50		12/08/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Potassium	7440-09-7	LA-505-411		2.66e+03	ug/L			1.00	1.7e+02		12/08/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		12/08/08
Sodium	7440-23-5	LA-505-411		1.15e+04	ug/L			1.00	51		12/08/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		12/08/08
Barium	7440-39-3	LA-505-411		42.5	ug/L			1.00	4.0		12/08/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		12/08/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		12/08/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		12/08/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		12/08/08
Calcium	7440-70-2	LA-505-411		3.17e+04	ug/L			1.00	73		12/08/08
Strontium	7440-24-6	LA-505-411		203	ug/L			1.00	4.0		12/08/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005270
Client ID: B1XBP3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	BD	0.172	mg/L			2.00	0.046		12/02/08
Chloride	16887-00-6	LA-533-410	D	6.04	mg/L			2.00	0.094		12/02/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		12/02/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	1.59	mg/L			2.00	0.024		12/02/08
Sulfate	14808-79-8	LA-533-410	D	21.3	mg/L			2.00	0.26		12/02/08
ICP Metals Analysis, Grd H20 P Prep											**12/03/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	B	55.8	ug/L			1.00	25		12/08/08
Magnesium	7439-95-4	LA-505-411		5.71e+03	ug/L			1.00	50		12/08/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Potassium	7440-09-7	LA-505-411		2.29e+03	ug/L			1.00	1.7e+02		12/08/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		12/08/08
Sodium	7440-23-5	LA-505-411		9.62e+03	ug/L			1.00	51		12/08/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		12/08/08
Barium	7440-39-3	LA-505-411		38.0	ug/L			1.00	4.0		12/08/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		12/08/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		12/08/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		12/08/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		12/08/08
Calcium	7440-70-2	LA-505-411		2.69e+04	ug/L			1.00	73		12/08/08
Strontium	7440-24-6	LA-505-411		174	ug/L			1.00	4.0		12/08/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but >= the IDL/MDL (inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005270
Client ID: B1XBP3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
ICP-200.8 MS All possible meta Prep											**12/30/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		61.2	ug/L			1.00	0.0500		12/30/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		77.0	mg/L			1.00	1.0		12/05/08

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
DF = Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005271
Client ID: B1XB18 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	BD	0.174	mg/L			2.00	0.046		12/02/08
Chloride	16887-00-6	LA-533-410	D	7.91	mg/L			2.00	0.094		12/02/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		12/02/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	2.31	mg/L			2.00	0.024		12/02/08
Sulfate	14808-79-8	LA-533-410	D	26.0	mg/L			2.00	0.26		12/02/08
ICP Metals Analysis, Grd H20 P Prep											**12/03/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		221	ug/L			1.00	25		12/08/08
Magnesium	7439-95-4	LA-505-411		6.45e+03	ug/L			1.00	50		12/08/08
Manganese	7439-96-5	LA-505-411	B	7.90	ug/L			1.00	4.0		12/08/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Potassium	7440-09-7	LA-505-411		2.57e+03	ug/L			1.00	1.7e+02		12/08/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		12/08/08
Sodium	7440-23-5	LA-505-411		1.12e+04	ug/L			1.00	51		12/08/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		12/08/08
Barium	7440-39-3	LA-505-411		61.3	ug/L			1.00	4.0		12/08/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		12/08/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		12/08/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		12/08/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		12/08/08
Calcium	7440-70-2	LA-505-411		3.18e+04	ug/L			1.00	73		12/08/08
Strontium	7440-24-6	LA-505-411		203	ug/L			1.00	4.0		12/08/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005271
Client ID: B1XB18 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		12/08/08
ICP-200.8 MS All possible meta Prep											**12/30/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		94.7	ug/L			1.00	0.0500		12/30/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		85.0	mg/L			1.00	1.0		12/05/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005272
Client ID: B1XBN7 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta Prep											**12/30/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		51.4	ug/L			1.00	0.0500		12/30/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

Report WGPP/ver. 5.2
GPAP

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005273
Client ID: B1XBP0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta Prep											**12/30/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		0.122	ug/L			1.00	0.0500		12/30/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005274
Client ID: B1XB16 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta Prep											**12/30/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		11.4	ug/L			1.00	0.0500		12/30/08

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
DF = Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005275
Client ID: B1XB11 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Inorganic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta Prep											**12/30/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		46.5	ug/L			1.00	0.0500		12/30/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

