RECEIVED SEPTEMBER 18, 2008

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FLUOR

Memorandum

M4W41-SLF-08-1027

To:	H. Hampt	E6-35	Date:	September 18, 2008
From:	S. L. Fitzgerald, Manager WSCF Analytical Lab			

cc: w/Attachments

T. F. Dale	S3-30	P. D. Mix	S3-30
D. Felmy (PNNL)	K6-75	J. E. Trechter	S3-30
A. J. Kopriva	S3-30	S. J. Trent	E6-35
H. K. Meznarich	S3-30	File/LB	

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20081785

Reference:
1) Letter of Instruction for Analytical Services for the Groundwater Performance Assessment Project and Analytical Laboratory Transition Plan, FH-0602422, September 19, 2006
2) HNF-SD-CD-QAPP-017, Rev. 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This transmittal contains the following information for sample delivery group WSCF20081785:

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

SLF/grf

Attachments 4

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ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20081785
Data Deliverable Date: 18-sep-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
I08-053	B1WDP4	W08P004099	WATER
	B1WDP7	W08P004100	WATER
	B1WDV8	W08P004101	WATER
	B1WDV9	W08P004102	WATER
	B1WDW9	W08P004106	WATER
	B1WDX0	W08P004107	WATER
I08-054	B1WF87	W08P004103	WATER
	B1WF88	W08P004105	WATER
	B1WF89	W08P004104	WATER
	B1WF90	W08P004125	WATER
S08-006	B1VM08	W08P004118	WATER
	B1VM09	W08P004119	WATER
	B1VM12	W08P004122	WATER
	B1VM13	W08P004123	WATER
S08-007	B1W1Y4	W08P004120	WATER
	B1W1Y5	W08P004121	WATER
S08-008	B1WMT5	W08P004124	WATER
W08-008	B1WKD9	W08P004110	WATER
	B1WKF0	W08P004111	WATER
	B1WKF2	W08P004114	WATER
	B1WKF3	W08P004117	WATER
	B1WKF5	W08P004113	WATER
	B1WKF6	W08P004116	WATER
	B1WKF7	W08P004112	WATER
	B1WKF8	W08P004115	WATER
	B1WKH0	W08P004108	WATER
	B1WKH1	W08P004109	WATER

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ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Introduction

Twenty-seven (27) groundwater samples were received at the WSCF Laboratory on August 19, 2008. Samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 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 sample 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 per GRP Letter of Instruction. See pages 53 through 57 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.
- Batch QC performed on sample# B1VM09 – Matrix Spike Duplicate recovery for Chloride was less than established laboratory limits. Affected sample results in this batch were N flagged.

All other 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 per the GRP Letter of Instruction. See pages 58 through 64 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.

- Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1WJD5 (SDG# 20081771) and B1WJP7 (SDG# 20081765).

- Batch QC performed on Sample# B1WJD5

    - Silver contamination detected in the Blank was evaluated and one affected sample result in this worklist was C flagged.

    - Calcium, Magnesium and Sodium concentrations exceeded spiking levels by a factor of 4. Spike recoveries are not valid. Check standard was analyzed to ensure linearity because the sample results were greater than the calibration standard.

    - All other QC controls are within the established limits.

- Batch QC performed on Sample# B1WJP7

    - Calcium, Magnesium and Sodium concentrations exceeded spiking levels by a factor of 4. Spike recoveries are not valid. Check standard was analyzed to ensure linearity because the sample results were greater than the calibration standard.

    - 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 per the GRP Letter of Instruction. See pages 65 through 66 for QC details. Analytical Note(s):

- Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1WDL3 and B1WDL5 (SDG# 20081716); and, B1WDX0 of this SDG.

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 per GRP Letter of Instruction. See page 67 for QC details. Analytical Note(s):

- Duplicate QC was analyzed on sample# B1WK70 (SDG# 20081765).

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 per the GRP Letter of Instruction. See pages 92 through 96 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1WF44 (SDG# 20081765).
- Sample results that were less than the lowest calibration standard, however greater than the method detection limit, were J flagged.
- Acetone and Methylene Chloride contamination detected in the Blank was evaluated and affected sample results in the batch were B flagged.

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 109 through 110 for QC details. Analytical Note(s):

- Technetium-99 – Duplicates and Matrix Spikes were analyzed on samples B1WDY5 (SDG# 20081811) and B1WF61 (SDG# 20081765).
- Tritium – Duplicate and Matrix Spike was analyzed on sample# B1W1F7 (SDG# 20081797).

All QC controls are within the established limits.

I certify that this data package is in compliance with the LOI, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy 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-08-1027

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 103 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

GPAP
Richland, WA 99352

Attention: Steve Trent E6-35

Analytical: S. Fitzgerald 9/18/08

Client Services: P.D. Mix 9/18/2008

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

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Report#: WSCF20081785
Report Date: 17-sep-2008
Report WGPP/ver. 5.2
GPAP

w13qlog v4.2 17-sep-2008 08:39:55

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20081785

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
37688	2	38122	42487	BLANK		Anions by Ion Chromatography
37688	13	38122	42487	BLANK		Anions by Ion Chromatography
37688	27	38122	42487	BLANK		Anions by Ion Chromatography
37688	3	38122	42487	LCS		Anions by Ion Chromatography
37688	14	38122	42487	LCS		Anions by Ion Chromatography
37688	5	38122	42487	DUP	W08P004083	Anions by Ion Chromatography
37688	6	38122	42487	MS	W08P004083	Anions by Ion Chromatography
37688	7	38122	42487	MSD	W08P004083	Anions by Ion Chromatography
37688	7	38122	42487	SPK-RPD	W08P004083	Anions by Ion Chromatography
37688	16	38122	42487	DUP	W08P004089	Anions by Ion Chromatography
37688	17	38122	42487	MS	W08P004089	Anions by Ion Chromatography
37688	18	38122	42487	MSD	W08P004089	Anions by Ion Chromatography
37688	18	38122	42487	SPK-RPD	W08P004089	Anions by Ion Chromatography
37688	23	38122	42487	SAMPLE	W08P004099	Anions by Ion Chromatography
37688	24	38122	42487	SAMPLE	W08P004100	Anions by Ion Chromatography
37688	25	38122	42487	SAMPLE	W08P004101	Anions by Ion Chromatography
37688	26	38122	42487	SAMPLE	W08P004107	Anions by Ion Chromatography
37710	1	38144	42502	BLANK		ICP-200.8 MS All possible meta
37710	2	38144	42502	LCS		ICP-200.8 MS All possible meta
37710	4	38144	42502	MS	W08P003904	ICP-200.8 MS All possible meta
37710	5	38144	42502	MSD	W08P003904	ICP-200.8 MS All possible meta
37710	5	38144	42502	SPK-RPD	W08P003904	ICP-200.8 MS All possible meta
37710	7	38144	42502	MS	W08P003906	ICP-200.8 MS All possible meta
37710	8	38144	42502	MSD	W08P003906	ICP-200.8 MS All possible meta
37710	8	38144	42502	SPK-RPD	W08P003906	ICP-200.8 MS All possible meta
37710	46	38144	42502	SAMPLE	W08P004099	ICP-200.8 MS All possible meta
37710	47	38144	42502	SAMPLE	W08P004100	ICP-200.8 MS All possible meta
37710	48	38144	42502	SAMPLE	W08P004101	ICP-200.8 MS All possible meta
37710	49	38144	42502	SAMPLE	W08P004102	ICP-200.8 MS All possible meta
37710	50	38144	42502	SAMPLE	W08P004106	ICP-200.8 MS All possible meta
37710	10	38144	42502	MS	W08P004107	ICP-200.8 MS All possible meta
37710	11	38144	42502	MSD	W08P004107	ICP-200.8 MS All possible meta
37710	9	38144	42502	SAMPLE	W08P004107	ICP-200.8 MS All possible meta
37710	11	38144	42502	SPK-RPD	W08P004107	ICP-200.8 MS All possible meta
37710	51	38144	42502	SAMPLE	W08P004119	ICP-200.8 MS All possible meta
37710	52	38144	42502	SAMPLE	W08P004121	ICP-200.8 MS All possible meta
37710	53	38144	42502	SAMPLE	W08P004123	ICP-200.8 MS All possible meta
37714	2	38150	42508	BLANK		Anions by Ion Chromatography
37714	15	38150	42508	BLANK		Anions by Ion Chromatography
37714	27	38150	42508	BLANK		Anions by Ion Chromatography
37714	3	38150	42508	LCS		Anions by Ion Chromatography
37714	16	38150	42508	LCS		Anions by Ion Chromatography
37714	8	38150	42508	SAMPLE	W08P004102	Anions by Ion Chromatography
37714	9	38150	42508	SAMPLE	W08P004105	Anions by Ion Chromatography
37714	10	38150	42508	SAMPLE	W08P004109	Anions by Ion Chromatography
37714	11	38150	42508	SAMPLE	W08P004111	Anions by Ion Chromatography
37714	12	38150	42508	SAMPLE	W08P004115	Anions by Ion Chromatography
37714	13	38150	42508	SAMPLE	W08P004116	Anions by Ion Chromatography
37714	14	38150	42508	SAMPLE	W08P004117	Anions by Ion Chromatography
37714	5	38150	42508	DUP	W08P004119	Anions by Ion Chromatography

37714	6	38150	42508	MS	W08P004119	Anions by Ion Chromatography
37714	7	38150	42508	MSD	W08P004119	Anions by Ion Chromatography
37714	4	38150	42508	SAMPLE	W08P004119	Anions by Ion Chromatography
37714	7	38150	42508	SPK-RPD	W08P004119	Anions by Ion Chromatography
37714	22	38150	42508	SAMPLE	W08P004121	Anions by Ion Chromatography
37714	18	38150	42508	DUP	W08P004123	Anions by Ion Chromatography
37714	19	38150	42508	MS	W08P004123	Anions by Ion Chromatography
37714	21	38150	42508	MSD	W08P004123	Anions by Ion Chromatography
37714	17	38150	42508	SAMPLE	W08P004123	Anions by Ion Chromatography
37714	21	38150	42508	SPK-RPD	W08P004123	Anions by Ion Chromatography
37714	23	38150	42508	SAMPLE	W08P004125	Anions by Ion Chromatography
37814	1	38239	42609	LCS		Total Alkalinity as mg/L CaCO3
37814	13	38239	42609	LCS		Total Alkalinity as mg/L CaCO3
37814	24	38239	42609	LCS		Total Alkalinity as mg/L CaCO3
37814	3	38239	42609	DUP	W08P004055	Total Alkalinity as mg/L CaCO3
37814	8	38239	42609	SAMPLE	W08P004109	Total Alkalinity as mg/L CaCO3
37814	9	38239	42609	SAMPLE	W08P004111	Total Alkalinity as mg/L CaCO3
37814	10	38239	42609	SAMPLE	W08P004115	Total Alkalinity as mg/L CaCO3
37814	11	38239	42609	SAMPLE	W08P004116	Total Alkalinity as mg/L CaCO3
37814	12	38239	42609	SAMPLE	W08P004117	Total Alkalinity as mg/L CaCO3
37814	14	38239	42609	SAMPLE	W08P004119	Total Alkalinity as mg/L CaCO3
37814	15	38239	42609	SAMPLE	W08P004121	Total Alkalinity as mg/L CaCO3
37814	16	38239	42609	SAMPLE	W08P004123	Total Alkalinity as mg/L CaCO3
37940	1	38275	42793	BLANK		ICP Metals Analysis, Grd H20 P
37940	2	38275	42793	LCS		ICP Metals Analysis, Grd H20 P
37940	4	38275	42793	MS	W08P004072	ICP Metals Analysis, Grd H20 P
37940	5	38275	42793	MSD	W08P004072	ICP Metals Analysis, Grd H20 P
37940	5	38275	42793	SPK-RPD	W08P004072	ICP Metals Analysis, Grd H20 P
37940	8	38275	42793	SAMPLE	W08P004110	ICP Metals Analysis, Grd H20 P
37940	9	38275	42793	SAMPLE	W08P004111	ICP Metals Analysis, Grd H20 P
37940	10	38275	42793	SAMPLE	W08P004112	ICP Metals Analysis, Grd H20 P
37940	11	38275	42793	SAMPLE	W08P004113	ICP Metals Analysis, Grd H20 P
37940	12	38275	42793	SAMPLE	W08P004114	ICP Metals Analysis, Grd H20 P
37940	13	38275	42793	SAMPLE	W08P004115	ICP Metals Analysis, Grd H20 P
37940	14	38275	42793	SAMPLE	W08P004116	ICP Metals Analysis, Grd H20 P
37940	15	38275	42793	SAMPLE	W08P004117	ICP Metals Analysis, Grd H20 P
37940	16	38275	42793	SAMPLE	W08P004118	ICP Metals Analysis, Grd H20 P
37940	17	38275	42793	SAMPLE	W08P004119	ICP Metals Analysis, Grd H20 P
37940	18	38275	42793	SAMPLE	W08P004120	ICP Metals Analysis, Grd H20 P
37940	19	38275	42793	SAMPLE	W08P004121	ICP Metals Analysis, Grd H20 P
37940	20	38275	42793	SAMPLE	W08P004122	ICP Metals Analysis, Grd H20 P
37940	21	38275	42793	SAMPLE	W08P004123	ICP Metals Analysis, Grd H20 P
37940	22	38275	42793	SAMPLE	W08P004125	ICP Metals Analysis, Grd H20 P
37840	1	38270	42834	BLANK		ICP Metals Analysis, Grd H20 P
37840	2	38270	42834	LCS		ICP Metals Analysis, Grd H20 P
37840	4	38270	42834	MS	W08P004052	ICP Metals Analysis, Grd H20 P
37840	5	38270	42834	MSD	W08P004052	ICP Metals Analysis, Grd H20 P
37840	5	38270	42834	SPK-RPD	W08P004052	ICP Metals Analysis, Grd H20 P
37840	20	38270	42834	SAMPLE	W08P004103	ICP Metals Analysis, Grd H20 P
37840	21	38270	42834	SAMPLE	W08P004104	ICP Metals Analysis, Grd H20 P
37840	22	38270	42834	SAMPLE	W08P004105	ICP Metals Analysis, Grd H20 P
37840	23	38270	42834	SAMPLE	W08P004108	ICP Metals Analysis, Grd H20 P
37840	24	38270	42834	SAMPLE	W08P004109	ICP Metals Analysis, Grd H20 P

