RECEIVED JULY 30, 2008

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FLUOR

Memorandum

M4W41-SLF-08-761

To:	H. Hampt	E6-35	Date:	July 30, 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 WSCF20081159

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 WSCF20081159:

- 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#: WSCF20081159
Data Deliverable Date: 23-jul-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
I08-043	B1VKT5	W08P002742	WATER
	B1VKT6	W08P002743	WATER
	B1VKV3	W08P002744	WATER
	B1VKV4	W08P002745	WATER
W08-006	B1VRJ1	W08P002746	WATER
	B1VRJ2	W08P002747	WATER
	B1VRM1	W08P002738	WATER
	B1VRM2	W08P002739	WATER
	B1VRM3	W08P002740	WATER
	B1VRM4	W08P002741	WATER

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ATTACHMENT 2

NARRATIVE

Consisting of 5 pages
Including cover page

Introduction

Ten groundwater samples were received at the WSCF Laboratory on June 9, 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 15 through 18, for a complete listing of approved analytical methods.

Inorganic Comments

Ammonia – The hold time requirement for this analysis was 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 page 35 for QC details.

All QC controls are within the established limits.

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 36 through 38 for QC details. Analytical Note(s):

- Sample results were D flagged if dilution(s) were required.

All QC controls are within the established limits.

Cyanide – The hold time requirement (14 days) for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See page 39 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V7W1 (SDG# 20081142).
- Matrix Spike and Matrix Spike Duplicate recoveries were less than established laboratory limits. Sample results 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 40 through 43 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V7W1 (SDG# 20081142).
- Check and high standards are analyzed to ensure Calcium, Sodium and Magnesium linearity because the sample results are greater than the calibration standard.

All 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 44 through 45 for QC details. Analytical Note(s):

- Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1V654 and B1V662 (SDG# 20081134).

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 46 for QC details. Analytical Note(s):

- Duplicate QC was analyzed on sample# B1VRK3 (SDG# 20081163).

All QC controls are within the established limits.

Total Organic Carbon – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Method Spike were analyzed with this delivery group per the GRP Letter of Instruction. See page 47 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1VPL3 (SDG# 20081142).

All QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was 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 page 55 for QC details. Analytical Note(s):

- Duplicate QC was analyzed on sample# B1V654 (SDG# 20081134).
- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1VKT6 of this SDG.

All QC controls are within the established limits.

Semi-VOA – 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 GPP Letter of Instruction. See pages 56 through 59 for QC details. Analytical Note(s):

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

All QC controls are within the established limits.

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See page 60 for QC details.

All QC controls are within the established limits.

TPHG-WA – The hold time requirement or this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See page 61 for QC details.

All QC controls are within the established limits.

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 62 through 64 for QC details.

All 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 71 through 73 for QC details. Analytical Note(s):

- Strontium89/90 and 85 (tracer) – Duplicate QC was analyzed on sample# B1V654 (SDG# 20081134).
- Technetium 99 – Duplicate and Matrix Spike were analyzed on sample# B1V693 (SDG# 20081142).

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-08-761

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 65 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

GPAP
Richland, WA 99352

Attention: Steve Trent E6-35

Analytical: S. Fitzgerald 7/31/08

Client Services: P.D. Mix 7/30/2008

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

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Report#: WSCF20081159
Report Date: 29-jul-2008
Report WGPP/ver. 5.2
GPAP