Report WGPP/ver. 5.2
GPAP

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082326
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 12/02/08
Receive Date:12/02/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P005271											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	7.8913		RPD			0.175	20.000		12/02/08
DUP	Fluoride	16984-48-8	0.1692		RPD			2.855	20.000		12/02/08
DUP	Nitrogen in Nitrite	NO2-N	<2.56e-2		RPD			n/a	20.000	U	12/02/08
DUP	Nitrogen in Nitrate	NO3-N	2.3049		RPD			0.282	20.000		12/02/08
DUP	Sulfate	14808-79-8	25.9764		RPD			0.099	20.000		12/02/08
MS	Chloride	16887-00-6	1.0379	105.371	% Recov	80.000	120.000				12/02/08
MS	Fluoride	16984-48-8	0.4951	98.040	% Recov	80.000	120.000				12/02/08
MS	Nitrogen in Nitrite	NO2-N	0.43525	88.465	% Recov	80.000	120.000				12/02/08
MS	Nitrogen in Nitrate	NO3-N	0.4223	94.899	% Recov	80.000	120.000				12/02/08
MS	Sulfate	14808-79-8	1.82905	92.376	% Recov	80.000	120.000				12/02/08
MSD	Chloride	16887-00-6	1.08895	110.553	% Recov	80.000	120.000				12/02/08
MSD	Fluoride	16984-48-8	0.50695	100.386	% Recov	80.000	120.000				12/02/08
MSD	Nitrogen in Nitrite	NO2-N	0.4316	87.724	% Recov	80.000	120.000				12/02/08
MSD	Nitrogen in Nitrate	NO3-N	0.43135	96.933	% Recov	80.000	120.000				12/02/08
MSD	Sulfate	14808-79-8	1.77695	89.745	% Recov	80.000	120.000				12/02/08
SPK-RPD	Chloride	16887-00-6	110.553		RPD			4.800	20.000		12/02/08
SPK-RPD	Fluoride	16984-48-8	100.386		RPD			2.365	20.000		12/02/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	87.724		RPD			0.841	20.000		12/02/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	96.933		RPD			2.121	20.000		12/02/08
SPK-RPD	Sulfate	14808-79-8	89.745		RPD			2.889	20.000		12/02/08
BATCH QC											
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	12/02/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	12/02/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	12/02/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	12/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082326
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	12/02/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	12/02/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	12/02/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	12/02/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	12/02/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	12/02/08
LCS	Chloride	16887-00-6	194.752	97.865	% Recov	80.000	120.000				12/02/08
LCS	Fluoride	16984-48-8	101.6281	99.635	% Recov	80.000	120.000				12/02/08
LCS	Nitrogen in Nitrite	NO2-N	99.0032	99.601	% Recov	80.000	120.000				12/02/08
LCS	Nitrogen in Nitrate	NO3-N	91.5679	101.855	% Recov	80.000	120.000				12/02/08
LCS	Sulfate	14808-79-8	392.3583	98.090	% Recov	80.000	120.000				12/02/08

Lab ID: W08P005264
BATCH QC ASSOCIATED WITH SAMPLE

DUP	Chloride	16887-00-6	7.5516		RPD			0.978	20.000		12/02/08
DUP	Fluoride	16984-48-8	0.1956		RPD			12.263	20.000		12/02/08
DUP	Nitrogen in Nitrite	NO2-N	<2.56e-2		RPD			n/a	20.000	U	12/02/08
DUP	Nitrogen in Nitrate	NO3-N	0.5164		RPD			0.973	20.000		12/02/08
DUP	Sulfate	14808-79-8	30.9832		RPD			0.004	20.000		12/02/08
MS	Chloride	16887-00-6	1.0617	107.787	% Recov	80.000	120.000				12/02/08
MS	Fluoride	16984-48-8	0.5145	101.881	% Recov	80.000	120.000				12/02/08
MS	Nitrogen in Nitrite	NO2-N	0.43685	88.791	% Recov	80.000	120.000				12/02/08
MS	Nitrogen in Nitrate	NO3-N	0.4374	98.292	% Recov	80.000	120.000				12/02/08
MS	Sulfate	14808-79-8	1.75675	88.725	% Recov	80.000	120.000				12/02/08
MSD	Chloride	16887-00-6	1.0377	105.350	% Recov	80.000	120.000				12/02/08
MSD	Fluoride	16984-48-8	0.5204	103.050	% Recov	80.000	120.000				12/02/08
MSD	Nitrogen in Nitrite	NO2-N	0.4347	88.354	% Recov	80.000	120.000				12/02/08
MSD	Nitrogen in Nitrate	NO3-N	0.44435	99.854	% Recov	80.000	120.000				12/02/08
MSD	Sulfate	14808-79-8	1.7353	87.641	% Recov	80.000	120.000				12/02/08
SPK-RPD	Chloride	16887-00-6	105.350		RPD			2.287	20.000		12/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082326
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 12/02/08
Receive Date:12/02/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Fluoride	16984-48-8	103.050		RPD			1.141	20.000		12/02/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	88.354		RPD			0.493	20.000		12/02/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	99.854		RPD			1.577	20.000		12/02/08
SPK-RPD	Sulfate	14808-79-8	87.641		RPD			1.229	20.000		12/02/08

BATCH QC

BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	12/02/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	12/02/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	12/02/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	12/02/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	12/02/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	12/02/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	12/02/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	12/02/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	12/02/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	12/02/08
LCS	Chloride	16887-00-6	194.3414	97.659	% Recov	80.000	120.000				12/02/08
LCS	Fluoride	16984-48-8	101.5406	99.550	% Recov	80.000	120.000				12/02/08
LCS	Nitrogen in Nitrite	NO2-N	98.9631	99.560	% Recov	80.000	120.000				12/02/08
LCS	Nitrogen in Nitrate	NO3-N	91.2306	101.480	% Recov	80.000	120.000				12/02/08
LCS	Sulfate	14808-79-8	389.6106	97.403	% Recov	80.000	120.000				12/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082326
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 12/02/08
Receive Date:12/02/08