w13qlog v4.2 17-sep-2008 08:39:55

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20081785

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			42662	BLANK		VOA Ground Water Protection
			42662	LCS		VOA Ground Water Protection
			42662	MS	W08P004043	VOA Ground Water Protection
			42662	MSD	W08P004043	VOA Ground Water Protection
			42662	SAMPLE	W08P004099	VOA Ground Water Protection
			42662	SPK-RPD	W08P004099	VOA Ground Water Protection
			42662	SURR	W08P004099	VOA Ground Water Protection
			42662	SAMPLE	W08P004100	VOA Ground Water Protection
			42662	SURR	W08P004100	VOA Ground Water Protection
			42662	SAMPLE	W08P004101	VOA Ground Water Protection
			42662	SURR	W08P004101	VOA Ground Water Protection
			42662	SAMPLE	W08P004102	VOA Ground Water Protection
			42662	SURR	W08P004102	VOA Ground Water Protection
			42662	SAMPLE	W08P004105	VOA Ground Water Protection
			42662	SURR	W08P004105	VOA Ground Water Protection
			42662	SAMPLE	W08P004107	VOA Ground Water Protection
			42662	SURR	W08P004107	VOA Ground Water Protection
			42662	SAMPLE	W08P004119	VOA Ground Water Protection
			42662	SURR	W08P004119	VOA Ground Water Protection
			42662	SAMPLE	W08P004121	VOA Ground Water Protection
			42662	SURR	W08P004121	VOA Ground Water Protection
			42662	SAMPLE	W08P004123	VOA Ground Water Protection
			42662	SURR	W08P004123	VOA Ground Water Protection
			42662	SAMPLE	W08P004124	VOA Ground Water Protection
			42662	SURR	W08P004124	VOA Ground Water Protection
			42662	SAMPLE	W08P004125	VOA Ground Water Protection
			42662	SURR	W08P004125	VOA Ground Water Protection

w13qlog v4.2 17-sep-2008 08:39:55

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20081785

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
37867	1	38295	42699	BLANK		TC99 by Liquid Scin.
37867	4	38295	42699	LCS		TC99 by Liquid Scin.
37867	5	38295	42699	SAMPLE	W08P004111	TC99 by Liquid Scin.
37867	6	38295	42699	SAMPLE	W08P004115	TC99 by Liquid Scin.
37867	7	38295	42699	SAMPLE	W08P004116	TC99 by Liquid Scin.
37867	8	38295	42699	SAMPLE	W08P004117	TC99 by Liquid Scin.
37867	9	38295	42699	SAMPLE	W08P004125	TC99 by Liquid Scin.
37867	3	38295	42699	DUP	W08P004177	TC99 by Liquid Scin.
37867	2	38295	42699	MS	W08P004177	TC99 by Liquid Scin.
37827	1	38252	42704	BLANK		TC99 by Liquid Scin.
37827	4	38252	42704	LCS		TC99 by Liquid Scin.
37827	3	38252	42704	DUP	W08P004061	TC99 by Liquid Scin.
37827	2	38252	42704	MS	W08P004061	TC99 by Liquid Scin.
37827	13	38252	42704	SAMPLE	W08P004099	TC99 by Liquid Scin.
37827	14	38252	42704	SAMPLE	W08P004100	TC99 by Liquid Scin.
37827	15	38252	42704	SAMPLE	W08P004101	TC99 by Liquid Scin.
37827	16	38252	42704	SAMPLE	W08P004102	TC99 by Liquid Scin.
37827	17	38252	42704	SAMPLE	W08P004105	TC99 by Liquid Scin.
37827	18	38252	42704	SAMPLE	W08P004109	TC99 by Liquid Scin.
37854	1	38282	42712	BLANK		Tritium by Liq Sct column prep
37854	4	38282	42712	LCS		Tritium by Liq Sct column prep
37854	6	38282	42712	SAMPLE	W08P004101	Tritium by Liq Sct column prep
37854	7	38282	42712	SAMPLE	W08P004102	Tritium by Liq Sct column prep
37854	8	38282	42712	SAMPLE	W08P004107	Tritium by Liq Sct column prep
37854	3	38282	42712	DUP	W08P004141	Tritium by Liq Sct column prep
37854	2	38282	42712	MS	W08P004141	Tritium by Liq Sct column prep

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-508-421 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: I08-053
Sample # W08P004099
Client ID: B1WDP4 TRENT WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	0.184	mg/L			2.00	0.046		08/19/08
Chloride	16887-00-6	LA-533-410	D	23.2	mg/L			2.00	0.094		08/19/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/19/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	11.7	mg/L			3.00	0.036		08/19/08
Sulfate	14808-79-8	LA-533-410	D	35.0	mg/L			2.00	0.26		08/19/08
ICP-200.8 MS All possible meta Prep											**08/20/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		349	ug/L			1.00	0.0500		08/20/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004100
Client ID: B1WDP7 TRENT WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	0.200	mg/L			2.00	0.046		08/19/08
Chloride	16887-00-6	LA-533-410	D	12.0	mg/L			2.00	0.094		08/19/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/19/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	3.90	mg/L			2.00	0.024		08/19/08
Sulfate	14808-79-8	LA-533-410	D	23.4	mg/L			2.00	0.26		08/19/08
ICP-200.8 MS All possible meta Prep											**08/20/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		1.25	ug/L			1.00	0.0500		08/20/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004101
Client ID: B1WDV8 TRENT WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	0.437	mg/L			2.00	0.046		08/19/08
Chloride	16887-00-6	LA-533-410	D	9.67	mg/L			2.00	0.094		08/19/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/19/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	4.05	mg/L			2.00	0.024		08/19/08
Sulfate	14808-79-8	LA-533-410	D	29.3	mg/L			2.00	0.26		08/19/08
ICP-200.8 MS All possible meta Prep											**08/20/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		34.5	ug/L			1.00	0.0500		08/20/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but >= the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004102
Client ID: B1WDV9 TRENT WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	DU	< 0.0464	mg/L			2.00	0.046		08/20/08
Chloride	16887-00-6	LA-533-410	DNU	< 0.0938	mg/L			2.00	0.094		08/20/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/20/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0242	mg/L			2.00	0.024		08/20/08
Sulfate	14808-79-8	LA-533-410	DU	< 0.264	mg/L			2.00	0.26		08/20/08
ICP-200.8 MS All possible meta Prep											**08/20/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		08/20/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associeted Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Anelyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-054
Sample # W08P004103
Client ID: B1WF87 TRENT WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**08/31/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		09/11/08
Magnesium	7439-95-4	LA-505-411		1.50e+04	ug/L			1.00	50		09/11/08
Manganese	7439-96-5	LA-505-411	B	7.00	ug/L			1.00	4.0		09/11/08
Nickel	7440-02-0	LA-505-411		39.2	ug/L			1.00	4.0		09/11/08
Potassium	7440-09-7	LA-505-411		5.11e+03	ug/L			1.00	1.7e+02		09/11/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/11/08
Sodium	7440-23-5	LA-505-411		1.38e+04	ug/L			1.00	51		09/11/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/11/08
Barium	7440-39-3	LA-505-411		56.5	ug/L			1.00	4.0		09/11/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/11/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/11/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/11/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/11/08
Calcium	7440-70-2	LA-505-411		4.95e+04	ug/L			1.00	73		09/11/08
Strontium	7440-24-6	LA-505-411		273	ug/L			1.00	4.0		09/11/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08

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

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U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
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N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-054
Sample # W08P004104
Client ID: B1WF89 TRENT WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**08/31/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		09/11/08
Magnesium	7439-95-4	LA-505-411	B	50.5	ug/L			1.00	50		09/11/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Potassium	7440-09-7	LA-505-411	U	< 170	ug/L			1.00	1.7e+02		09/11/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/11/08
Sodium	7440-23-5	LA-505-411	B	58.1	ug/L			1.00	51		09/11/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/11/08
Barium	7440-39-3	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/11/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/11/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/11/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/11/08
Calcium	7440-70-2	LA-505-411	B	198	ug/L			1.00	73		09/11/08
Strontium	7440-24-6	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08

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

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U - Analyzed for but not detected above limiting criteria(inorg)

B - The anelyte < the RDL but >= the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-054
Sample # W08P004105
Client ID: B1WF88 TRENT **Matrix:** WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	D	0.150	mg/L			2.00	0.046		08/20/08
Chloride	16887-00-6	LA-533-410	DN	39.1	mg/L			2.00	0.094		08/20/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/20/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	3.29	mg/L			2.00	0.024		08/20/08
Sulfate	14808-79-8	LA-533-410	D	29.5	mg/L			2.00	0.26		08/20/08
ICP Metals Analysis, Grd H20 P Prep											**08/31/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		198	ug/L			1.00	25		09/11/08
Magnesium	7439-95-4	LA-505-411		1.46e+04	ug/L			1.00	50		09/11/08
Manganese	7439-96-5	LA-505-411	B	8.00	ug/L			1.00	4.0		09/11/08
Nickel	7440-02-0	LA-505-411		45.2	ug/L			1.00	4.0		09/11/08
Potassium	7440-09-7	LA-505-411		5.04e+03	ug/L			1.00	1.7e+02		09/11/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/11/08
Sodium	7440-23-5	LA-505-411		1.36e+04	ug/L			1.00	51		09/11/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/11/08
Barium	7440-39-3	LA-505-411		55.0	ug/L			1.00	4.0		09/11/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/11/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/11/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/11/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/11/08
Calcium	7440-70-2	LA-505-411		4.68e+04	ug/L			1.00	73		09/11/08
Strontium	7440-24-6	LA-505-411		264	ug/L			1.00	4.0		09/11/08

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

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C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-054
Sample # W08P004105
Client ID: B1WF88 TRENT WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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		09/11/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004106
Client ID: B1WDW9 PNNL-GPP WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta Prep											**08/20/08**
ICP-200.8 MS All possible meta											
Arsenic	7440-38-2	LA-505-412		5.21	ug/L			1.00	0.400		08/20/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004107
Client ID: B1WDX0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	0.0865	mg/L			2.00	0.046		08/19/08
Chloride	16887-00-6	LA-533-410	D	6.22	mg/L			2.00	0.094		08/19/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/19/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	4.19	mg/L			2.00	0.024		08/19/08
Sulfate	14808-79-8	LA-533-410	D	16.2	mg/L			2.00	0.26		08/19/08
ICP-200.8 MS All possible meta Prep											**08/20/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		28.5	ug/L			1.00	0.0500		08/20/08
Arsenic	7440-38-2	LA-505-412		5.14	ug/L			1.00	0.400		08/20/08