w13qlog v4.2 29-jul-2008 14:57:21

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20081159

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36655	2	37068	41399	BLANK		Anions by Ion Chromatography
36655	13	37068	41399	BLANK		Anions by Ion Chromatography
36655	23	37068	41399	BLANK		Anions by Ion Chromatography
36655	3	37068	41399	LCS		Anions by Ion Chromatography
36655	14	37068	41399	LCS		Anions by Ion Chromatography
36655	8	37068	41399	SAMPLE	W08P002739	Anions by Ion Chromatography
36655	9	37068	41399	SAMPLE	W08P002741	Anions by Ion Chromatography
36655	5	37068	41399	DUP	W08P002746	Anions by Ion Chromatography
36655	6	37068	41399	MS	W08P002746	Anions by Ion Chromatography
36655	7	37068	41399	MSD	W08P002746	Anions by Ion Chromatography
36655	4	37068	41399	SAMPLE	W08P002746	Anions by Ion Chromatography
36655	7	37068	41399	SPK-RPD	W08P002746	Anions by Ion Chromatography
36655	16	37068	41399	DUP	W08P002747	Anions by Ion Chromatography
36655	17	37068	41399	MS	W08P002747	Anions by Ion Chromatography
36655	18	37068	41399	MSD	W08P002747	Anions by Ion Chromatography
36655	15	37068	41399	SAMPLE	W08P002747	Anions by Ion Chromatography
36655	18	37068	41399	SPK-RPD	W08P002747	Anions by Ion Chromatography
36699	1	37116	41441	LCS		Total Alkalinity as mg/L CaCO3
36699	13	37116	41441	LCS		Total Alkalinity as mg/L CaCO3
36699	24	37116	41441	LCS		Total Alkalinity as mg/L CaCO3
36699	7	37116	41441	SAMPLE	W08P002739	Total Alkalinity as mg/L CaCO3
36699	8	37116	41441	SAMPLE	W08P002741	Total Alkalinity as mg/L CaCO3
36699	9	37116	41441	SAMPLE	W08P002746	Total Alkalinity as mg/L CaCO3
36699	10	37116	41441	SAMPLE	W08P002747	Total Alkalinity as mg/L CaCO3
36699	3	37116	41441	DUP	W08P002755	Total Alkalinity as mg/L CaCO3
36757	7	37173	41517	BLANK		Cyanide by Midi/Spectrophotom
36757	8	37173	41517	LCS		Cyanide by Midi/Spectrophotom
36757	10	37173	41517	MS	W08P002737	Cyanide by Midi/Spectrophotom
36757	11	37173	41517	MSD	W08P002737	Cyanide by Midi/Spectrophotom
36757	11	37173	41517	SPK-RPD	W08P002737	Cyanide by Midi/Spectrophotom
36757	13	37173	41517	SAMPLE	W08P002743	Cyanide by Midi/Spectrophotom
36757	14	37173	41517	SAMPLE	W08P002745	Cyanide by Midi/Spectrophotom
36786	3	37205	41543	BLANK		Ammonia (N) by IC
36786	9	37205	41543	BLANK		Ammonia (N) by IC
36786	1	37205	41543	LCS		Ammonia (N) by IC
36786	5	37205	41543	DUP	W08P002743	Ammonia (N) by IC
36786	6	37205	41543	MS	W08P002743	Ammonia (N) by IC
36786	7	37205	41543	MSD	W08P002743	Ammonia (N) by IC
36786	4	37205	41543	SAMPLE	W08P002743	Ammonia (N) by IC
36786	7	37205	41543	SPK-RPD	W08P002743	Ammonia (N) by IC
36786	8	37205	41543	SAMPLE	W08P002745	Ammonia (N) by IC
36802	1	37221	41563	BLANK		Total Organic Carbon
36802	2	37221	41563	METHSPIKE		Total Organic Carbon
36802	3	37221	41563	SPK-RSD		Total Organic Carbon
36802	4	37221	41563	MS	W08P002725	Total Organic Carbon
36802	5	37221	41563	MSD	W08P002725	Total Organic Carbon
36802	5	37221	41563	SPK-RPD	W08P002725	Total Organic Carbon
36802	15	37221	41563	SAMPLE	W08P002743	Total Organic Carbon

36802	16	37221	41563	SAMPLE	W08P002745	Total Organic Carbon
36820	1	37242	41582	BLANK		ICP-200.8 MS All possible meta
36820	2	37242	41582	LCS		ICP-200.8 MS All possible meta
36820	4	37242	41582	MS	W08P002695	ICP-200.8 MS All possible meta
36820	5	37242	41582	MSD	W08P002695	ICP-200.8 MS All possible meta
36820	5	37242	41582	SPK-RPD	W08P002695	ICP-200.8 MS All possible meta
36820	7	37242	41582	MS	W08P002697	ICP-200.8 MS All possible meta
36820	8	37242	41582	MSD	W08P002697	ICP-200.8 MS All possible meta
36820	8	37242	41582	SPK-RPD	W08P002697	ICP-200.8 MS All possible meta
36820	28	37242	41582	SAMPLE	W08P002742	ICP-200.8 MS All possible meta
36820	29	37242	41582	SAMPLE	W08P002743	ICP-200.8 MS All possible meta
36820	30	37242	41582	SAMPLE	W08P002744	ICP-200.8 MS All possible meta
36820	31	37242	41582	SAMPLE	W08P002745	ICP-200.8 MS All possible meta
37132	1	37555	41934	BLANK		ICP Metals Analysis, Grd H20 P
37132	2	37555	41934	LCS		ICP Metals Analysis, Grd H20 P
37132	4	37555	41934	MS	W08P002737	ICP Metals Analysis, Grd H20 P
37132	5	37555	41934	MSD	W08P002737	ICP Metals Analysis, Grd H20 P
37132	5	37555	41934	SPK-RPD	W08P002737	ICP Metals Analysis, Grd H20 P
37132	6	37555	41934	SAMPLE	W08P002738	ICP Metals Analysis, Grd H20 P
37132	7	37555	41934	SAMPLE	W08P002739	ICP Metals Analysis, Grd H20 P
37132	8	37555	41934	SAMPLE	W08P002740	ICP Metals Analysis, Grd H20 P
37132	9	37555	41934	SAMPLE	W08P002741	ICP Metals Analysis, Grd H20 P
37132	10	37555	41934	SAMPLE	W08P002742	ICP Metals Analysis, Grd H20 P
37132	11	37555	41934	SAMPLE	W08P002743	ICP Metals Analysis, Grd H20 P
37132	12	37555	41934	SAMPLE	W08P002744	ICP Metals Analysis, Grd H20 P
37132	13	37555	41934	SAMPLE	W08P002745	ICP Metals Analysis, Grd H20 P