Lab ID: W08P005266
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Silver	7440-22-4	962	96.200	% Recov	75.000	125.000				12/08/08
MS	Barium	7440-39-3	475.9	95.180	% Recov	75.000	125.000				12/08/08
MS	Beryllium	7440-41-7	533.1	106.620	% Recov	75.000	125.000				12/08/08
MS	Calcium	7440-70-2	1110	111.000	% Recov	75.000	125.000				12/08/08
MS	Cadmium	7440-43-9	1023	102.300	% Recov	75.000	125.000				12/08/08
MS	Cobalt	7440-48-4	1026	102.600	% Recov	75.000	125.000				12/08/08
MS	Chromium	7440-47-3	1002	100.200	% Recov	75.000	125.000				12/08/08
MS	Copper	7440-50-8	948.1	94.810	% Recov	75.000	125.000				12/08/08
MS	Iron	7439-89-6	1016	101.600	% Recov	75.000	125.000				12/08/08
MS	Potassium	7440-09-7	9151	91.510	% Recov	75.000	125.000				12/08/08
MS	Magnesium	7439-95-4	649	64.900	% Recov	75.000	125.000			*	12/08/08
MS	Manganese	7439-96-5	1018.4	101.840	% Recov	75.000	125.000				12/08/08
MS	Sodium	7440-23-5	-190	-19.000	% Recov	75.000	125.000			*	12/08/08
MS	Nickel	7440-02-0	1020	102.000	% Recov	75.000	125.000				12/08/08
MS	Antimony	7440-36-0	1014	101.400	% Recov	75.000	125.000				12/08/08
MS	Strontium	7440-24-6	512.6	102.520	% Recov	75.000	125.000				12/08/08
MS	Vanadium	7440-62-2	989.7	98.970	% Recov	75.000	125.000				12/08/08
MS	Zinc	7440-66-6	1030	103.000	% Recov	75.000	125.000				12/08/08
MSD	Silver	7440-22-4	972.2	97.220	% Recov	75.000	125.000				12/08/08
MSD	Barium	7440-39-3	473.4	94.680	% Recov	75.000	125.000				12/08/08
MSD	Beryllium	7440-41-7	527	105.400	% Recov	75.000	125.000				12/08/08
MSD	Calcium	7440-70-2	360	36.000	% Recov	75.000	125.000			*	12/08/08
MSD	Cadmium	7440-43-9	1018	101.800	% Recov	75.000	125.000				12/08/08
MSD	Cobalt	7440-48-4	1002	100.200	% Recov	75.000	125.000				12/08/08
MSD	Chromium	7440-47-3	992.6	99.260	% Recov	75.000	125.000				12/08/08
MSD	Copper	7440-50-8	954.9	95.490	% Recov	75.000	125.000				12/08/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082326
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 12/02/08
Receive Date:12/02/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Iron	7439-89-6	1009	100.900	% Recov	75.000	125.000				12/08/08
MSD	Potassium	7440-09-7	9441	94.410	% Recov	75.000	125.000				12/08/08
MSD	Magnesium	7439-95-4	719	71.900	% Recov	75.000	125.000			•	12/08/08
MSD	Manganese	7439-96-5	1002.4	100.240	% Recov	75.000	125.000				12/08/08
MSD	Sodium	7440-23-5	420	42.000	% Recov	75.000	125.000			•	12/08/08
MSD	Nickel	7440-02-0	1001	100.100	% Recov	75.000	125.000				12/08/08
MSD	Antimony	7440-36-0	1032	103.200	% Recov	75.000	125.000				12/08/08
MSD	Strontium	7440-24-6	505.8	101.160	% Recov	75.000	125.000				12/08/08
MSD	Vanadium	7440-62-2	983.2	98.320	% Recov	75.000	125.000				12/08/08
MSD	Zinc	7440-66-6	1011	101.100	% Recov	75.000	125.000				12/08/08
SPK-RPD	Silver	7440-22-4	97.220		RPD			1.055	20.000		12/08/08
SPK-RPD	Barium	7440-39-3	94.680		RPD			0.527	20.000		12/08/08
SPK-RPD	Beryllium	7440-41-7	105.400		RPD			1.151	20.000		12/08/08
SPK-RPD	Calcium	7440-70-2	36.000		RPD			102.041	20.000	•	12/08/08
SPK-RPD	Cadmium	7440-43-9	101.800		RPD			0.490	20.000		12/08/08
SPK-RPD	Cobalt	7440-48-4	100.200		RPD			2.367	20.000		12/08/08
SPK-RPD	Chromium	7440-47-3	99.260		RPD			0.943	20.000		12/08/08
SPK-RPD	Copper	7440-50-8	95.490		RPD			0.715	20.000		12/08/08
SPK-RPD	Iron	7439-89-6	100.900		RPD			0.691	20.000		12/08/08
SPK-RPD	Potassium	7440-09-7	94.410		RPD			3.120	20.000		12/08/08
SPK-RPD	Magnesium	7439-95-4	71.900		RPD			10.234	20.000		12/08/08
SPK-RPD	Manganese	7439-96-5	100.240		RPD			1.584	20.000		12/08/08
SPK-RPD	Sodium	7440-23-5	42.000		RPD			530.435	20.000	•	12/08/08
SPK-RPD	Nickel	7440-02-0	100.100		RPD			1.880	20.000		12/08/08
SPK-RPD	Antimony	7440-36-0	103.200		RPD			1.760	20.000		12/08/08
SPK-RPD	Strontium	7440-24-6	101.160		RPD			1.335	20.000		12/08/08
SPK-RPD	Vanadium	7440-62-2	98.320		RPD			0.659	20.000		12/08/08
SPK-RPD	Zinc	7440-66-6	101.100		RPD			1.862	20.000		12/08/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082326