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RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004108
Client ID: B1WKH0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**08/31/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		09/11/08
Magnesium	7439-95-4	LA-505-411		8.58e+03	ug/L			1.00	50		09/11/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Potassium	7440-09-7	LA-505-411		3.81e+03	ug/L			1.00	1.7e+02		09/11/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/11/08
Sodium	7440-23-5	LA-505-411		1.87e+04	ug/L			1.00	51		09/11/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/11/08
Barium	7440-39-3	LA-505-411		28.9	ug/L			1.00	4.0		09/11/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/11/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/11/08
Vanadium	7440-62-2	LA-505-411	B	20.1	ug/L			1.00	12		09/11/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/11/08
Calcium	7440-70-2	LA-505-411		2.86e+04	ug/L			1.00	73		09/11/08
Strontium	7440-24-6	LA-505-411		153	ug/L			1.00	4.0		09/11/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
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U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004109
Client ID: B1WKH1 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	0.214	mg/L			2.00	0.046		08/20/08
Chloride	16887-00-6	LA-533-410	DN	9.24	mg/L			2.00	0.094		08/20/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/20/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	9.12	mg/L			2.00	0.024		08/20/08
Sulfate	14808-79-8	LA-533-410	D	21.2	mg/L			2.00	0.26		08/20/08
ICP Metals Analysis, Grd H20 P Prep											**08/31/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	B	75.2	ug/L			1.00	25		09/11/08
Magnesium	7439-95-4	LA-505-411		8.50e+03	ug/L			1.00	50		09/11/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Potassium	7440-09-7	LA-505-411		3.68e+03	ug/L			1.00	1.7e+02		09/11/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/11/08
Sodium	7440-23-5	LA-505-411		1.81e+04	ug/L			1.00	51		09/11/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/11/08
Barium	7440-39-3	LA-505-411		28.7	ug/L			1.00	4.0		09/11/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/11/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/11/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/11/08
Vanadium	7440-62-2	LA-505-411	B	24.8	ug/L			1.00	12		09/11/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/11/08
Calcium	7440-70-2	LA-505-411		2.90e+04	ug/L			1.00	73		09/11/08
Strontium	7440-24-6	LA-505-411		153	ug/L			1.00	4.0		09/11/08

MDL=Minimum Detection Limit
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N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004109
Client ID: B1WKH1 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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		09/11/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		87.0	mg/L			1.00	1.0		08/28/08

MDL=Minimum Detection Limit
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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(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004110
Client ID: B1WKD9 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	B	77.3	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		3.60e+04	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411		32.3	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		1.19e+04	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		6.41e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		136	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	B	54.1	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411		402	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		1.23e+05	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		848	ug/L			1.00	4.0		09/09/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004111
Client ID: B1WKF0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	0.236	mg/L			2.00	0.046		08/20/08
Chloride	16887-00-6	LA-533-410	DN	9.07	mg/L			2.00	0.094		08/20/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/20/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	7.82	mg/L			2.00	0.024		08/20/08
Sulfate	14808-79-8	LA-533-410	D	27.9	mg/L			2.00	0.26		08/20/08
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		9.47e+03	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		4.05e+03	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		2.07e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		30.7	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	B	17.3	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		2.92e+04	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		159	ug/L			1.00	4.0		09/09/08

MDL=Minimum Detection Limit
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004111
Client ID: B1WKF0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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		09/09/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		84.0	mg/L			1.00	1.0		08/28/08

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

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N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004112
Client ID: B1WKF7 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411	B	54.2	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411	U	< 170	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411	B	102	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411	B	194	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004113
Client ID: B1WKF5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	B	26.2	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		1.41e+04	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411		65.3	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		4.57e+03	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		1.93e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		43.8	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	B	10.3	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	B	23.3	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		4.33e+04	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		236	ug/L			1.00	4.0		09/09/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08

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RQ=Result Qualifier
TP Err=Total Propagated Error
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004114
Client ID: B1WKF2 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		1.70e+04	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		5.35e+03	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		2.31e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		71.9	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		5.25e+04	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		291	ug/L			1.00	4.0		09/09/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004115
Client ID: B1WKF8 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	DU	< 0.0464	mg/L			2.00	0.046		08/20/08
Chloride	16887-00-6	LA-533-410	DNU	< 0.0938	mg/L			2.00	0.094		08/20/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/20/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0242	mg/L			2.00	0.024		08/20/08
Sulfate	14808-79-8	LA-533-410	DU	< 0.264	mg/L			2.00	0.26		08/20/08
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411	B	53.7	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411	U	< 170	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411	B	78.0	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411	B	200	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004115
Client ID: B1WKF8 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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		09/09/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411	U	< 1.00	mg/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004116
Client ID: B1WKF6 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	0.234	mg/L			2.00	0.046		08/20/08
Chloride	16887-00-6	LA-533-410	DN	33.0	mg/L			2.00	0.094		08/20/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/20/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	12.2	mg/L			10.00	0.12		08/20/08
Sulfate	14808-79-8	LA-533-410	D	35.0	mg/L			2.00	0.26		08/20/08
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	B	106	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		1.44e+04	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411		58.9	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		4.62e+03	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		2.02e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		44.6	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	B	20.7	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	B	13.7	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	B	22.6	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		4.35e+04	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		238	ug/L			1.00	4.0		09/09/08

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

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C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004116
Client ID: B1WKF6 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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		09/09/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		83.0	mg/L			1.00	1.0		08/28/08

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

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C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004117
Client ID: B1WKF3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	0.143	mg/L			2.00	0.046		08/20/08
Chloride	16887-00-6	LA-533-410	DN	36.7	mg/L			2.00	0.094		08/20/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/20/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	16.5	mg/L			10.00	0.12		08/20/08
Sulfate	14808-79-8	LA-533-410	D	44.8	mg/L			2.00	0.26		08/20/08
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		1.73e+04	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		5.80e+03	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	BC	8.20	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		2.45e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		73.3	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	B	15.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		5.17e+04	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		289	ug/L			1.00	4.0		09/09/08

MDL = Minimum Detection Limit
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DF = Dilution Factor

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J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004117
Client ID: B1WKF3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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		09/09/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		92.0	mg/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-006
Sample # W08P004118
Client ID: B1VM08 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		1.03e+03	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		7.35e+03	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411		277	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		6.42e+03	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		3.98e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		80.9	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		1.94e+04	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		143	ug/L			1.00	4.0		09/09/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08

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

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C - The Analyte was found in the Associated Blank.(inorg)
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B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-006
Sample # W08P004119
Client ID: B1VM09 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	0.346	mg/L			2.00	0.046		08/20/08
Chloride	16887-00-6	LA-533-410	DN	6.27	mg/L			2.00	0.094		08/20/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/20/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0242	mg/L			2.00	0.024		08/20/08
Sulfate	14808-79-8	LA-533-410	DU	< 0.264	mg/L			2.00	0.26		08/20/08
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		1.08e+03	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		7.34e+03	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411		280	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		6.46e+03	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	BC	6.10	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		3.99e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		81.1	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		1.95e+04	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		142	ug/L			1.00	4.0		09/09/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-006
Sample # W08P004119
Client ID: B1VM09 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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		09/09/08
ICP-200.8 MS All possible meta Prep											**08/20/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		08/20/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		160	mg/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-007
Sample # W08P004120
Client ID: B1W1Y4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		2.75e+04	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		1.09e+04	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		3.68e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		115	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		1.22e+05	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		770	ug/L			1.00	4.0		09/09/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
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U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-007
Sample # W08P004121
Client ID: B1W1Y5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	0.775	mg/L			2.00	0.046		08/20/08
Chloride	16887-00-6	LA-533-410	D	45.1	mg/L			10.00	0.47		08/20/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/20/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	51.3	mg/L			10.00	0.12		08/20/08
Sulfate	14808-79-8	LA-533-410	D	87.4	mg/L			2.00	0.26		08/20/08
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	B	42.5	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		2.80e+04	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		1.13e+04	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		3.75e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		118	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		1.26e+05	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		795	ug/L			1.00	4.0		09/09/08

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

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C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-007
Sample # W08P004121
Client ID: B1W1Y5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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		09/09/08
ICP-200.8 MS All possible meta Prep											**08/20/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		12.9	ug/L			1.00	0.0500		08/20/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		170	mg/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
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J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-006
Sample # W08P004122
Client ID: B1VM12 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		3.29e+03	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		5.69e+03	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411		139	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	B	4.40	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		9.76e+03	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		6.58e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		110	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		1.25e+04	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		109	ug/L			1.00	4.0		09/09/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08

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

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C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-006
Sample # W08P004123
Client ID: B1VM13 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	1.22	mg/L			2.00	0.046		08/20/08
Chloride	16887-00-6	LA-533-410	D	10.0	mg/L			2.00	0.094		08/20/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/20/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0242	mg/L			2.00	0.024		08/20/08
Sulfate	14808-79-8	LA-533-410	DU	< 0.264	mg/L			2.00	0.26		08/20/08
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		3.45e+03	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411		5.43e+03	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411		138	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	B	5.90	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411		9.62e+03	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411		6.40e+04	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411		108	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411		1.18e+04	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411		104	ug/L			1.00	4.0		09/09/08

MDL = Minimum Detection Limit
RQ = Result Qualifier
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DF = Dilution Factor

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-006
Sample # W08P004123
Client ID: B1VM13 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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		09/09/08
ICP-200.8 MS All possible meta Prep											**08/20/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		08/20/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		180	mg/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-054
Sample # W08P004125
Client ID: B1WF90 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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	DU	< 0.0464	mg/L			2.00	0.046		08/20/08
Chloride	16887-00-6	LA-533-410	DU	< 0.0938	mg/L			2.00	0.094		08/20/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0256	mg/L			2.00	0.026		08/20/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0242	mg/L			2.00	0.024		08/20/08
Sulfate	14808-79-8	LA-533-410	DU	< 0.264	mg/L			2.00	0.26		08/20/08
ICP Metals Analysis, Grd H20 P Prep											**09/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		09/09/08
Magnesium	7439-95-4	LA-505-411	U	< 50.0	ug/L			1.00	50		09/09/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Potassium	7440-09-7	LA-505-411	U	< 170	ug/L			1.00	1.7e+02		09/09/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		09/09/08
Sodium	7440-23-5	LA-505-411	B	204	ug/L			1.00	51		09/09/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		09/09/08
Barium	7440-39-3	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		09/09/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		09/09/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		09/09/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		09/09/08
Calcium	7440-70-2	LA-505-411	U	< 73.0	ug/L			1.00	73		09/09/08
Strontium	7440-24-6	LA-505-411	U	< 4.00	ug/L			1.00	4.0		09/09/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but >= the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-054
Sample # W08P004125
Client ID: B1WF90 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Inorganic
Sampled: 08/19/08
Received: 08/19/08