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Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20081159

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			41494	BLANK		NWTPH-D TPH Diesel Range (Wa)
			41494	LCS		NWTPH-D TPH Diesel Range (Wa)
			41494	MS	W08P002743	NWTPH-D TPH Diesel Range (Wa)
			41494	MSD	W08P002743	NWTPH-D TPH Diesel Range (Wa)
			41494	SAMPLE	W08P002743	NWTPH-D TPH Diesel Range (Wa)
			41494	SPK-RPD	W08P002743	NWTPH-D TPH Diesel Range (Wa)
			41494	SURR	W08P002743	NWTPH-D TPH Diesel Range (Wa)
			41494	SAMPLE	W08P002745	NWTPH-D TPH Diesel Range (Wa)
			41494	SURR	W08P002745	NWTPH-D TPH Diesel Range (Wa)
			41569	BLANK		SW-846 8270C Semi-Vols
			41569	LCS		SW-846 8270C Semi-Vols
			41569	MS	W08P002743	SW-846 8270C Semi-Vols
			41569	MSD	W08P002743	SW-846 8270C Semi-Vols
			41569	SAMPLE	W08P002743	SW-846 8270C Semi-Vols
			41569	SPK-RPD	W08P002743	SW-846 8270C Semi-Vols
			41569	SURR	W08P002743	SW-846 8270C Semi-Vols
			41569	SAMPLE	W08P002745	SW-846 8270C Semi-Vols
			41569	SURR	W08P002745	SW-846 8270C Semi-Vols
37099	1	37525	41877	BLANK		Alcohols, Glycols - 8015
37099	2	37525	41877	LCS		Alcohols, Glycols - 8015
37099	4	37525	41877	DUP	W08P002695	Alcohols, Glycols - 8015
37099	9	37525	41877	MS	W08P002743	Alcohols, Glycols - 8015
37099	10	37525	41877	MSD	W08P002743	Alcohols, Glycols - 8015
37099	8	37525	41877	SAMPLE	W08P002743	Alcohols, Glycols - 8015
37099	10	37525	41877	SPK-RPD	W08P002743	Alcohols, Glycols - 8015
37099	11	37525	41877	SAMPLE	W08P002745	Alcohols, Glycols - 8015
			41886	BLANK		VOA Ground Water Protection
			41886	LCS		VOA Ground Water Protection
			41886	MS	W08P002743	VOA Ground Water Protection
			41886	MSD	W08P002743	VOA Ground Water Protection
			41886	SAMPLE	W08P002743	VOA Ground Water Protection
			41886	SPK-RPD	W08P002743	VOA Ground Water Protection
			41886	SURR	W08P002743	VOA Ground Water Protection
			41886	SAMPLE	W08P002745	VOA Ground Water Protection
			41886	SURR	W08P002745	VOA Ground Water Protection
37205	1	37640	41955	BLANK		NWTPH-GX TPH Gasoline Range
37205	2	37640	41955	LCS		NWTPH-GX TPH Gasoline Range
37205	4	37640	41955	DUP	W08P002743	NWTPH-GX TPH Gasoline Range
37205	5	37640	41955	MS	W08P002743	NWTPH-GX TPH Gasoline Range
37205	6	37640	41955	MSD	W08P002743	NWTPH-GX TPH Gasoline Range
37205	3	37640	41955	SAMPLE	W08P002743	NWTPH-GX TPH Gasoline Range
37205	6	37640	41955	SPK-RPD	W08P002743	NWTPH-GX TPH Gasoline Range
37205	7	37640	41955	SAMPLE	W08P002745	NWTPH-GX TPH Gasoline Range

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Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20081159