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	Silver	7440-22-4	<5	n/a	ug/L					U	12/08/08
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	12/08/08
BLANK	Beryllium	7440-41-7	<4	n/a	ug/L					U	12/08/08
BLANK	Calcium	7440-70-2	<73	n/a	ug/L					U	12/08/08
BLANK	Cadmium	7440-43-9	<4	n/a	ug/L					U	12/08/08
BLANK	Cobalt	7440-48-4	<4	n/a	ug/L					U	12/08/08
BLANK	Chromium	7440-47-3	<13	n/a	ug/L					U	12/08/08
BLANK	Copper	7440-50-8	<6	n/a	ug/L					U	12/08/08
BLANK	Iron	7439-89-6	<25	n/a	ug/L					U	12/08/08
BLANK	Potassium	7440-09-7	<170	n/a	ug/L					U	12/08/08
BLANK	Magnesium	7439-95-4	<50	n/a	ug/L					U	12/08/08
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	12/08/08
BLANK	Sodium	7440-23-5	<51	n/a	ug/L					U	12/08/08
BLANK	Nickel	7440-02-0	<4	n/a	ug/L					U	12/08/08
BLANK	Antimony	7440-36-0	<56	n/a	ug/L					U	12/08/08
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	12/08/08
BLANK	Vanadium	7440-62-2	<12	n/a	ug/L					U	12/08/08
BLANK	Zinc	7440-66-6	<9	n/a	ug/L					U	12/08/08
LCS	Silver	7440-22-4	978.5	97.850	% Recov	80.000	120.000				12/08/08
LCS	Barium	7440-39-3	462.9	92.580	% Recov	80.000	120.000				12/08/08
LCS	Beryllium	7440-41-7	537.5	107.500	% Recov	80.000	120.000				12/08/08
LCS	Calcium	7440-70-2	931.1	93.110	% Recov	80.000	120.000				12/08/08
LCS	Cadmium	7440-43-9	1058	105.800	% Recov	80.000	120.000				12/08/08
LCS	Cobalt	7440-48-4	1042	104.200	% Recov	80.000	120.000				12/08/08
LCS	Chromium	7440-47-3	968.4	96.840	% Recov	80.000	120.000				12/08/08
LCS	Copper	7440-50-8	1013	101.300	% Recov	80.000	120.000				12/08/08
LCS	Iron	7439-89-6	979.3	97.930	% Recov	80.000	120.000				12/08/08
LCS	Potassium	7440-09-7	10870	108.700	% Recov	80.000	120.000				12/08/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082326
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	Magnesium	7439-95-4	999.5	99.950	% Recov	80.000	120.000				12/08/08
LCS	Manganese	7439-96-5	986.1	98.610	% Recov	80.000	120.000				12/08/08
LCS	Sodium	7440-23-5	1051	105.100	% Recov	80.000	120.000				12/08/08
LCS	Nickel	7440-02-0	1046	104.600	% Recov	80.000	120.000				12/08/08
LCS	Antimony	7440-36-0	1077	107.700	% Recov	80.000	120.000				12/08/08
LCS	Strontium	7440-24-6	496.8	99.360	% Recov	80.000	120.000				12/08/08
LCS	Vanadium	7440-62-2	986.3	98.630	% Recov	80.000	120.000				12/08/08
LCS	Zinc	7440-66-6	1063	106.300	% Recov	80.000	120.000				12/08/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082326
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 11/24/08
Receive Date:11/24/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P005207											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Uranium	7440-61-1	45.734	114.335	% Recov	70.000	130.000				12/30/08
MSD	Uranium	7440-61-1	44.454	111.135	% Recov	70.000	130.000				12/30/08
SPK-RPD	Uranium	7440-61-1	111.135		RPD			2.839	20.000		12/31/08
Lab ID: W08P005540											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Uranium	7440-61-1	44.527	111.317	% Recov	70.000	130.000				12/30/08
MSD	Uranium	7440-61-1	43.997	109.993	% Recov	70.000	130.000				12/30/08
SPK-RPD	Uranium	7440-61-1	109.993		RPD			1.197	20.000		12/31/08
Lab ID: W08P005622											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Uranium	7440-61-1	44.043	110.108	% Recov	70.000	130.000				12/30/08
MSD	Uranium	7440-61-1	43.883	109.707	% Recov	70.000	130.000				12/30/08
SPK-RPD	Uranium	7440-61-1	109.707		RPD			0.365	20.000		12/31/08
BATCH QC											
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	12/30/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	12/30/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	12/30/08
LCS	Uranium	7440-61-1	40.72	101.800	% Recov	85.000	115.000				12/30/08
LCS	Uranium	7440-61-1	40.23	100.575	% Recov	85.000	115.000				12/30/08
LCS	Uranium	7440-61-1	40.28	100.700	% Recov	85.000	115.000				12/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082326
Matrix: WATER
Test: Total Alkalinity as mg/L CaCO3