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		09/09/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 08/18/08
Receive Date:08/18/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004083											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	1.717		RPD			3.243	20.000		08/19/08
DUP	Fluoride	16984-48-8	<4.64e-2		RPD			n/a	20.000	U	08/19/08
DUP	Nitrogen in Nitrite	NO2-N	<2.56e-2		RPD			n/a	20.000	U	08/19/08
DUP	Nitrogen in Nitrate	NO3-N	<2.42e-2		RPD			n/a	20.000	U	08/19/08
DUP	Sulfate	14808-79-8	<0.264		RPD			n/a	20.000	U	08/19/08
MS	Chloride	16887-00-6	0.9448	94.955	% Recov	80.000	120.000				08/19/08
MS	Fluoride	16984-48-8	0.45205	91.694	% Recov	80.000	120.000				08/19/08
MS	Nitrogen in Nitrite	NO2-N	0.46055	93.608	% Recov	80.000	120.000				08/19/08
MS	Nitrogen in Nitrate	NO3-N	0.45065	101.043	% Recov	80.000	120.000				08/19/08
MS	Sulfate	14808-79-8	1.9279	98.362	% Recov	80.000	120.000				08/19/08
MSD	Chloride	16887-00-6	0.9553	96.010	% Recov	80.000	120.000				08/19/08
MSD	Fluoride	16984-48-8	0.46095	93.499	% Recov	80.000	120.000				08/19/08
MSD	Nitrogen in Nitrite	NO2-N	0.46395	94.299	% Recov	80.000	120.000				08/19/08
MSD	Nitrogen in Nitrate	NO3-N	0.4519	101.323	% Recov	80.000	120.000				08/19/08
MSD	Sulfate	14808-79-8	1.9133	97.617	% Recov	80.000	120.000				08/19/08
SPK-RPD	Chloride	16887-00-6	96.010		RPD			1.105	20.000		08/19/08
SPK-RPD	Fluoride	16984-48-8	93.499		RPD			1.949	20.000		08/19/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	94.299		RPD			0.735	20.000		08/19/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	101.323		RPD			0.277	20.000		08/19/08
SPK-RPD	Sulfate	14808-79-8	97.617		RPD			0.760	20.000		08/19/08
Lab ID: W08P004089											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	7.9145		RPD			0.069	20.000		08/19/08
DUP	Fluoride	16984-48-8	6.53e-2		RPD			27.130	20.000 *		08/19/08
DUP	Nitrogen in Nitrite	NO2-N	<2.56e-2		RPD			n/a	20.000	U	08/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 08/18/08
Receive Date:08/18/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
DUP	Nitrogen in Nitrate	NO3-N	1.7922		RPD			0.638	20.000		08/19/08
DUP	Sulfate	14808-79-8	47.6669		RPD			0.599	20.000		08/19/08
MS	Chloride	16887-00-6	0.95195	95.673	% Recov	80.000	120.000				08/19/08
MS	Fluoride	16984-48-8	0.4763	96.613	% Recov	80.000	120.000				08/19/08
MS	Nitrogen in Nitrite	NO2-N	0.439	89.228	% Recov	80.000	120.000				08/19/08
MS	Nitrogen in Nitrate	NO3-N	0.4425	99.215	% Recov	80.000	120.000				08/19/08
MS	Sulfate	14808-79-8	1.726	88.061	% Recov	80.000	120.000				08/19/08
MSD	Chloride	16887-00-6	0.8371	84.131	% Recov	80.000	120.000				08/19/08
MSD	Fluoride	16984-48-8	0.5178	105.030	% Recov	80.000	120.000				08/19/08
MSD	Nitrogen in Nitrite	NO2-N	0.4191	85.183	% Recov	80.000	120.000				08/19/08
MSD	Nitrogen in Nitrate	NO3-N	0.38595	86.536	% Recov	80.000	120.000				08/19/08
MSD	Sulfate	14808-79-8	1.8465	94.209	% Recov	80.000	120.000				08/19/08
SPK-RPD	Chloride	16887-00-6	84.131		RPD			12.838	20.000		08/19/08
SPK-RPD	Fluoride	16984-48-8	105.030		RPD			8.348	20.000		08/19/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	85.183		RPD			4.638	20.000		08/19/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	86.536		RPD			13.652	20.000		08/19/08
SPK-RPD	Sulfate	14808-79-8	94.209		RPD			6.746	20.000		08/19/08

BATCH QC

BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	08/19/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	08/19/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	08/19/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	08/19/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	08/19/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	08/19/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	08/19/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	08/19/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	08/19/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	08/19/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	08/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
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 Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	08/19/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	08/19/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	08/19/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	08/19/08
LCS	Chloride	16887-00-6	192.968	96.004	% Recov	80.000	120.000				08/19/08
LCS	Chloride	16887-00-6	197.6159	98.316	% Recov	80.000	120.000				08/19/08
LCS	Fluoride	16984-48-8	103.0897	103.504	% Recov	80.000	120.000				08/19/08
LCS	Fluoride	16984-48-8	98.4905	98.886	% Recov	80.000	120.000				08/19/08
LCS	Nitrogen in Nitrite	NO2-N	92.9357	93.497	% Recov	80.000	120.000				08/19/08
LCS	Nitrogen in Nitrite	NO2-N	94.8559	95.428	% Recov	80.000	120.000				08/19/08
LCS	Nitrogen in Nitrate	NO3-N	88.6778	98.422	% Recov	80.000	120.000				08/19/08
LCS	Nitrogen in Nitrate	NO3-N	91.6368	101.706	% Recov	80.000	120.000				08/19/08
LCS	Sulfate	14808-79-8	386.3561	97.565	% Recov	80.000	120.000				08/19/08
LCS	Sulfate	14808-79-8	387.5714	97.872	% Recov	80.000	120.000				08/19/08

Lab ID: W08P004119
BATCH QC ASSOCIATED WITH SAMPLE

DUP	Chloride	16887-00-6	6.2306		RPD			0.662	20.000		08/20/08
DUP	Fluoride	16984-48-8	0.362		RPD			4.635	20.000		08/20/08
DUP	Nitrogen in Nitrite	NO2-N	<2.56e-2		RPD			n/a	20.000	U	08/20/08
DUP	Nitrogen in Nitrate	NO3-N	<2.42e-2		RPD			n/a	20.000	U	08/20/08
DUP	Sulfate	14808-79-8	<0.264		RPD			n/a	20.000	U	08/20/08
MS	Chloride	16887-00-6	0.9868	99.176	% Recov	80.000	120.000				08/20/08
MS	Fluoride	16984-48-8	0.4829	97.951	% Recov	80.000	120.000				08/20/08
MS	Nitrogen in Nitrite	NO2-N	0.43565	88.547	% Recov	80.000	120.000				08/20/08
MS	Nitrogen in Nitrate	NO3-N	0.437	97.982	% Recov	80.000	120.000				08/20/08
MS	Sulfate	14808-79-8	2.01325	102.717	% Recov	80.000	120.000				08/20/08
MSD	Chloride	16887-00-6	0.76005	76.387	% Recov	80.000	120.000				08/20/08
MSD	Fluoride	16984-48-8	0.4885	99.087	% Recov	80.000	120.000				08/20/08
MSD	Nitrogen in Nitrite	NO2-N	0.4098	83.293	% Recov	80.000	120.000				08/20/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 08/19/08
Receive Date:08/19/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Nitrogen in Nitrate	NO3-N	0.39325	88.173	% Recov	80.000	120.000				08/20/08
MSD	Sulfate	14808-79-8	1.9709	100.556	% Recov	80.000	120.000				08/20/08
SPK-RPD	Chloride	16887-00-6	76.387		RPD			25.961	20.000 •		08/20/08
SPK-RPD	Fluoride	16984-48-8	99.087		RPD			1.153	20.000		08/20/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	83.293		RPD			6.115	20.000		08/20/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	88.173		RPD			10.539	20.000		08/20/08
SPK-RPD	Sulfate	14808-79-8	100.556		RPD			2.126	20.000		08/20/08

Lab ID: W08P004123
BATCH QC ASSOCIATED WITH SAMPLE

DUP	Chloride	16887-00-6	10.0263		RPD			0.013	20.000		08/20/08
DUP	Fluoride	16984-48-8	1.3203		RPD			7.766	20.000		08/20/08
DUP	Nitrogen in Nitrite	NO2-N	<2.56e-2		RPD			n/a	20.000	U	08/20/08
DUP	Nitrogen in Nitrate	NO3-N	<2.42e-2		RPD			n/a	20.000	U	08/20/08
DUP	Sulfate	14808-79-8	<0.264		RPD			n/a	20.000	U	08/20/08
MS	Chloride	16887-00-6	0.8707	87.508	% Recov	80.000	120.000				08/20/08
MS	Fluoride	16984-48-8	0.47615	96.582	% Recov	80.000	120.000				08/20/08
MS	Nitrogen in Nitrite	NO2-N	0.4339	88.191	% Recov	80.000	120.000				08/20/08
MS	Nitrogen in Nitrate	NO3-N	0.4408	98.834	% Recov	80.000	120.000				08/20/08
MS	Sulfate	14808-79-8	1.89815	96.844	% Recov	80.000	120.000				08/20/08
MSD	Chloride	16887-00-6	0.98345	98.839	% Recov	80.000	120.000				08/20/08
MSD	Fluoride	16984-48-8	0.5416	109.858	% Recov	80.000	120.000				08/20/08
MSD	Nitrogen in Nitrite	NO2-N	0.4317	87.744	% Recov	80.000	120.000				08/20/08
MSD	Nitrogen in Nitrate	NO3-N	0.42895	96.177	% Recov	80.000	120.000				08/20/08
MSD	Sulfate	14808-79-8	1.905	97.194	% Recov	80.000	120.000				08/20/08
SPK-RPD	Chloride	16887-00-6	98.839		RPD			12.161	20.000		08/20/08
SPK-RPD	Fluoride	16984-48-8	109.858		RPD			12.862	20.000		08/20/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	87.744		RPD			0.508	20.000		08/20/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	96.177		RPD			2.725	20.000		08/20/08
SPK-RPD	Sulfate	14808-79-8	97.194		RPD			0.361	20.000		08/20/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 08/19/08
Receive Date:08/19/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	08/20/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	08/20/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	08/20/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	08/20/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	08/20/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	08/20/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	08/20/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	08/20/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	08/20/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	08/20/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	08/20/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	08/20/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	08/20/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	08/20/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	08/20/08
LCS	Chloride	16887-00-6	198.8311	98.921	% Recov	80.000	120.000				08/20/08
LCS	Chloride	16887-00-6	198.5642	98.788	% Recov	80.000	120.000				08/20/08
LCS	Fluoride	16984-48-8	101.1623	101.569	% Recov	80.000	120.000				08/20/08
LCS	Fluoride	16984-48-8	103.1486	103.583	% Recov	80.000	120.000				08/20/08
LCS	Nitrogen in Nitrite	NO2-N	97.1252	97.711	% Recov	80.000	120.000				08/20/08
LCS	Nitrogen in Nitrite	NO2-N	96.93	97.515	% Recov	80.000	120.000				08/20/08
LCS	Nitrogen in Nitrate	NO3-N	91.9054	102.004	% Recov	80.000	120.000				08/20/08
LCS	Nitrogen in Nitrate	NO3-N	93.0115	103.231	% Recov	80.000	120.000				08/20/08
LCS	Sulfate	14808-79-8	391.7197	98.919	% Recov	80.000	120.000				08/20/08
LCS	Sulfate	14808-79-8	393.2761	99.312	% Recov	80.000	120.000				08/20/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 08/18/08
Receive Date:08/18/08