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36701	1	37118	41566	BLANK		Strontium 89/90
36701	2	37118	41566	LCS		Strontium 89/90
36701	3	37118	41566	DUP	W08P002695	Strontium 89/90
36701	14	37118	41566	SAMPLE	W08P002743	Strontium 89/90
36701	15	37118	41566	SURR	W08P002743	Strontium 89/90
36701	16	37118	41566	SAMPLE	W08P002745	Strontium 89/90
36701	17	37118	41566	SURR	W08P002745	Strontium 89/90
36683	1	37100	41597	BLANK		TC99 by Liquid Scin.
36683	2	37100	41597	LCS		TC99 by Liquid Scin.
36683	3	37100	41597	DUP	W08P002731	TC99 by Liquid Scin.
36683	4	37100	41597	MS	W08P002731	TC99 by Liquid Scin.
36683	8	37100	41597	SAMPLE	W08P002739	TC99 by Liquid Scin.
36683	9	37100	41597	SAMPLE	W08P002741	TC99 by Liquid Scin.
36683	10	37100	41597	SAMPLE	W08P002746	TC99 by Liquid Scin.
36683	11	37100	41597	SAMPLE	W08P002747	TC99 by Liquid Scin.
36774	2	37192	41601	BLANK		Tritium by Liq Sct column prep
36774	3	37192	41601	LCS		Tritium by Liq Sct column prep
36774	4	37192	41601	DUP	W08P002743	Tritium by Liq Sct column prep
36774	1	37192	41601	MS	W08P002743	Tritium by Liq Sct column prep
36774	5	37192	41601	SAMPLE	W08P002743	Tritium by Liq Sct column prep
36774	6	37192	41601	SAMPLE	W08P002745	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-344-406	LA-344-406: TOTAL ORGANIC CARBON (TOC) BASED ON SW-846	
	EPA SW-846 9060	TOTAL ORGANIC CARBON
	HEIS 9060_TOC	Total Organic Carbon
LA-503-401	LA-503-401: ANALYSIS OF CATIONS BY ION CHROMATOGRAPHY	
	EPA-600/4-86-024 300.7	Dissolved Sodium, Ammonium, Potassium, and Calcium in Wet Deposition by Chemical
	HEIS 300.7_CATIONS_IC	Determination of Ammonium by Ion Chromatography
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
LA-695-402	LA-695-402: DETERMINATION OF CYANIDE BY MIDIDISTILLATION AND SPECTROPHOTOMETRIC	

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: 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.

EPA-600/4-79-020 335.2	Cyanide, Total
HEIS 335.2_CYANIDE	Cyanide, Total

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-523-443	LA-523-443: GAS CHROMATOGRAPH ANALYSIS OF GASOLINE RANGE TOTAL PETROLEUM HYDROCA	
	HEIS WTPH_GASOLINE	Total Petroleum Hydrocarbons, Gasoline
	WDOE TPH NWTPH-G	Volatile Petroleum Products Method for Soil and Water
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)
LA-523-456	LA-523-456: SEMIVOLATILE SAMPLE ANALYSIS BY SW-846, METHOD 8270C	
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
	HEIS 8270_SVOA_GCMS	Semivolatile Orgamoc Compounds By Gas Chromatography/Mass Spectrometry (GC/MS)
LA-523-493	NWTPH-Diesel and/or Gasoline	
	HEIS WTPH_DIESEL (HEIS)	Total Petroleum Hydrocarbons in Diesel
	WDOE TPHD	Total Petroleum Hydrocarbons in Diesel
Organics	Organics - Alcohols, Glycols	
	EPA SW-846 8015B	Nonhalogenated Organics Using GC/FID

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

WSCF
METHOD REFERENCES REPORT

Department: Radiochemistry

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

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

HEIS	**ALPHA_GPC**	GROSS ALPHA GPC
HEIS	**BETA_GPC**	GROSS BETA GPC
HEIS	**SRTOT_SEP_PRECIP_GPC**	Strontium 89/90

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-006
Sample # W08P002738
Client ID: B1VRM1 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**07/17/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/18/08
Magnesium	7439-95-4	LA-505-411		3.57e+04	ug/L			1.00	50		07/18/08
Manganese	7439-96-5	LA-505-411		4.90	ug/L			1.00	4.0		07/18/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Potassium	7440-09-7	LA-505-411		5.50e+03	ug/L			1.00	1.7e+02		07/18/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/18/08
Sodium	7440-23-5	LA-505-411		2.86e+04	ug/L			1.00	51		07/18/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/18/08
Barium	7440-39-3	LA-505-411		118	ug/L			1.00	4.0		07/18/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Chromium	7440-47-3	LA-505-411		817	ug/L			1.00	13		07/18/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/18/08
Vanadium	7440-62-2	LA-505-411		19.1	ug/L			1.00	12		07/18/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/18/08
Calcium	7440-70-2	LA-505-411		1.15e+05	ug/L			1.00	73		07/18/08
Strontium	7440-24-6	LA-505-411		471	ug/L			1.00	4.0		07/18/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-006
Sample # W08P002739
Client ID: B1VRM2 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