Sample Date: 12/01/08
Receive Date:12/01/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P005240											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	84.97		RPD			0.949	20.000		12/05/08
BATCH QC											
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	33.06	110.940	%Recove	80.000	120.000				12/05/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	32.72	109.799	%Recove	80.000	120.000				12/05/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	33.02	110.805	%Recove	80.000	120.000				12/05/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20082326
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-AES: [Samples W08P5266-5271] Magnesium, sodium, and calcium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. Check standard used to ensure sodium and calcium linearity because sample results are greater than the calibration standard. Sample results < 5X MDL; "B" flag. VOA: 1,1-Dichloroethene spike recovery was high in the MSD at 119%. 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
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005267
Client ID: B1XB13 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Trichloroethene	79-01-6	LA-523-455		7.40	ug/L			1.00	1.0		12/09/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Toluene	108-88-3	LA-523-455	J	2.00	ug/L			1.00	1.0		12/09/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Tetrachloroethene	127-18-4	LA-523-455	J	4.00	ug/L			1.00	1.0		12/09/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		12/09/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	J	4.60	ug/L			1.00	1.0		12/09/08

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
DF = Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005267
Client ID: B1XB13 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL=Minimum Detection Limit
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TP Err=Total Propagated Error
DF=Dilution Factor

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005270
Client ID: B1XBP3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Benzene	71-43-2	LA-523-455	J	2.50	ug/L			1.00	1.0		12/09/08
Toluene	108-88-3	LA-523-455	J	2.00	ug/L			1.00	1.0		12/09/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		12/09/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005270
Client ID: B1XBP3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005271
Client ID: B1XB18 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Benzene	71-43-2	LA-523-455	J	2.50	ug/L			1.00	1.0		12/09/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		12/09/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL=Minimum Detection Limit
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005271
Client ID: B1XB18 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005272
Client ID: B1XBN7 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Trichloroethene	79-01-6	LA-523-455		7.10	ug/L			1.00	1.0		12/09/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Toluene	108-88-3	LA-523-455	J	2.00	ug/L			1.00	1.0		12/09/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Tetrachloroethene	127-18-4	LA-523-455	J	3.90	ug/L			1.00	1.0		12/09/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		12/09/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005272
Client ID: B1XBN7 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005273
Client ID: B1XBP0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Toluene	108-88-3	LA-523-455	J	2.00	ug/L			1.00	1.0		12/09/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Methylenechloride	75-09-2	LA-523-455	J	2.90	ug/L			1.00	1.0		12/09/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		12/09/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

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J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005273
Client ID: B1XBP0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL=Minimum Detection Limit
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005274
Client ID: B1XB16 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Trichloroethene	79-01-6	LA-523-455	J	1.20	ug/L			1.00	1.0		12/09/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Tetrachloroethene	127-18-4	LA-523-455	J	3.90	ug/L			1.00	1.0		12/09/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		12/09/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
DF = Dilution Factor

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005274
Client ID: B1XB16 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL=Minimum Detection Limit
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005275
Client ID: B1XB11 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Chloroform	67-66 3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		12/09/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL=Minimum Detection Limit
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005275
Client ID: B1XB11 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005276
Client ID: B1XTL3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Toluene	108-88-3	LA-523-455	J	2.00	ug/L			1.00	1.0		12/09/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
Methylenechloride	75-09-2	LA-523-455		6.60	ug/L			1.00	1.0		12/09/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		12/09/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL=Minimum Detection Limit
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005276
Client ID: B1XTL3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Organic
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		12/09/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		12/09/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

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J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent E6-35

Group #: WSCF20082326
Department: Organic

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08P005267	B1XB13	PNNL-GPP	VOA Ground Water Protection	SMP 5.198 Chloromethane	74-87-3	5.198216		1.2	ug/L
W08P005272	B1XBN7	PNNL-GPP	VOA Ground Water Protection	SMP 5.204 Chloromethane	74-87-3	5.2048		1.7	ug/L
W08P005274	B1XB16	PNNL-GPP	VOA Ground Water Protection	SMP 5.188 Chloromethane	74-87-3	5.188766		1.0	ug/L
W08P005275	B1XB11	PNNL-GPP	VOA Ground Water Protection	SMP 5.211 Chloromethane	74-87-3	5.211033		1.2	ug/L

RQ=Result Qualifier

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GPAP

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082326
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 12/02/08
Receive Date:12/02/08