Lab ID: W08P004072
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	971.1	97.110	% Recov	75.000	125.000				09/09/08
MS	Barium	7440-39-3	490.4	98.080	% Recov	75.000	125.000				09/09/08
MS	Beryllium	7440-41-7	505.1	101.020	% Recov	75.000	125.000				09/09/08
MS	Calcium	7440-70-2	6300	630.000	% Recov	75.000	125.000			•	09/09/08
MS	Cadmium	7440-43-9	980.2	98.020	% Recov	75.000	125.000				09/09/08
MS	Cobalt	7440-48-4	932.7	93.270	% Recov	75.000	125.000				09/09/08
MS	Chromium	7440-47-3	944	94.400	% Recov	75.000	125.000				09/09/08
MS	Copper	7440-50-8	959.5	95.950	% Recov	75.000	125.000				09/09/08
MS	Iron	7439-89-6	957.4	95.740	% Recov	75.000	125.000				09/09/08
MS	Potassium	7440-09-7	9560	95.600	% Recov	75.000	125.000				09/09/08
MS	Magnesium	7439-95-4	-200	-20.000	% Recov	75.000	125.000			•	09/09/08
MS	Manganese	7439-96-5	986.1	98.610	% Recov	75.000	125.000				09/09/08
MS	Sodium	7440-23-5	-3700	-370.000	% Recov	75.000	125.000			•	09/09/08
MS	Nickel	7440-02-0	923.8	92.380	% Recov	75.000	125.000				09/09/08
MS	Antimony	7440-36-0	965.1	96.510	% Recov	75.000	125.000				09/09/08
MS	Strontium	7440-24-6	532	106.400	% Recov	75.000	125.000				09/09/08
MS	Vanadium	7440-62-2	970.7	97.070	% Recov	75.000	125.000				09/09/08
MS	Zinc	7440-66-6	990.4	99.040	% Recov	75.000	125.000				09/09/08
MSD	Silver	7440-22-4	977.8	97.780	% Recov	75.000	125.000				09/09/08
MSD	Barium	7440-39-3	492.8	98.560	% Recov	75.000	125.000				09/09/08
MSD	Beryllium	7440-41-7	508.2	101.640	% Recov	75.000	125.000				09/09/08
MSD	Calcium	7440-70-2	3600	360.000	% Recov	75.000	125.000			•	09/09/08
MSD	Cadmium	7440-43-9	982	98.200	% Recov	75.000	125.000				09/09/08
MSD	Cobalt	7440-48-4	934.5	93.450	% Recov	75.000	125.000				09/09/08
MSD	Chromium	7440-47-3	954	95.400	% Recov	75.000	125.000				09/09/08
MSD	Copper	7440-50-8	956	95.600	% Recov	75.000	125.000				09/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081785
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 08/18/08
Receive Date:08/18/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Iron	7439-89-6	965.4	96.540	% Recov	75.000	125.000				09/09/08
MSD	Potassium	7440-09-7	9500	95.000	% Recov	75.000	125.000				09/09/08
MSD	Magnesium	7439-95-4	-600	-60.000	% Recov	75.000	125.000			•	09/09/08
MSD	Manganese	7439-96-5	986.1	98.610	% Recov	75.000	125.000				09/09/08
MSD	Sodium	7440-23-5	-3100	-310.000	% Recov	75.000	125.000			•	09/09/08
MSD	Nickel	7440-02-0	925.4	92.540	% Recov	75.000	125.000				09/09/08
MSD	Antimony	7440-36-0	960	96.000	% Recov	75.000	125.000				09/09/08
MSD	Strontium	7440-24-6	528	105.600	% Recov	75.000	125.000				09/09/08
MSD	Vanadium	7440-62-2	976.5	97.650	% Recov	75.000	125.000				09/09/08
MSD	Zinc	7440-66-6	985.1	98.510	% Recov	75.000	125.000				09/09/08
SPK-RPD	Silver	7440-22-4	97.780		RPD			0.688	20.000		09/09/08
SPK-RPD	Barium	7440-39-3	98.560		RPD			0.488	20.000		09/09/08
SPK-RPD	Beryllium	7440-41-7	101.640		RPD			0.612	20.000		09/09/08
SPK-RPD	Calcium	7440-70-2	360.000		RPD			54.545	20.000	•	09/09/08
SPK-RPD	Cadmium	7440-43-9	98.200		RPD			0.183	20.000		09/09/08
SPK-RPD	Cobalt	7440-48-4	93.450		RPD			0.193	20.000		09/09/08
SPK-RPD	Chromium	7440-47-3	95.400		RPD			1.054	20.000		09/09/08
SPK-RPD	Copper	7440-50-8	95.600		RPD			0.365	20.000		09/09/08
SPK-RPD	Iron	7439-89-6	96.540		RPD			0.832	20.000		09/09/08
SPK-RPD	Potassium	7440-09-7	95.000		RPD			0.630	20.000		09/09/08
SPK-RPD	Magnesium	7439-95-4	-60.000		RPD			-100.000	20.000	•	09/09/08
SPK-RPD	Manganese	7439-96-5	98.610		RPD			0.000	20.000		09/09/08
SPK-RPD	Sodium	7440-23-5	-310.000		RPD			-17.647	20.000	•	09/09/08
SPK-RPD	Nickel	7440-02-0	92.540		RPD			0.173	20.000		09/09/08
SPK-RPD	Antimony	7440-36-0	96.000		RPD			0.530	20.000		09/09/08
SPK-RPD	Strontium	7440-24-6	105.600		RPD			0.755	20.000		09/09/08
SPK-RPD	Vanadium	7440-62-2	97.650		RPD			0.596	20.000		09/09/08
SPK-RPD	Zinc	7440-66-6	98.510		RPD			0.537	20.000		09/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
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	5.5	5.500	ug/L						09/09/08
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	09/09/08
BLANK	Beryllium	7440-41-7	<4	n/a	ug/L					U	09/09/08
BLANK	Calcium	7440-70-2	<73	n/a	ug/L					U	09/09/08
BLANK	Cadmium	7440-43-9	<4	n/a	ug/L					U	09/09/08
BLANK	Cobalt	7440-48-4	<4	n/a	ug/L					U	09/09/08
BLANK	Chromium	7440-47-3	<13	n/a	ug/L					U	09/09/08
BLANK	Copper	7440-50-8	<6	n/a	ug/L					U	09/09/08
BLANK	Iron	7439-89-6	<25	n/a	ug/L					U	09/09/08
BLANK	Potassium	7440-09-7	<170	n/a	ug/L					U	09/09/08
BLANK	Magnesium	7439-95-4	<50	n/a	ug/L					U	09/09/08
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	09/09/08
BLANK	Sodium	7440-23-5	<51	n/a	ug/L					U	09/09/08
BLANK	Nickel	7440-02-0	<4	n/a	ug/L					U	09/09/08
BLANK	Antimony	7440-36-0	<56	n/a	ug/L					U	09/09/08
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	09/09/08
BLANK	Vanadium	7440-62-2	<12	n/a	ug/L					U	09/09/08
BLANK	Zinc	7440-66-6	<9	n/a	ug/L					U	09/09/08
LCS	Silver	7440-22-4	970.4	97.040	% Recov	80.000	120.000				09/09/08
LCS	Barium	7440-39-3	464.3	92.860	% Recov	80.000	120.000				09/09/08
LCS	Beryllium	7440-41-7	516.2	103.240	% Recov	80.000	120.000				09/09/08
LCS	Calcium	7440-70-2	1023	102.300	% Recov	80.000	120.000				09/09/08
LCS	Cadmium	7440-43-9	1007	100.700	% Recov	80.000	120.000				09/09/08
LCS	Cobalt	7440-48-4	984.1	98.410	% Recov	80.000	120.000				09/09/08
LCS	Chromium	7440-47-3	950	95.000	% Recov	80.000	120.000				09/09/08
LCS	Copper	7440-50-8	1005	100.500	% Recov	80.000	120.000				09/09/08
LCS	Iron	7439-89-6	951	95.100	% Recov	80.000	120.000				09/09/08
LCS	Potassium	7440-09-7	11120	111.200	% Recov	80.000	120.000				09/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
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	1016	101.600	% Recov	80.000	120.000				09/09/08
LCS	Manganese	7439-96-5	970.2	97.020	% Recov	80.000	120.000				09/09/08
LCS	Sodium	7440-23-5	1073	107.300	% Recov	80.000	120.000				09/09/08
LCS	Nickel	7440-02-0	995.6	99.560	% Recov	80.000	120.000				09/09/08
LCS	Antimony	7440-36-0	1026	102.600	% Recov	80.000	120.000				09/09/08
LCS	Strontium	7440-24-6	500.3	100.060	% Recov	80.000	120.000				09/09/08
LCS	Vanadium	7440-62-2	965.4	96.540	% Recov	80.000	120.000				09/09/08
LCS	Zinc	7440-66-6	1009	100.900	% Recov	80.000	120.000				09/09/08

Lab ID: W08P004052
BATCH QC ASSOCIATED WITH SAMPLE

MS	Silver	7440-22-4	956.1	95.610	% Recov	75.000	125.000				09/11/08
MS	Barium	7440-39-3	482.9	96.580	% Recov	75.000	125.000				09/11/08
MS	Beryllium	7440-41-7	514.1	102.820	% Recov	75.000	125.000				09/11/08
MS	Calcium	7440-70-2	3400	340.000	% Recov	75.000	125.000			•	09/11/08
MS	Cadmium	7440-43-9	981.4	98.140	% Recov	75.000	125.000				09/11/08
MS	Cobalt	7440-48-4	970.7	97.070	% Recov	75.000	125.000				09/11/08
MS	Chromium	7440-47-3	972.6	97.260	% Recov	75.000	125.000				09/11/08
MS	Copper	7440-50-8	927.9	92.790	% Recov	75.000	125.000				09/11/08
MS	Iron	7439-89-6	950.8	95.080	% Recov	75.000	125.000				09/11/08
MS	Potassium	7440-09-7	8190	81.900	% Recov	75.000	125.000				09/11/08
MS	Magnesium	7439-95-4	-2350	-235.000	% Recov	75.000	125.000			•	09/11/08
MS	Manganese	7439-96-5	998.4	99.840	% Recov	75.000	125.000				09/11/08
MS	Sodium	7440-23-5	-4900	-490.000	% Recov	75.000	125.000			•	09/11/08
MS	Nickel	7440-02-0	957.7	95.770	% Recov	75.000	125.000				09/11/08
MS	Antimony	7440-36-0	892	89.200	% Recov	75.000	125.000				09/11/08
MS	Strontium	7440-24-6	588.4	117.680	% Recov	75.000	125.000				09/11/08
MS	Vanadium	7440-62-2	958.2	95.820	% Recov	75.000	125.000				09/11/08
MS	Zinc	7440-66-6	980.2	98.020	% Recov	75.000	125.000				09/11/08
MSD	Silver	7440-22-4	981	98.100	% Recov	75.000	125.000				09/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 08/17/08
Receive Date:08/17/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Barium	7440-39-3	496	99.200	% Recov	75.000	125.000				09/11/08
MSD	Beryllium	7440-41-7	529.4	105.880	% Recov	75.000	125.000				09/11/08
MSD	Calcium	7440-70-2	3900	390.000	% Recov	75.000	125.000			•	09/11/08
MSD	Cadmium	7440-43-9	1014	101.400	% Recov	75.000	125.000				09/11/08
MSD	Cobalt	7440-48-4	995.8	99.580	% Recov	75.000	125.000				09/11/08
MSD	Chromium	7440-47-3	997.6	99.760	% Recov	75.000	125.000				09/11/08
MSD	Copper	7440-50-8	952.1	95.210	% Recov	75.000	125.000				09/11/08
MSD	Iron	7439-89-6	988.9	98.890	% Recov	75.000	125.000				09/11/08
MSD	Potassium	7440-09-7	8550	85.500	% Recov	75.000	125.000				09/11/08
MSD	Magnesium	7439-95-4	-2130	-213.000	% Recov	75.000	125.000			•	09/11/08
MSD	Manganese	7439-96-5	1031.4	103.140	% Recov	75.000	125.000				09/11/08
MSD	Sodium	7440-23-5	-500	-50.000	% Recov	75.000	125.000			•	09/11/08
MSD	Nickel	7440-02-0	980.4	98.040	% Recov	75.000	125.000				09/11/08
MSD	Antimony	7440-36-0	922.8	92.280	% Recov	75.000	125.000				09/11/08
MSD	Strontium	7440-24-6	599.4	119.880	% Recov	75.000	125.000				09/11/08
MSD	Vanadium	7440-62-2	993.1	99.310	% Recov	75.000	125.000				09/11/08
MSD	Zinc	7440-66-6	999.8	99.980	% Recov	75.000	125.000				09/11/08
SPK-RPD	Silver	7440-22-4	98.100		RPD			2.571	20.000		09/11/08
SPK-RPD	Barium	7440-39-3	99.200		RPD			2.676	20.000		09/11/08
SPK-RPD	Beryllium	7440-41-7	105.880		RPD			2.932	20.000		09/11/08
SPK-RPD	Calcium	7440-70-2	390.000		RPD			13.699	20.000		09/11/08
SPK-RPD	Cadmium	7440-43-9	101.400		RPD			3.268	20.000		09/11/08
SPK-RPD	Cobalt	7440-48-4	99.580		RPD			2.553	20.000		09/11/08
SPK-RPD	Chromium	7440-47-3	99.760		RPD			2.538	20.000		09/11/08
SPK-RPD	Copper	7440-50-8	95.210		RPD			2.574	20.000		09/11/08
SPK-RPD	Iron	7439-89-6	98.890		RPD			3.928	20.000		09/11/08
SPK-RPD	Potassium	7440-09-7	85.500		RPD			4.301	20.000		09/11/08
SPK-RPD	Magnesium	7439-95-4	-213.000		RPD			-9.821	20.000 •		09/11/08
SPK-RPD	Manganese	7439-96-5	103.140		RPD			3.252	20.000		09/11/08
SPK-RPD	Sodium	7440-23-5	-50.000		RPD			-162.963	20.000 •		09/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 08/17/08
Receive Date:08/17/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Nickel	7440-02-0	98.040		RPD			2.343	20.000		09/11/08
SPK-RPD	Antimony	7440-36-0	92.280		RPD			3.394	20.000		09/11/08
SPK-RPD	Strontium	7440-24-6	119.880		RPD			1.852	20.000		09/11/08
SPK-RPD	Vanadium	7440-62-2	99.310		RPD			3.577	20.000		09/11/08
SPK-RPD	Zinc	7440-66-6	99.980		RPD			1.980	20.000		09/11/08
BATCH QC											
BLANK	Silver	7440-22-4	<5	n/a	ug/L					U	09/11/08
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	09/11/08
BLANK	Beryllium	7440-41-7	<4	n/a	ug/L					U	09/11/08
BLANK	Calcium	7440-70-2	<73	n/a	ug/L					U	09/11/08
BLANK	Cadmium	7440-43-9	<4	n/a	ug/L					U	09/11/08
BLANK	Cobalt	7440-48-4	<4	n/a	ug/L					U	09/11/08
BLANK	Chromium	7440-47-3	<13	n/a	ug/L					U	09/11/08
BLANK	Copper	7440-50-8	<6	n/a	ug/L					U	09/11/08
BLANK	Iron	7439-89-6	<25	n/a	ug/L					U	09/11/08
BLANK	Potassium	7440-09-7	<170	n/a	ug/L					U	09/11/08
BLANK	Magnesium	7439-95-4	<50	n/a	ug/L					U	09/11/08
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	09/11/08
BLANK	Sodium	7440-23-5	<51	n/a	ug/L					U	09/11/08
BLANK	Nickel	7440-02-0	<4	n/a	ug/L					U	09/11/08
BLANK	Antimony	7440-36-0	<56	n/a	ug/L					U	09/11/08
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	09/11/08
BLANK	Vanadium	7440-62-2	<12	n/a	ug/L					U	09/11/08
BLANK	Zinc	7440-66-6	<9	n/a	ug/L					U	09/11/08
LCS	Silver	7440-22-4	953.7	95.370	% Recov	80.000	120.000				09/11/08
LCS	Barium	7440-39-3	471.6	94.320	% Recov	80.000	120.000				09/11/08
LCS	Beryllium	7440-41-7	528.4	105.680	% Recov	80.000	120.000				09/11/08
LCS	Calcium	7440-70-2	1017	101.700	% Recov	80.000	120.000				09/11/08
LCS	Cadmium	7440-43-9	1014	101.400	% Recov	80.000	120.000				09/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
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	Cobalt	7440-48-4	1025	102.500	% Recov	80.000	120.000				09/11/08
LCS	Chromium	7440-47-3	1001	100.100	% Recov	80.000	120.000				09/11/08
LCS	Copper	7440-50-8	937.7	93.770	% Recov	80.000	120.000				09/11/08
LCS	Iron	7439-89-6	992.8	99.280	% Recov	80.000	120.000				09/11/08
LCS	Potassium	7440-09-7	10150	101.500	% Recov	80.000	120.000				09/11/08
LCS	Magnesium	7439-95-4	895.6	89.560	% Recov	80.000	120.000				09/11/08
LCS	Manganese	7439-96-5	1016	101.600	% Recov	80.000	120.000				09/11/08
LCS	Sodium	7440-23-5	914.6	91.460	% Recov	80.000	120.000				09/11/08
LCS	Nickel	7440-02-0	1025	102.500	% Recov	80.000	120.000				09/11/08
LCS	Antimony	7440-36-0	933.5	93.350	% Recov	80.000	120.000				09/11/08
LCS	Strontium	7440-24-6	505.6	101.120	% Recov	80.000	120.000				09/11/08
LCS	Vanadium	7440-62-2	975.8	97.580	% Recov	80.000	120.000				09/11/08
LCS	Zinc	7440-66-6	994.3	99.430	% Recov	80.000	120.000				09/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
Matrix: WATER
Test: ICP-200.8 MS All possible meta