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	0.288	mg/L			2.00	0.042		06/10/08
Chloride	16887-00-6	LA-533-410	D	17.7	mg/L			2.00	0.22		06/10/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		06/10/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	104	mg/L			20.00	0.72		06/10/08
Sulfate	14808-79-8	LA-533-410	D	26.4	mg/L			2.00	0.15		06/10/08
ICP Metals Analysis, Grd H20 P Prep											**07/17/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		95.8	ug/L			1.00	25		07/18/08
Magnesium	7439-95-4	LA-505-411		3.55e+04	ug/L			1.00	50		07/18/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Potassium	7440-09-7	LA-505-411		5.51e+03	ug/L			1.00	1.7e+02		07/18/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/18/08
Sodium	7440-23-5	LA-505-411		2.87e+04	ug/L			1.00	51		07/18/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/18/08
Barium	7440-39-3	LA-505-411		117	ug/L			1.00	4.0		07/18/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Chromium	7440-47-3	LA-505-411		813	ug/L			1.00	13		07/18/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/18/08
Vanadium	7440-62-2	LA-505-411		18.5	ug/L			1.00	12		07/18/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/18/08
Calcium	7440-70-2	LA-505-411		1.14e+05	ug/L			1.00	73		07/18/08
Strontium	7440-24-6	LA-505-411		466	ug/L			1.00	4.0		07/18/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-006
Sample # W08P002739
Client ID: B1VRM2 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

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		07/18/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		91.0	mg/L			1.00	1.0		06/12/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-006
Sample # W08P002740
Client ID: B1VRM3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**07/17/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/18/08
Magnesium	7439-95-4	LA-505-411		3.61e+04	ug/L			1.00	50		07/18/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Potassium	7440-09-7	LA-505-411		5.54e+03	ug/L			1.00	1.7e+02		07/18/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/18/08
Sodium	7440-23-5	LA-505-411		2.87e+04	ug/L			1.00	51		07/18/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/18/08
Barium	7440-39-3	LA-505-411		119	ug/L			1.00	4.0		07/18/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Chromium	7440-47-3	LA-505-411		823	ug/L			1.00	13		07/18/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/18/08
Vanadium	7440-62-2	LA-505-411		18.3	ug/L			1.00	12		07/18/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/18/08
Calcium	7440-70-2	LA-505-411		1.17e+05	ug/L			1.00	73		07/18/08
Strontium	7440-24-6	LA-505-411		475	ug/L			1.00	4.0		07/18/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08

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

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)

J - Analyte < lowest calibration but > = MDL.(org)
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: W08-006
Sample # W08P002741
Client ID: B1VRM4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

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	0.286	mg/L			2.00	0.042		06/10/08
Chloride	16887-00-6	LA-533-410	D	17.8	mg/L			2.00	0.22		06/10/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		06/10/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	105	mg/L			20.00	0.72		06/10/08
Sulfate	14808-79-8	LA-533-410	D	26.2	mg/L			2.00	0.15		06/10/08
ICP Metals Analysis, Grd H20 P Prep											**07/17/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		113	ug/L			1.00	25		07/18/08
Magnesium	7439-95-4	LA-505-411		3.69e+04	ug/L			1.00	50		07/18/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Potassium	7440-09-7	LA-505-411		5.59e+03	ug/L			1.00	1.7e+02		07/18/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/18/08
Sodium	7440-23-5	LA-505-411		2.93e+04	ug/L			1.00	51		07/18/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/18/08
Barium	7440-39-3	LA-505-411		122	ug/L			1.00	4.0		07/18/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Chromium	7440-47-3	LA-505-411		846	ug/L			1.00	13		07/18/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/18/08
Vanadium	7440-62-2	LA-505-411		18.2	ug/L			1.00	12		07/18/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/18/08
Calcium	7440-70-2	LA-505-411		1.20e+05	ug/L			1.00	73		07/18/08
Strontium	7440-24-6	LA-505-411		486	ug/L			1.00	4.0		07/18/08

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-006
Sample # W08P002741
Client ID: B1VRM4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