Lab ID: W08P005267
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	1,1-Dichloroethene	75-35-4	29.350	117.000	% Recov	63.000	117.000				12/09/08
MS	Benzene	71-43-2	24.890	99.600	% Recov	75.000	129.000				12/09/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	48.610	97.200	% Recov	75.000	125.000				12/09/08
MS	Chlorobenzene	108-90-7	26.050	104.000	% Recov	79.000	119.000				12/09/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.710	115.000	% Recov	75.000	125.000				12/09/08
MS	Toluene-d8(Surr)	2037-26-5	47.830	95.700	% Recov	75.000	125.000				12/09/08
MS	Toluene	108-88-3	23.836	95.300	% Recov	76.000	120.000				12/09/08
MS	Trichloroethene	79-01-6	22.129	88.500	% Recov	73.000	123.000				12/09/08
MSD	1,1-Dichloroethene	75-35-4	29.850	119.000	% Recov	63.000	117.000				12/09/08
MSD	Benzene	71-43-2	25.240	101.000	% Recov	75.000	129.000				12/09/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	48.600	97.200	% Recov	75.000	125.000				12/09/08
MSD	Chlorobenzene	108-90-7	26.580	106.000	% Recov	79.000	119.000				12/09/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.730	115.000	% Recov	75.000	125.000				12/09/08
MSD	Toluene-d8(Surr)	2037-26-5	47.880	95.800	% Recov	75.000	125.000				12/09/08
MSD	Toluene	108-88-3	24.046	96.200	% Recov	76.000	120.000				12/09/08
MSD	Trichloroethene	79-01-6	21.799	87.200	% Recov	73.000	123.000				12/09/08
SPK-RPD	1,1-Dichloroethene	75-35-4	119.000		RPD			1.695	20.000		12/09/08
SPK-RPD	Benzene	71-43-2	101.000		RPD			1.396	20.000		12/09/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	97.200		RPD			0.000	20.000		12/09/08
SPK-RPD	Chlorobenzene	108-90-7	106.000		RPD			1.905	20.000		12/09/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	115.000		RPD			0.000	20.000		12/09/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	95.800		RPD			0.104	20.000		12/09/08
SPK-RPD	Toluene	108-88-3	96.200		RPD			0.940	20.000		12/09/08
SPK-RPD	Trichloroethene	79-01-6	87.200		RPD			1.480	20.000		12/09/08
SURR	4-Bromofluorobenzene(Surr)	460-00-4	49.090	98.200	% Recov	75.000	125.000				12/09/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.170	114.000	% Recov	75.000	125.000				12/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082326
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 12/02/08
Receive Date:12/02/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Toluene-d8(Surr)	2037-26-5	48.410	96.800	% Recov	75.000	125.000				12/09/08
Lab ID: W08P005270											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.640	97.300	% Recov	75.000	125.000				12/09/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.540	115.000	% Recov	75.000	125.000				12/09/08
SURR	Toluene-d8(Surr)	2037-26-5	48.280	96.600	% Recov	75.000	125.000				12/09/08
Lab ID: W08P005271											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.760	97.500	% Recov	75.000	125.000				12/09/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.440	115.000	% Recov	75.000	125.000				12/09/08
SURR	Toluene-d8(Surr)	2037-26-5	48.460	96.900	% Recov	75.000	125.000				12/09/08
Lab ID: W08P005272											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.820	97.600	% Recov	75.000	125.000				12/09/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.540	115.000	% Recov	75.000	125.000				12/09/08
SURR	Toluene-d8(Surr)	2037-26-5	48.500	97.000	% Recov	75.000	125.000				12/09/08
Lab ID: W08P005273											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.640	97.300	% Recov	75.000	125.000				12/09/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	56.880	114.000	% Recov	75.000	125.000				12/09/08
SURR	Toluene-d8(Surr)	2037-26-5	48.350	96.700	% Recov	75.000	125.000				12/09/08
Lab ID: W08P005274											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.360	96.700	% Recov	75.000	125.000				12/09/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.900	116.000	% Recov	75.000	125.000				12/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082326
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 12/02/08
Receive Date:12/02/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Toluene-d8(Surr)	2037-26-5	48.720	97.400	% Recov	75.000	125.000				12/09/08
Lab ID: W08P005275											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.090	96.200	% Recov	75.000	125.000				12/09/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.210	114.000	% Recov	75.000	125.000				12/09/08
SURR	Toluene-d8(Surr)	2037-26-5	48.370	96.700	% Recov	75.000	125.000				12/09/08
Lab ID: W08P005276											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.600	97.200	% Recov	75.000	125.000				12/09/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.650	115.000	% Recov	75.000	125.000				12/09/08
SURR	Toluene-d8(Surr)	2037-26-5	48.650	97.300	% Recov	75.000	125.000				12/09/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	12/09/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L					U	12/09/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L					U	12/09/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L					U	12/09/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L					U	12/09/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.0	n/a	ug/L					U	12/09/08
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	12/09/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	12/09/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	49.170	98.300	% Recov	75.000	125.000				12/09/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	12/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20082326
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/L					U	12/09/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.580	115.000	% Recov	75.000	125.000				12/09/08
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Ethyl cyanide	107-12-0	< 2.0	n/a	ug/L					U	12/09/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	0.000	5.000			U	12/09/08
BLANK	Tetrahydrofuran	109-99-9	< 2.0	n/a	ug/L					U	12/09/08
BLANK	Toluene-d8(Surr)	2037-26-5	47.800	95.600	% Recov	75.000	125.000				12/09/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	12/09/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	12/09/08
LCS	1,1-Dichloroethene	75-35-4	27.530	110.000	% Recov	75.000	125.000				12/10/08
LCS	Benzene	71-43-2	24.340	97.400	% Recov	75.000	125.000				12/10/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	48.400	96.800	% Recov	75.000	125.000				12/10/08
LCS	Chlorobenzene	108-90-7	24.920	99.700	% Recov	75.000	125.000				12/10/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	56.880	114.000	% Recov	75.000	125.000				12/10/08
LCS	Toluene-d8(Surr)	2037-26-5	47.950	95.900	% Recov	75.000	125.000				12/10/08
LCS	Toluene	108-88-3	24.910	99.600	% Recov	75.000	125.000				12/10/08
LCS	Trichloroethene	79-01-6	20.850	83.400	% Recov	75.000	125.000				12/10/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20082326
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-AES: [Samples W08P5266-5271] Magnesium, sodium, and calcium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. Check standard used to ensure sodium and calcium linearity because sample results are greater than the calibration standard. Sample results < 5X MDL; "B" flag. VOA: 1,1-Dichloroethene spike recovery was high in the MSD at 119%. 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
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005267
Client ID: B1XB13 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Radiochemistry
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha on Alpha Plateau											
Gross alpha on alpha plateau	12587-46-1	LA-508-415		42.0	pCi/L	+-5.88	pCi/L	1.00	3.0		12/22/08
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		44.0	pCi/L	+-5.72	pCi/L	1.00	2.8		12/19/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		2.30e+03	pCi/L	+-506	pCi/L	1.00	2.3e+02		12/05/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005270
Client ID: B1XBP3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Radiochemistry
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha on Alpha Plateau											
Gross alpha on alpha plateau	12587-46-1	LA-508-415		18.0	pCi/L	+-3.06	pCi/L	1.00	2.2		12/22/08
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		21.0	pCi/L	+-3.15	pCi/L	1.00	2.3		12/19/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		1.20e+03	pCi/L	+-288	pCi/L	1.00	2.3e+02		12/05/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: X09-001
Sample # W08P005271
Client ID: B1XB18 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20082326
Department: Radiochemistry
Sampled: 12/02/08
Received: 12/02/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha on Alpha Plateau											
Gross alpha on alpha plateau	12587-46-1	LA-508-415		34.0	pCi/L	+-4.76	pCi/L	1.00	2.4		12/22/08
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		24.0	pCi/L	+-3.36	pCi/L	1.00	2.3		12/19/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		2.10e+03	pCi/L	+-462	pCi/L	1.00	2.3e+02		12/05/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20082326
Matrix: WATER
Test: Gross Alpha on Alpha Plateau