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P003904											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	36.76	91.900	% Recov	70.000	130.000				08/20/08
MS	Uranium	7440-61-1	35.925	89.812	% Recov	70.000	130.000				08/20/08
MSD	Arsenic	7440-38-2	36.52	91.300	% Recov	70.000	130.000				08/20/08
MSD	Uranium	7440-61-1	35.455	88.637	% Recov	70.000	130.000				08/20/08
SPK-RPD	Arsenic	7440-38-2	91.300		RPD			0.655	20.000		08/20/08
SPK-RPD	Uranium	7440-61-1	88.637		RPD			1.317	20.000		08/20/08
Lab ID: W08P003906											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	35.57	88.925	% Recov	70.000	130.000				08/20/08
MS	Uranium	7440-61-1	35.5054	88.764	% Recov	70.000	130.000				08/20/08
MSD	Arsenic	7440-38-2	36.32	90.800	% Recov	70.000	130.000				08/20/08
MSD	Uranium	7440-61-1	35.5454	88.864	% Recov	70.000	130.000				08/20/08
SPK-RPD	Arsenic	7440-38-2	90.800		RPD			2.087	20.000		08/20/08
SPK-RPD	Uranium	7440-61-1	88.864		RPD			0.113	20.000		08/20/08
Lab ID: W08P004107											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	37.02	92.550	% Recov	70.000	130.000				08/20/08
MS	Uranium	7440-61-1	34.82	87.050	% Recov	70.000	130.000				08/20/08
MSD	Arsenic	7440-38-2	36.9	92.250	% Recov	70.000	130.000				08/20/08
MSD	Uranium	7440-61-1	34.09	85.225	% Recov	70.000	130.000				08/20/08
SPK-RPD	Arsenic	7440-38-2	92.250		RPD			0.325	20.000		08/20/08
SPK-RPD	Uranium	7440-61-1	85.225		RPD			2.119	20.000		08/20/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
Matrix: WATER
Test: ICP-200.8 MS All possible meta

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	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	08/20/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	08/20/08
LCS	Arsenic	7440-38-2	34.31	85.775	% Recov	85.000	115.000				08/20/08
LCS	Uranium	7440-61-1	34.4	86.000	% Recov	85.000	115.000				08/20/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081785
Matrix: WATER
Test: Total Alkalinity as mg/L CaCO3

Sample Date: 08/17/08
Receive Date:08/17/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004055											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	<1		RPD			n/a	20.000	U	08/28/08
BATCH QC											
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	31.27	104.933	%Recove	80.000	120.000				08/28/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	31.92	107.114	%Recove	80.000	120.000				08/28/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	31.85	106.879	%Recove	80.000	120.000				08/28/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081785
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-AES: [Samples W08P4110-4123; 4125] High silver preparation blank result; "C" flag if applicable. No zirconium present in the LCS standard. Magnesium, sodium, and calcium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. Check and high standards used to ensure sodium, magnesium, and calcium linearity because sample results are greater than the calibration standard. ICP-AES: B-Flag for samples <5X MDL ICP-AES: [Samples W08P4103-4105; 4108-4109] No zirconium present in the LCS standard. Magnesium, calcium, and sodium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. Check standard used to ensure magnesium, calcium, and sodium linearity because sample results are greater than the calibration standard. IC Anion - MSD recovery out of limits for chloride in sample W08P004119; Data N-flagged for samples W08P004119, 4102, 4105, 4109, 4111, 4115, 4116, 4117. DTS IC Anion - Sample spike RPD out of limits for chloride in

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

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WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081785
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
				sample W08P004119. No flag required. DTS

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: I08-053
Sample # W08P004099
Client ID: B1WDP4 TRENT

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF 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		08/27/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
Carbon tetrachloride	56-23-5	LA-523-455		140	ug/L			1.00	1.0		08/27/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
Chloroform	67-66-3	LA-523-455	J	2.60	ug/L			1.00	1.0		08/27/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
Methylenechloride	75-09-2	LA-523-455	BJ	1.20	ug/L			1.00	1.0		08/27/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		08/27/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		08/27/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004099
Client ID: B1WDP4 TRENT WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/27/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/27/08

MDL=Minimum Detection Limit
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004100
Client ID: B1WDP7 TRENT
Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF 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		08/28/08
Trichloroethene	79-01-6	LA-523-455	J	1.70	ug/L			1.00	1.0		08/28/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Carbon tetrachloride	56-23-5	LA-523-455		170	ug/L			1.00	1.0		08/28/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chloroform	67-66-3	LA-523-455		6.40	ug/L			1.00	1.0		08/28/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Methylenechloride	75-09-2	LA-523-455	BJ	1.10	ug/L			1.00	1.0		08/28/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		08/28/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		08/28/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
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B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004100
Client ID: B1WDP7 TRENT **Matrix:** WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF 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		08/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but >= the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004101
Client ID: B1WDV8 TRENT **Matrix:** WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF 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		08/28/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Carbon tetrachloride	56-23-5	LA-523-455		410	ug/L			1.00	10		08/29/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chloroform	67-66-3	LA-523-455	J	3.60	ug/L			1.00	1.0		08/28/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Methylenechloride	75-09-2	LA-523-455	BJ	1.90	ug/L			1.00	1.0		08/28/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		08/28/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		08/28/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

MDL=Minimum Detection Limit
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004101
Client ID: B1WDV8 TRENT
Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF 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		08/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
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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: I08-053
Sample # W08P004102
Client ID: B1WDV9 TRENT

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF 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		08/28/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Carbon tetrachloride	56-23-5	LA-523-455	J	2.20	ug/L			1.00	1.0		08/28/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Methylenechloride	75-09-2	LA-523-455	BJ	2.00	ug/L			1.00	1.0		08/28/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		08/28/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		08/28/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004102
Client ID: B1WDV9 TRENT **Matrix:** WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF 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		08/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-054
Sample # W08P004105
Client ID: B1WF88 TRENT
Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF 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		08/28/08
Trichloroethene	79-01-6	LA-523-455	J	2.20	ug/L			1.00	1.0		08/28/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Carbon tetrachloride	56-23-5	LA-523-455		750	ug/L			1.00	25		08/29/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chloroform	67-66-3	LA-523-455		19.0	ug/L			1.00	1.0		08/28/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Methylenechloride	75-09-2	LA-523-455	BJ	1.60	ug/L			1.00	1.0		08/28/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		08/28/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		08/28/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-054
Sample # W08P004105
Client ID: B1WF88 TRENT WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
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B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004107
Client ID: B1WDX0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Carbon tetrachloride	56-23-5	LA-523-455		200	ug/L			1.00	1.0		08/28/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chloroform	67-66-3	LA-523-455	J	3.60	ug/L			1.00	1.0		08/28/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Methylenechloride	75-09-2	LA-523-455	BJ	1.50	ug/L			1.00	1.0		08/28/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		08/28/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		08/28/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004107
Client ID: B1WDX0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but >= the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-006
Sample # W08P004119
Client ID: B1VM09 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Carbon tetrachloride	56-23-5	LA-523-455	J	2.90	ug/L			1.00	1.0		08/28/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Methylenechloride	75-09-2	LA-523-455	BJ	1.60	ug/L			1.00	1.0		08/28/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		08/28/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		08/28/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-006
Sample # W08P004119
Client ID: B1VM09 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-007
Sample # W08P004121
Client ID: B1W1Y5 PNNL-GPP WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Carbon tetrachloride	56-23-5	LA-523-455	J	2.50	ug/L			1.00	1.0		08/28/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Methylenechloride	75-09-2	LA-523-455	BJ	1.80	ug/L			1.00	1.0		08/28/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		08/28/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		08/28/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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RQ=Result Qualifier
TP Err=Total Propagated Error
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-007
Sample # W08P004121
Client ID: B1W1Y5 PNNL-GPP WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-006
Sample # W08P004123
Client ID: B1VM13 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Carbon tetrachloride	56-23-5	LA-523-455	J	2.60	ug/L			1.00	1.0		08/28/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Methylenechloride	75-09-2	LA-523-455	BJ	1.70	ug/L			1.00	1.0		08/28/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		08/28/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		08/28/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
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N - Spike sample recovery is outside control limits.(inorg)
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* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-006
Sample # W08P004123
Client ID: B1VM13 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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: S08-008
Sample # W08P004124
Client ID: B1WMT5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Carbon tetrachloride	56-23-5	LA-523-455	J	2.50	ug/L			1.00	1.0		08/28/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Methylenechloride	75-09-2	LA-523-455	B	5.30	ug/L			1.00	1.0		08/28/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		08/28/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		08/28/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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: S08-008
Sample # W08P004124
Client ID: B1WMT5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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: I08-054
Sample # W08P004125
Client ID: B1WF90 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Carbon tetrachloride	56-23-5	LA-523-455	J	2.20	ug/L			1.00	1.0		08/28/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
Methylenechloride	75-09-2	LA-523-455	BJ	2.20	ug/L			1.00	1.0		08/28/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		08/28/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		08/28/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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: I08-054
Sample # W08P004125
Client ID: B1WF90 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Organic
Sampled: 08/19/08
Received: 08/19/08