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		07/18/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		91.0	mg/L			1.00	1.0		06/12/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-043
Sample # W08P002742
Client ID: B1VKT5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**07/17/08**
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	U	< 52.0	ug/L			1.00	52		07/18/08
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/18/08
Magnesium	7439-95-4	LA-505-411		7.87e+03	ug/L			1.00	50		07/18/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Potassium	7440-09-7	LA-505-411		3.06e+03	ug/L			1.00	1.7e+02		07/18/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/18/08
Sodium	7440-23-5	LA-505-411		2.22e+04	ug/L			1.00	51		07/18/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/18/08
Barium	7440-39-3	LA-505-411		25.2	ug/L			1.00	4.0		07/18/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/18/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/18/08
Vanadium	7440-62-2	LA-505-411		28.6	ug/L			1.00	12		07/18/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/18/08
Calcium	7440-70-2	LA-505-411		2.50e+04	ug/L			1.00	73		07/18/08
Lithium	7439-93-2	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Strontium	7440-24-6	LA-505-411		105	ug/L			1.00	4.0		07/18/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/24/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-043
Sample # W08P002742
Client ID: B1VKT5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/24/08
Arsenic	7440-38-2	LA-505-412		2.68	ug/L			1.00	0.400		07/01/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-043
Sample # W08P002743
Client ID: B1VKT6 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Cyanide											
Cyanide	57-12-5	LA-695-402	NU	< 4.00	ug/L			1.00	4.0		06/17/08
ICP Metals Analysis, Grd H20 P Prep											**07/17/08**
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	U	< 52.0	ug/L			1.00	52		07/18/08
Iron	7439-89-6	LA-505-411		38.4	ug/L			1.00	25		07/18/08
Magnesium	7439-95-4	LA-505-411		8.01e+03	ug/L			1.00	50		07/18/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Potassium	7440-09-7	LA-505-411		3.09e+03	ug/L			1.00	1.7e+02		07/18/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/18/08
Sodium	7440-23-5	LA-505-411		2.22e+04	ug/L			1.00	51		07/18/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/18/08
Barium	7440-39-3	LA-505-411		25.7	ug/L			1.00	4.0		07/18/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/18/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/18/08
Vanadium	7440-62-2	LA-505-411		28.9	ug/L			1.00	12		07/18/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/18/08
Calcium	7440-70-2	LA-505-411		2.57e+04	ug/L			1.00	73		07/18/08
Lithium	7439-93-2	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Strontium	7440-24-6	LA-505-411		107	ug/L			1.00	4.0		07/18/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
ICP-200.8 MS All possible meta Prep											**06/24/08**

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

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)

J - Analyte < lowest calibration but >= MDL.(org)
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: I08-043
Sample # W08P002743
Client ID: B1VKT6 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/24/08
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/24/08
Uranium	7440-61-1	LA-505-412		0.680	ug/L			1.00	0.0500		06/24/08
Arsenic	7440-38-2	LA-505-412		2.64	ug/L			1.00	0.400		07/01/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	U	< 9.32e-03	mg/L			1.00	9.3e-03		06/20/08
Total organic carbon											
Total organic carbon	TOC	LA-344-406		0.484	mg/L			1.00	0.30		06/19/08

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

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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: I08-043
Sample # W08P002744
Client ID: B1VKV3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**07/17/08**
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	U	< 52.0	ug/L			1.00	52		07/18/08
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/18/08
Magnesium	7439-95-4	LA-505-411		7.81e+03	ug/L			1.00	50		07/18/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Potassium	7440-09-7	LA-505-411		3.03e+03	ug/L			1.00	1.7e+02		07/18/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/18/08
Sodium	7440-23-5	LA-505-411		2.18e+04	ug/L			1.00	51		07/18/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/18/08
Barium	7440-39-3	LA-505-411		24.9	ug/L			1.00	4.0		07/18/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/18/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/18/08
Vanadium	7440-62-2	LA-505-411		28.9	ug/L			1.00	12		07/18/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/18/08
Calcium	7440-70-2	LA-505-411		2.51e+04	ug/L			1.00	73		07/18/08
Lithium	7439-93-2	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Strontium	7440-24-6	LA-505-411		104	ug/L			1.00	4.0		07/18/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/24/08

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

D - Analyte wes 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)

J - Analyte < lowest calibration but > = MDL.(org)
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: I08-043
Sample # W08P002744
Client ID: B1VKV3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/24/08
Arsenic	7440-38-2	LA-505-412		2.65	ug/L			1.00	0.400		07/01/08

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: I08-043
Sample # W08P002745
Client ID: B1VKV4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Cyanide											
Cyanide	57-12-5	LA-695-402	NU	< 4.00	ug/L			1.00	4.0		06/17/08
ICP Metals Analysis, Grd H20 P Prep											**07/17/08**
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	U	< 52.0	ug/L			1.00	52		07/18/08
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/18/08
Magnesium	7439-95-4	LA-505-411		7.92e+03	ug/L			1.00	50		07/18/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Potassium	7440-09-7	LA-505-411		3.03e+03	ug/L			1.00	1.7e+02		07/18/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/18/08
Sodium	7440-23-5	LA-505-411		2.20e+04	ug/L			1.00	51		07/18/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/18/08
Barium	7440-39-3	LA-505-411		25.4	ug/L			1.00	4.0		07/18/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/18/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/18/08
Vanadium	7440-62-2	LA-505-411		28.9	ug/L			1.00	12		07/18/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/18/08
Calcium	7440-70-2	LA-505-411		2.55e+04	ug/L			1.00	73		07/18/08
Lithium	7439-93-2	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
Strontium	7440-24-6	LA-505-411		106	ug/L			1.00	4.0		07/18/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/18/08
ICP-200.8 MS All possible meta Prep											**06/24/08**