Sample Date: 11/21/08
Receive Date: 11/21/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P005122											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross alpha on alpha plateau	12587-46-1	U-8.0E-01		RPD			n/a	20.000		12/22/08
BATCH QC											
BLANK	Gross alpha on alpha plateau	12587-46-1-ap	U-9.0E-02	n/a	pCi/L	-100.000	100.000				12/22/08
LCS	Gross alpha on alpha plateau	12587-46-1-ap	31.1	80.362	% Recov	80.000	120.000				12/22/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20082326
Matrix: WATER
Test: Gross Alpha/Gross Beta (AB32)

Sample Date: 11/21/08
Receive Date:11/21/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P005122											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross beta	12587-47-2	U5.3E-01		RPD			n/a	20.000		12/19/08
BATCH QC											
BLANK	Gross beta	12587-47-2	U-4.5E-01	n/a	pCi/L	-10.000	10.000				12/19/08
LCS	Gross beta	12587-47-2	126.0	112.299	% Recov	80.000	120.000				12/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20082326
Matrix: WATER
Test: Tritium by Liq Sct column prep

Sample Date: 12/02/08
Receive Date: 12/02/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P005261											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tritium	10028-17-8	U-6.7E+01		RPD			n/a	20.000		12/05/08
MS	Tritium	10028-17-8	19200.0	86.517	% Recov	75.000	125.000				12/05/08
BATCH QC											
BLANK	Tritium	10028-17-8	U-5.8E+01	n/a	pCi/L	-10.000	1000.000				12/05/08
LCS	Tritium	10028-17-8	2450	85.500	% Recov	80.000	120.000				12/05/08

M4W41-SLF-09-022

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 11 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
01/15/09

ACKNOWLEDGMENT OF SAMPLES RECEIVED

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 131280
Group#: 20082326

The following samples were received from you on 12/02/08. 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
W08P005266	B1XB12	PNNL-GPP @GPP6010	Water	12/02/08
W08P005267	B1XB13	PNNL-GPP @2008 @AB-32 @ALPHA @GPP6010 @H3-33 @IC-30 @VOA-GPP ALKALI	Water	12/02/08
W08P005268	B1XBP2	PNNL-GPP @GPP6010	Water	12/02/08
W08P005269	B1XB17	PNNL-GPP @GPP6010	Water	12/02/08
W08P005270	B1XBP3	PNNL-GPP @2008 @AB-32 @ALPHA @GPP6010 @H3-33 @IC-30 @VOA-GPP ALKALI	Water	12/02/08
W08P005271	B1XB18	PNNL-GPP @2008 @AB-32 @ALPHA @GPP6010 @H3-33 @IC-30 @VOA-GPP ALKALI	Water	12/02/08
W08P005272	B1XBN7	PNNL-GPP @2008 @VOA-GPP	Water	12/02/08
W08P005273	B1XBP0	PNNL-GPP @2008 @VOA-GPP	Water	12/02/08
W08P005274	B1XB16	PNNL-GPP @2008 @VOA-GPP	Water	12/02/08
W08P005275	B1XB11	PNNL-GPP @2008 @VOA-GPP	Water	12/02/08
W08P005276	B1XTL3	PNNL-GPP @VOA-GPP	Water	12/02/08

Test Acronym Description

Test Acronym	Description
@2008	ICP-200.8 MS All possible meta
@AB-32	Gross Alpha/Gross Beta (AB32)
@ALPHA	Gross Alpha on Alpha Plateau
@GPP6010	ICP Metals Analysis, Grd H20 P

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 131280
Group#: 20082326

Test Acronym Description

Test Acronym	Description
@H3-33	Tritium by Liq Sct column prep
@IC-30	Anions by Ion Chromatography
@VOA-GPP	VOA Ground Water Protection
ALKALI	Total Alkalinity as mg/L CaCO3

FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST 12-2-08 01/45 01/15/09 20082326	C.O.C. # X09-001-437 Page 1 of 1

Collector KAUER, MCINTYRE, WHITE, BATES	Contact/Requester Mike Neely	Telephone No. 509-373-0654 MSIN FAX
SAF No. X09-001	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title Aquifer Tubes October 2008		Ice Chest No. Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
" "