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		08/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		08/28/08

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

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081785
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 08/17/08
Receive Date:08/17/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004043											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,1-Dichloroethene	75-35-4	23.070	92.300	% Recov	63.000	117.000				08/27/08
MS	Benzene	71-43-2	22.360	89.400	% Recov	75.000	129.000				08/27/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	48.400	96.800	% Recov	75.000	125.000				08/27/08
MS	Chlorobenzene	108-90-7	24.920	99.700	% Recov	79.000	119.000				08/27/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	55.380	111.000	% Recov	75.000	125.000				08/27/08
MS	Toluene-d8(Surr)	2037-26-5	49.620	99.200	% Recov	75.000	125.000				08/27/08
MS	Toluene	108-88-3	23.670	94.700	% Recov	76.000	120.000				08/27/08
MS	Trichloroethene	79-01-6	22.440	89.800	% Recov	73.000	123.000				08/27/08
MSD	1,1-Dichloroethene	75-35-4	21.830	87.300	% Recov	63.000	117.000				08/27/08
MSD	Benzene	71-43-2	22.880	91.500	% Recov	75.000	129.000				08/27/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	48.460	96.900	% Recov	75.000	125.000				08/27/08
MSD	Chlorobenzene	108-90-7	25.740	103.000	% Recov	79.000	119.000				08/27/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	55.280	111.000	% Recov	75.000	125.000				08/27/08
MSD	Toluene-d8(Surr)	2037-26-5	49.740	99.500	% Recov	75.000	125.000				08/27/08
MSD	Toluene	108-88-3	24.280	97.100	% Recov	76.000	120.000				08/27/08
MSD	Trichloroethene	79-01-6	22.930	91.700	% Recov	73.000	123.000				08/27/08
Lab ID: W08P004099											
BATCH QC ASSOCIATED WITH SAMPLE											
SPK-RPD	1,1-Dichloroethene	75-35-4	79.000		RPD			1.508	20.000		08/28/08
SPK-RPD	Benzene	71-43-2	94.600		RPD			0.530	20.000		08/28/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	97.400		RPD			0.103	20.000		08/28/08
SPK-RPD	Chlorobenzene	108-90-7	105.000		RPD			1.923	20.000		08/28/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	113.000		RPD			1.786	20.000		08/28/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	101.000		RPD			0.000	20.000		08/28/08
SPK-RPD	Toluene	108-88-3	100.000		RPD			0.501	20.000		08/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081785
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 08/19/08
Receive Date:08/19/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Trichloroethene	79-01-6	84.000		RPD			0.000	20.000		08/28/08
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.140	96.300	% Recov	75.000	125.000				08/27/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	56.120	112.000	% Recov	75.000	125.000				08/27/08
SURR	Toluene-d8(Surr)	2037-26-5	50.920	102.000	% Recov	75.000	125.000				08/27/08
Lab ID: W08P004100											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	47.890	95.800	% Recov	75.000	125.000				08/28/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	56.060	112.000	% Recov	75.000	125.000				08/28/08
SURR	Toluene-d8(Surr)	2037-26-5	51.100	102.000	% Recov	75.000	125.000				08/28/08
Lab ID: W08P004101											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.070	96.100	% Recov	75.000	125.000				08/28/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	56.180	112.000	% Recov	75.000	125.000				08/28/08
SURR	Toluene-d8(Surr)	2037-26-5	50.950	102.000	% Recov	75.000	125.000				08/28/08
Lab ID: W08P004102											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.390	96.800	% Recov	75.000	125.000				08/28/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	55.400	111.000	% Recov	75.000	125.000				08/28/08
SURR	Toluene-d8(Surr)	2037-26-5	51.250	102.000	% Recov	75.000	125.000				08/28/08
Lab ID: W08P004105											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	47.940	95.900	% Recov	75.000	125.000				08/28/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	56.680	113.000	% Recov	75.000	125.000				08/28/08
SURR	Toluene-d8(Surr)	2037-26-5	51.010	102.000	% Recov	75.000	125.000				08/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081785
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 08/19/08
Receive Date:08/19/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004107											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	47.660	95.300	% Recov	75.000	125.000				08/28/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	56.120	112.000	% Recov	75.000	125.000				08/28/08
SURR	Toluene-d8(Surr)	2037-26-5	51.620	103.000	% Recov	75.000	125.000				08/28/08
Lab ID: W08P004119											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	47.860	95.700	% Recov	75.000	125.000				08/28/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	55.600	111.000	% Recov	75.000	125.000				08/28/08
SURR	Toluene-d8(Surr)	2037-26-5	51.350	103.000	% Recov	75.000	125.000				08/28/08
Lab ID: W08P004121											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	47.780	95.600	% Recov	75.000	125.000				08/28/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	55.950	112.000	% Recov	75.000	125.000				08/28/08
SURR	Toluene-d8(Surr)	2037-26-5	51.270	103.000	% Recov	75.000	125.000				08/28/08
Lab ID: W08P004123											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	47.120	94.200	% Recov	75.000	125.000				08/28/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	55.640	111.000	% Recov	75.000	125.000				08/28/08
SURR	Toluene-d8(Surr)	2037-26-5	51.200	102.000	% Recov	75.000	125.000				08/28/08
Lab ID: W08P004124											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	48.130	96.300	% Recov	75.000	125.000				08/28/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	55.850	112.000	% Recov	75.000	125.000				08/28/08
SURR	Toluene-d8(Surr)	2037-26-5	51.480	103.000	% Recov	75.000	125.000				08/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081785
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 08/19/08
Receive Date:08/19/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004125											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	47.740	95.500	% Recov	75.000	125.000				08/28/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	55.360	111.000	% Recov	75.000	125.000				08/28/08
SURR	Toluene-d8(Surr)	2037-26-5	51.010	102.000	% Recov	75.000	125.000				08/28/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	08/27/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L					U	08/27/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L					U	08/27/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L					U	08/27/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L					U	08/27/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.0	n/a	ug/L					U	08/27/08
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	08/27/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/L					U	08/27/08
BLANK	Acetone	67-64-1	57	57.000	ug/L						08/27/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	08/27/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	48.550	97.100	% Recov	75.000	125.000				08/27/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	08/27/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	08/27/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L					U	08/27/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	08/27/08
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/L					U	08/27/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	54.390	109.000	% Recov	75.000	125.000				08/27/08
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L					U	08/27/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L					U	08/27/08
BLANK	Ethyl cyanide	107-12-0	< 2.0	n/a	ug/L					U	08/27/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	08/27/08
BLANK	Methylenechloride	75-09-2	2.0	2.000	ug/L						08/27/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081785
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	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L					U	08/27/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	0.000	5.000			U	08/27/08
BLANK	Tetrahydrofuran	109-99-9	< 2.0	n/e	ug/L					U	08/27/08
BLANK	Toluene-d8(Surr)	2037-26-5	50.040	100.000	% Recov	75.000	125.000				08/27/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	08/27/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	08/27/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	08/27/08
LCS	1,1-Dichloroethene	75-35-4	20.770	83.100	% Recov	75.000	125.000				08/27/08
LCS	Benzene	71-43-2	21.930	87.700	% Recov	75.000	125.000				08/27/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	48.200	96.400	% Recov	75.000	125.000				08/27/08
LCS	Chlorobenzene	108-90-7	24.020	96.100	% Recov	75.000	125.000				08/27/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	54.910	110.000	% Recov	75.000	125.000				08/27/08
LCS	Toluene-d8(Surr)	2037-26-5	50.410	101.000	% Recov	75.000	125.000				08/27/08
LCS	Toluene	108-88-3	23.290	93.200	% Recov	75.000	125.000				08/27/08
LCS	Trichloroethene	79-01-6	21.420	85.700	% Recov	75.000	125.000				08/27/08

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004099
Client ID: B1WDP4 TRENT **Matrix:** WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		160	pCi/L	+-32.0	pCi/L	1.00	5.7		08/27/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004100
Client ID: B1WDP7 TRENT **Matrix:** WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		210	pCi/L	+-42.0	pCi/L	1.00	5.7		08/27/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004101
Client ID: B1WDV8 TRENT **Matrix:** WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	WSCF Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		75.0	pCi/L	+-15.8	pCi/L	1.00	5.7		08/27/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	150	pCi/L	+-128	pCi/L	1.00	2.3e+02		08/30/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but >= the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004102
Client ID: B1WDV9 TRENT WSCF
Matrix: WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421	U	-2.40	pCi/L	+-3.41	pCi/L	1.00	5.7		08/27/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	-32.0	pCi/L	+-72.3	pCi/L	1.00	2.2e+02		08/30/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but >= the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-054
Sample # W08P004105
Client ID: B1WF88 TRENT WSCF **Matrix:** WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		11.0	pCi/L	+-4.18	pCi/L	1.00	5.7		08/27/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but >= the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-053
Sample # W08P004107
Client ID: B1WDX0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		2.80e+04	pCi/L	+-5.60e+03	pCi/L	1.00	2.3e+02		08/30/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004109
Client ID: B1WKH1 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		1.90e+03	pCi/L	+-380	pCi/L	1.00	5.7		08/27/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004111
Client ID: B1WKF0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		1.60e+03	pCi/L	+-320	pCi/L	1.00	5.8		09/02/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but >= the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004115
Client ID: B1WKF8 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421	U	-2.60	pCi/L	+-3.46	pCi/L	1.00	5.8		09/02/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004116
Client ID: B1WKF6 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		1.20e+03	pCi/L	+-240	pCi/L	1.00	5.8		09/02/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-008
Sample # W08P004117
Client ID: B1WKF3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		210	pCi/L	+-42.0	pCi/L	1.00	5.8		09/02/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but > = MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but > = the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-054
Sample # W08P004125
Client ID: B1WF90 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081785
Department: Radiochemistry
Sampled: 08/19/08
Received: 08/19/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421	U	-2.80	pCi/L	+-3.42	pCi/L	1.00	5.8		09/02/08

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

B - The Analyte detected in both the BLANK and the SAMPLE.(org)
C - The Analyte was found in the Associated Blank.(inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria(inorg)

B - The analyte < the RDL but >= the IDL/MDL (inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081785
Matrix: WATER
Test: TC99 by Liquid Scin.

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004177											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tc-99 by Liquid Scin.	14133-76-7	U0.2		RPD			n/a	20.000		09/02/08
MS	Tc-99 by Liquid Scin.	14133-76-7	663.3	104.188	% Recov	75.000	125.000				09/02/08
BATCH QC											
BLANK	Tc-99 by Liquid Scin.	14133-76-7	U-3.0	n/a	pCi/L	-10.000	10.000				09/02/08
LCS	Tc-99 by Liquid Scin.	14133-76-7	164.4	103.266	% Recov	80.000	120.000				09/02/08
Lab ID: W08P004061											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tc-99 by Liquid Scin.	14133-76-7	9.9E+01		RPD			10.526	20.000		08/27/08
MS	Tc-99 by Liquid Scin.	14133-76-7	656.4	103.110	% Recov	75.000	125.000				08/27/08
BATCH QC											
BLANK	Tc-99 by Liquid Scin.	14133-76-7	U-2.7	n/a	pCi/L	-10.000	10.000				08/27/08
LCS	Tc-99 by Liquid Scin.	14133-76-7	161.6	101.508	% Recov	80.000	120.000				08/27/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081785
Matrix: WATER
Test: Tritium by Liq Sct column prep

Sample Date: 08/20/08
Receive Date:08/20/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P004141											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tritium	10028-17-8	1.5E+03		RPD			6.897	20.000		08/30/08
MS	Tritium	10028-17-8	24210	94.540	% Recov	75.000	125.000				08/30/08
BATCH QC											
BLANK	Tritium	10028-17-8	U-3.0E+01	n/a	pCi/L	-10.000	1000.000				08/30/08
LCS	Tritium	10028-17-8	3180	93.684	% Recov	80.000	120.000				08/30/08

M4W41-SLF-08-1027

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 19 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