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

D - Analyte was identified at a secondary dilution factor(inorg)
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J - Analyte < lowest calibration but > = MDL.(org)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-043
Sample # W08P002745
Client ID: B1VKV4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/24/08
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/24/08
Uranium	7440-61-1	LA-505-412		0.710	ug/L			1.00	0.0500		06/24/08
Arsenic	7440-38-2	LA-505-412		2.63	ug/L			1.00	0.400		07/01/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	U	< 9.32e-03	mg/L			1.00	9.3e-03		06/20/08
Total organic carbon											
Total organic carbon	TOC	LA-344-406		0.409	mg/L			1.00	0.30		06/19/08

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: W08-006
Sample # W08P002746
Client ID: B1VRJ1 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

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	0.382	mg/L			2.00	0.042		06/10/08
Chloride	16887-00-6	LA-533-410	D	6.54	mg/L			2.00	0.22		06/10/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		06/10/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	5.37	mg/L			2.00	0.072		06/10/08
Sulfate	14808-79-8	LA-533-410	D	23.3	mg/L			2.00	0.15		06/10/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		91.0	mg/L			1.00	1.0		06/12/08

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

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

J - Analyte < lowest calibration but > = MDL.(org)
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: W08-006
Sample # W08P002747
Client ID: B1VRJ2 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Inorganic
Sampled: 06/09/08
Received: 06/09/08

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	0.377	mg/L			2.00	0.042		06/10/08
Chloride	16887-00-6	LA-533-410	D	6.57	mg/L			2.00	0.22		06/10/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		06/10/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	5.46	mg/L			2.00	0.072		06/10/08
Sulfate	14808-79-8	LA-533-410	D	23.6	mg/L			2.00	0.15		06/10/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		91.0	mg/L			1.00	1.0		06/12/08

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

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Report WGPP/ver. 5.2
GPAP

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081159
Matrix: WATER
Test: Ammonia (N) by IC

Sample Date: 06/09/08
Receive Date:06/09/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002743											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Ammonia (N) by IC	7664-41-7	<9.32e-3		RPD			n/a	20.000	U	06/20/08
MS	Ammonia (N) by IC	7664-41-7	0.5411	108.655	% Recov	80.000	120.000				06/20/08
MSD	Ammonia (N) by IC	7664-41-7	0.5425	108.936	% Recov	80.000	120.000				06/20/08
SPK-RPD	Ammonia (N) by IC	7664-41-7	108.936		RPD			0.258	20.000		06/20/08
BATCH QC											
BLANK	Ammonia (N) by IC	7664-41-7	<9.32e-3	n/a	mg/L	0.000	0.002			U	06/20/08
BLANK	Ammonia (N) by IC	7664-41-7	<9.32e-3	n/a	mg/L	0.000	0.002			U	06/19/08
LCS	Ammonia (N) by IC	7664-41-7	97.3206	97.321	% Recov	80.000	120.000				06/20/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081159
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 06/09/08
Receive Date:06/09/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002746											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	6.5323		RPD			0.086	20.000		06/10/08
DUP	Fluoride	16984-48-8	0.3831		RPD			0.261	20.000		06/10/08
DUP	Nitrogen in Nitrite	NO2-N	<1.98e-2		RPD			n/a	20.000	U	06/10/08
DUP	Nitrogen in Nitrate	NO3-N	5.3983		RPD			0.473	20.000		06/10/08
DUP	Sulfate	14808-79-8	23.9855		RPD			2.962	20.000		06/10/08
MS	Chloride	16887-00-6	1.0779	108.332	% Recov	80.000	120.000				06/10/08
MS	Fluoride	16984-48-8	0.50735	102.911	% Recov	80.000	120.000				06/10/08
MS	Nitrogen in Nitrite	NO2-N	0.46745	95.010	% Recov	80.000	120.000				06/10/08
MS	Nitrogen in Nitrate	NO3-N	0.469	105.157	% Recov	80.000	120.000				06/10/08
MS	Sulfate	14808-79-8	2.0537	104.781	% Recov	80.000	120.000				06/10/08
MSD	Chloride	16887-00-6	1.0691	107.447	% Recov	80.000	120.000				06/10/08
MSD	Fluoride	16984-48-8	0.51915	105.304	% Recov	80.000	120.000				06/10/08
MSD	Nitrogen in Nitrite	NO2-N	0.46855	95.234	% Recov	80.000	120.000				06/10/08
MSD	Nitrogen in Nitrate	NO3-N	0.4707	105.538	% Recov	80.000	120.000				06/10/08
MSD	Sulfate	14808-79-8	2.0893	106.597	% Recov	80.000	120.000				06/10/08
SPK-RPD	Chloride	16887-00-6	107.447		RPD			0.820	20.000		06/10/08
SPK-RPD	Fluoride	16984-48-8	105.304		RPD			2.299	20.000		06/10/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	95.234		RPD			0.235	20.000		06/10/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	105.538		RPD			0.362	20.000		06/10/08
SPK-RPD	Sulfate	14808-79-8	106.597		RPD			1.718	20.000		06/10/08
Lab ID: W08P002747											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	6.5876		RPD			0.222	20.000		06/10/08
DUP	Fluoride	16984-48-8	0.3857		RPD			2.334	20.000		06/10/08
DUP	Nitrogen in Nitrite	NO2-N	<1.98e-2		RPD			n/a	20.000	U	06/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081159
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 06/09/08
Receive Date:06/09/08