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1XB12 (F)	WOK005261	W	12-2-08	0947	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B1XB13	5267	W	12-2-08	0947	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B1XB13		W	12-2-08	0947	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1XB13		W	12-2-08	0947	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C
B1XB13		W	12-2-08	0947	1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B1XB13		W	12-2-08	0947	1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B1XB13		W	12-2-08	0947	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool~4C
B1XB13		W	12-2-08	0947	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

ICED

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
E.I. KAUER	12-2-08 1300	TA FIVAZIM	12/2/08 1300

Matrix *

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

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X09-001-735
		Page 1 of 1

Collector Kauer, McIntyre, Bates, White	Contact/Requester Mike Neely	Telephone No. 509-373-0654 MSIN FAX
SAF No. X09-001	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title Aquifer Tubes, October 2008		Ice Chest No. Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1XBP2 (F)	5268	W	12-2-08	1112	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
X B1XBP3	5270	W	12-2-08	1112	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HCL ~~HNO3~~ to pH <2
B1XBP3		W	12-2-08	1112	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1XBP3		W	12-2-08	1112	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C
B1XBP3		W	12-2-08	1112	1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B1XBP3		W	12-2-08	1112	1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B1XBP3		W	12-2-08	1112	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool~4C
B1XBP3		W	12-2-08	1112	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

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Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Ed Kauer / [signature]	12-2-08 1300	TA Fnazim / [signature]	12-2-08 1300
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X09-001-770
		Page 1 of 1

Collector: Kauer, McIntyre, White, Biffles	Contact/Requester: Mike Neely	Telephone No.: 509-373-0654 MSIN FAX
SAF No.: X09-001	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: Aquifer Tubes, October 2008		Ice Chest No. Temp.
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1XB17 (F)	5269	W	12-2-08	10:47	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B1XB18	5271	W	12-2-08	1047	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B1XB18		W	12-2-08	1047	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B1XB18		W	12-2-08	1047	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	28 Days/48 Hours	Cool~4C
B1XB18		W	12-2-08	1047	1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B1XB18		W	12-2-08	1047	1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B1XB18		W	12-2-08	1047	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool~4C
B1XB18	X	W	12-2-08	1047	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

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Relinquished By / Print / Sign	Date/Time	Received By / Print / Sign	Date/Time
Ed Kauer / [signature]	12-2-08 1300	TA Frazier [signature]	12-2-08 1300
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X09-001-729
		Page 1 of 1

Collector: Kauer, McIntyre, White, Bates	Contact/Requester: Mike Neely	Telephone No.: 509-373-0654 MSIN FAX
SAF No.: X09-001	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: Aquifer Tubes, October 2008		Ice Chest No. Temp.
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
" "

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1XBN7	5272	W	12-2-08	1135	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool~4C
B1XBN7	↓	W	12-2-08	1135	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Ed Kauer			12-2-08 1300	TA Frazier			12-2-08 1300
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liquid	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X09-001-732
		Page 1 of 1

Collector: Bates, White, Kauer	Contact/Requester: Mike Neely	Telephone No.: 509-373-0654 MSIN FAX
SAF No.: X09-001	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: Aquifer Tubes October 2008		Ice Chest No. Temp.
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1XBP0	5273	W	12/2/08	0744	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool~4C
B1XBP0	↓	W	12/2/08	0748	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

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Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Ed Kauer / [signature]	12-2-08 1300	TA Frazier / [signature]	12-2-08 1300

Matrix *

S = Soil		DS = Drum Solid	
SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X09-001-441
		Page 1 of 1

Collector Kaube, White, McIntyre, Bates	Contact/Requester Mike Neely	Telephone No. 509-373-0654 MSIN FAX
SAF No. X09-001	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title Aquifer Tubes, October 2008		Ice Chest No. Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1XB16	5274	W	12-2-08	1007	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool~4C
B1XB16	↓	W	12-2-08	1007	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Ed Kaube			12-2-08 1300	JA Brazzum			12-2-08 1300
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

FLUOR HANFORD	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X09-001-433
		Page 1 of 1

Collector Kevin McIntyre, White Bates	Contact/Requester Mike Neely	Telephone No. 509-373-0654 MSIN FAX
SAF No. X09-001	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title Aquifer Tubes, October 2008		Ice Chest No. Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
Site-Wide Generator Knowledge Information Form applies

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1XB11	5275	W	12-2-08	0531	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool~4C
B1XB11	↓	W	12-2-08	0531	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
E.L. Kewin			12-2-08 1300	TA Frazier			12-2-08 1300
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wine	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X09-001-810
		Page 1 of 1

Collector Kauer, McTwitzee, White, Bates	Contact/Requester Mike Neely	Telephone No. 509-373-0654 MSIN FAX
SAF No. X09-001	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title Aquifer Tubes, October 2008		Ice Chest No. Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
" "

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☑ No ☐
Do not combine X SAF samples with other sets. Need SDG to be stand alone.
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B1XTL3	5276	W	12-2-08	0931	1x20-mL P	Activity Scan	6 Months	None
B1XTL3	↓	W	12-2-08	0931	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool~4C

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Ed Kraus,	Ed Kraus		12-2-08 1300	TA Brazin	Steve Brazin		12-2-08 1300
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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SE = Sediment		DL = Drum Liqui	
SO = Solid		T = Tissue	
SL = Sludge		WI = Wipe	
W = Water		L = Liquid	
O = Oil		V = Vegetation	
A = Air		X = Other	

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time