ACKNOWLEDGMENT OF SAMPLES RECEIVED

09/18/08
CH

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081785

The following samples were received from you on 08/19/08. 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
W08P004099	B1WDP4	@2008	TRENT @IC-30 @TC99-30 @VOA-GPP Water	08/19/08
W08P004100	B1WDP7	@2008	TRENT @IC-30 @TC99-30 @VOA-GPP Water	08/19/08
W08P004101	B1WDV8	@2008	TRENT @H3-33 @IC-30 @TC99-30 @VOA-GPP Water	08/19/08
W08P004102	B1WDV9	@2008	TRENT @H3-33 @IC-30 @TC99-30 @VOA-GPP Water	08/19/08
W08P004103	B1WF87	@GPP6010	TRENT Water	08/19/08
W08P004104	B1WF89	@GPP6010	TRENT Water	08/19/08
W08P004105	B1WF88	@GPP6010	TRENT @IC-30 @TC99-30 @VOA-GPP Water	08/19/08
W08P004106	B1WDW9	PNNL-GPP @2008	Water	08/19/08
W08P004107	B1WDX0	PNNL-GPP @2008	@H3-33 @IC-30 @VOA-GPP Water	08/19/08
W08P004108	B1WKH0	PNNL-GPP @GPP6010	Water	08/19/08
W08P004109	B1WKH1	PNNL-GPP @GPP6010	@IC-30 @TC99-30 ALKALI Water	08/19/08
W08P004110	B1WKD9	PNNL-GPP @GPP6010	Water	08/19/08
W08P004111	B1WKF0	PNNL-GPP @GPP6010	@IC-30 @TC99-30 ALKALI Water	08/19/08
W08P004112	B1WKF7	PNNL-GPP @GPP6010	Water	08/19/08
W08P004113	B1WKF5	PNNL-GPP @GPP6010	Water	08/19/08

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081785

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W08P004114	B1WKF2	PNNL-GPP @GPP6010	Water	08/19/08
W08P004115	B1WKF8	PNNL-GPP @GPP6010 @IC-30 @TC99-30 ALKALI	Water	08/19/08
W08P004116	B1WKF6	PNNL-GPP @GPP6010 @IC-30 @TC99-30 ALKALI	Water	08/19/08
W08P004117	B1WKF3	PNNL-GPP @GPP6010 @IC-30 @TC99-30 ALKALI	Water	08/19/08
W08P004118	B1VM08	PNNL-GPP @GPP6010	Water	08/19/08
W08P004119	B1VM09	PNNL-GPP @2008 @GPP6010 @IC-30 @VOA-GPP ALKALI	Water	08/19/08
W08P004120	B1W1Y4	PNNL-GPP @GPP6010	Water	08/19/08
W08P004121	B1W1Y5	PNNL-GPP @2008 @GPP6010 @IC-30 @VOA-GPP ALKALI	Water	08/19/08
W08P004122	B1VM12	PNNL-GPP @GPP6010	Water	08/19/08
W08P004123	B1VM13	PNNL-GPP @2008 @GPP6010 @IC-30 @VOA-GPP ALKALI	Water	08/19/08
W08P004124	B1WMT5	PNNL-GPP @VOA-GPP	Water	08/19/08
W08P004125	B1WF90	PNNL-GPP @GPP6010 @IC-30 @TC99-30 @VOA-GPP	Water	08/19/08

Test Acronym Description

Test Acronym	Description
@2008	ICP-200.8 MS All possible meta
@GPP6010	ICP Metals Analysis, Grd H20 P
@H3-33	Tritium by Liq Sct column prep
@IC-30	Anions by Ion Chromatography
@TC99-30	TC99 by Liquid Scin.
@VOA-GPP	VOA Ground Water Protection
ALKALI	Total Alkalinity as mg/L CaCO3

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-053-44

Collector D. Bates	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. I08-053	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 2UP1 AUGUST 2008	HNF-N-506-19	**Ice Chest No.** 54-05 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**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)

20081785

SPECIAL INSTRUCTIONS **Hold Time**
200 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WDP4	W8P004099	W	8/19/08	1225	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1WDP4		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WDP4		W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
B1WDP4		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2

8/19/08

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	J. P. Herrick		AUG 19 2008 1300	TA Frazier			AUG 19 2008 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

I08-053-50

Page 1 of 1

Collector D. Bates	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. I08-053	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 2UP1, AUGUST 2008	HNF-N-506-19	**Ice Chest No.** Swns 1 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**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 ☐
200 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WDP7	W08P0410U	W	8/19/08	1037	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1WDP7		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WDP7		W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
B1WDP7		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2

8/19/08

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	J.P. Horlick		8/19/08 1300	TA FINAZIM			8/19/08 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

I08-053-100

Collector Fluor Hanford D. R. BREWINGTON	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. I08-053	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 2UP1 AUGUST 2008	HNF-N-506-14	**Ice Chest No.** GW-1 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**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**
200 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WDV8	W08P6C4H01	W	8-19-08	1157	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1WDV8		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WDV8		W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
B1WDV8		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None
B1WDV8		W	8-19-08	1157	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Fluor Hanford D. R. BREWINGTON			AUG 19 2008 1310				AUG 19 2008 1310
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

I08-053-101

Collector Fluor Hanford D. R. BREWINGTON	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. I08-053	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 2UP1, AUGUST 2008	HNF-N-501-14	**Ice Chest No.** GW-1 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**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 ☐
200 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WDV9	W0804109	W	8-19-08	0820	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1WDV9		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WDV9		W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
B1WDV9		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None
B1WDV9		W	8-19-08	0820	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2

ICED

Relinquished By	Received By
Print: Fluor Hanford D. R. BREWINGTON Sign: D.R. Brewington Date/Time: AUG 19 2008 1310	Print: Sign: AUG 19 2008 Date/Time: 1310
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	= 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

I08-054-113

Collector Fluor Hanford	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. D. R. BREWINGTON I08-054	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 2ZPL AUGUST 2008	HNF-N-506-14	**Ice Chest No.** GW-1 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

SPECIAL INSTRUCTIONS **Hold Time**
200 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WF87 (F)	W0P0004103	W	8-19-08	1051	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WF88	W0P0004105	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1WF88		W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WF88		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WF88		W	8-19-08	1051	1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Fluor Hanford	D.R. BREWINGTON	D.R. Brewington	AUG 19 2008 1310				AUG 19 2008 1310
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

I08-054-114

Collector Fluor Hanford D. R. BREWINGTON	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. I08-054	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 2ZPL AUGUST 2008	HNF-N-506-14	**Ice Chest No.** GW-1 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol CERCLA	**Priority:** 30 Days **PRIORITY**	**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 ☐
200 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WF89 (F)	W08R004104	W	8-19-08	0810	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WF90	W08R004106	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1WF90		W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WF90		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WF90		W	8-19-08	0810	1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
	W08R004125						

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Fluor Hanford D. R. BREWINGTON	D.R. Brewington		AUG 19 2008 1310		CAHudson		AUG 19 2008 1310
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

8-19-08

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-053-116

Page 1 of 1

Collector Scott E. Hamaker	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. I08-053	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 2UP1 AUGUST 2008	HWF-W-506-16	**Ice Chest No.** GW5029 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**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 ☐
200 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WDW9 (F)	4106	W	8/19/08	1314	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	HNO3 to pH <2
B1WDX0	4107	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1WDX0		W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	HNO3 to pH <2
B1WDX0		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WDX0		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None
B1WDX0		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	Scott E. Hamaker		AUG 19 2008 1400		Victor Bins		AUG 19 2008 1400
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

W08-008-374

Collector Scott E. Hamaker	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. W08-008	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title RCRA AUGUST 2008	HWF-N-506-16	**Ice Chest No.** GWS-029 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol RCRA	**Priority:** 30 Days **PRIORITY**	**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 ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WKH0 (F)	4108	W	8/19/08	1109	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WKH1	4109	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WKH1	↓	W	↓	↓	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1WKH1	↓	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WKH1	↓	W	↓	↓	1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2

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Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
Scott E. Hamaker	Scott Hamaker	AUG 19 2008 1703	Victor Bins		AUG 19 2008 1703
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

W08-008-362

Collector Scott E. Hamaker	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. W08-008	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title RCRA AUGUST 2008	HWF-N-506-16	**Ice Chest No.** GW5-029 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol RCRA	**Priority:** 30 Days **PRIORITY**	**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 ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WKD9 (F)	9110	W	8/19/08	1029	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WKF0	9111	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WKF0	↓	W	↓	↓	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1WKF0	↓	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WKF0	↓	W	↓	↓	1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Scott E. Hamaker	Scott Hamaker		AUG 19 2008 1400	Victor Bine			AUG 19 2008 1400
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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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

W08-008-371

Collector Scott E. Hamaker	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. W08-008	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title RCRA, AUGUST 2008	HNF-N-506-16	**Ice Chest No.** GWS-029 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol RCRA	**Priority:** 30 Days **PRIORITY**	**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 ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WKF7 (F)	4112	W	8/19/08	0315	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WKF8	4115	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WKF8		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1WKF8		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WKF8		W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2

ICED

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
Scott E. Hamaker	Scott Hamaker	AUG 19 2008 1400	V. Victor Sims		AUG 19 2008 1400
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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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

W08-008-370

Collector Scott E. Hamaker	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. W08-008	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title RCRA, AUGUST 2008	HWF-N-506-1C	**Ice Chest No.** GW5029 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol RCRA	**Priority:** 30 Days **PRIORITY**	**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 ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WKF5 (F)	4113	W	8/19/08	0936	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WKF6	4116	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WKF6	↓	W	↓	↓	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1WKF6	↓	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WKF6	↓	W	↓	↓	1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2

ICED

Relinquished By	Received By
Print: Scott E. Hamaker Sign: Scott Hamaker Date/Time: AUG 19 2008 1400	Print: Victor J Sims Sign: [signature] Date/Time: AUG 19 2008 1400
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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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

W08-008-366

Collector Scott E. Hamaker	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. W08-008	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title RCRA, AUGUST 2008	HWF-N-506-16	**Ice Chest No.** GWS-029 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol RCRA	**Priority:** 30 Days **PRIORITY**	**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 ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WKF2 (F)	4114	W	8/19/08	1154	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WKF3	4117	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1WKF3	↓	W	↓	↓	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1WKF3	↓	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1WKF3	↓	W	↓	↓	1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Scott E. Hamaker	Scott Hamaker		AUG 19 2008 1700	Vicki Sims			AUG 19 2008 1700
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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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

S08-006-398

Collector Roy Shepard Fluor Hanford	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. S08-006	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV. JUNE 2008	HNF-N-506-17	**Ice Chest No.** GWS-008 **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 ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1VM08 (F)	4118	W	8/19/08	1024	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1VM09	4119	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1VM09		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1VM09		W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1VM09		W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1VM09		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C

ICED

Relinquished By Roy Shepard Fluor Hanford	Print	Sign	Date/Time AUG 19 2008 1445	Received By	Print	Sign	Date/Time AUG 19 2008 1445
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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O = Oil		V = Vegetation	
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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

S08-007-80

Collector Roy Shepard	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. S08-007 Fluor Hanford	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV JULY 2008	HNF-N-506-17	**Ice Chest No.** AWS 002 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**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**
Site-Wide Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1W1Y4 (F)	4120	W	8/19/08	1218	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1W1Y5	4121	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1W1Y5		W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1W1Y5		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1W1Y5		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1W1Y5		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Roy Shepard Fluor Hanford			AUG 19 2008 1415				AUG 19 2008 1415
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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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

S08-006-404

Collector Roy Shepard Fluor Hanford	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. S08-006	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV. JUNE 2008	HNF-N-506.17	**Ice Chest No.** GWS-007 **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 ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1VM12 (F)	4122	W	8/19/08	1120	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1VM13	4123	W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1VM13		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1VM13		W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1VM13		W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1VM13		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C

ICED

Relinquished By Roy Shepard Fluor Hanford Print Sign	Date/Time 1415 AUG 19 2008	Received By Print Sign	Date/Time 1415 AUG 19 2008
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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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

S08-008-78

Collector Roy Shepard, Fluor Hanford	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. S08-008	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV, AUGUST 2008	HNF-N-506-17	**Ice Chest No.** RWS-008 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 30 Days **PRIORITY**	**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**
Site-Wide Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1WMT5	4124	W	8/19/08	1026	1x20-mL P	Activity Scan	None
B1WMT5	↓	W	↓	↓	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Roy Shepard, Fluor Hanford			AUG 19 2008 1415				AUG 19 2008 1415
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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FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time