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	5.4275		RPD			0.608	20.000		06/10/08
DUP	Sulfate	14808-79-8	23.3945		RPD			0.702	20.000		06/10/08
MS	Chloride	16887-00-6	1.1216	112.724	% Recov	80.000	120.000				06/10/08
MS	Fluoride	16984-48-8	0.52205	105.892	% Recov	80.000	120.000				06/10/08
MS	Nitrogen in Nitrite	NO2-N	0.4675	95.020	% Recov	80.000	120.000				06/10/08
MS	Nitrogen in Nitrate	NO3-N	0.44855	100.572	% Recov	80.000	120.000				06/10/08
MS	Sulfate	14808-79-8	1.97885	100.962	% Recov	80.000	120.000				06/10/08
MSD	Chloride	16887-00-6	1.0801	108.553	% Recov	80.000	120.000				06/10/08
MSD	Fluoride	16984-48-8	0.5108	103.611	% Recov	80.000	120.000				06/10/08
MSD	Nitrogen in Nitrite	NO2-N	0.46815	95.152	% Recov	80.000	120.000				06/10/08
MSD	Nitrogen in Nitrate	NO3-N	0.4465	100.112	% Recov	80.000	120.000				06/10/08
MSD	Sulfate	14808-79-8	1.92055	97.987	% Recov	80.000	120.000				06/10/08
SPK-RPD	Chloride	16887-00-6	108.553		RPD			3.770	20.000		06/10/08
SPK-RPD	Fluoride	16984-48-8	103.611		RPD			2.178	20.000		06/10/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	95.152		RPD			0.139	20.000		06/10/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	100.112		RPD			0.458	20.000		06/10/08
SPK-RPD	Sulfate	14808-79-8	97.987		RPD			2.991	20.000		06/10/08
BATCH QC											
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	06/10/08
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	06/10/08
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	06/10/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	06/10/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	06/10/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	06/10/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	06/10/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	06/10/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	06/10/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	06/10/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	06/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081159
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	<3.6e-2	n/a	mg/L	0.000	0.040			U	06/10/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	06/10/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	06/10/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	06/10/08
LCS	Chloride	16887-00-6	204.4544	101.719	% Recov	80.000	120.000				06/10/08
LCS	Chloride	16887-00-6	204.8332	101.907	% Recov	80.000	120.000				06/10/08
LCS	Fluoride	16984-48-8	106.3501	106.777	% Recov	80.000	120.000				06/10/08
LCS	Fluoride	16984-48-8	106.4391	106.867	% Recov	80.000	120.000				06/10/08
LCS	Nitrogen in Nitrite	NO2-N	103.0129	103.635	% Recov	80.000	120.000				06/10/08
LCS	Nitrogen in Nitrite	NO2-N	102.9128	103.534	% Recov	80.000	120.000				06/10/08
LCS	Nitrogen in Nitrate	NO3-N	95.8937	106.430	% Recov	80.000	120.000				06/10/08
LCS	Nitrogen in Nitrate	NO3-N	95.755	106.276	% Recov	80.000	120.000				06/10/08
LCS	Sulfate	14808-79-8	393.3004	99.318	% Recov	80.000	120.000				06/10/08
LCS	Sulfate	14808-79-8	391.7292	98.922	% Recov	80.000	120.000				06/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081159
Matrix: WATER
Test: Cyanide by Midi/Spectrophotom

Sample Date: 06/05/08
Receive Date:06/05/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002737											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cyanide by Midi/Spectrophotom	57-12-5	16.6	41.500	% Recov	75.000	125.000		*		06/17/08
MSD	Cyanide by Midi/Spectrophotom	57-12-5	21.7	54.250	% Recov	75.000	125.000		*		06/17/08
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	54.250		RPD			26.632	20.000 *		06/17/08
BATCH QC											
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	4.3	4.300	ug/L	-4.000	4.000		*		06/17/08
LCS	Cyanide by Midi/Spectrophotom	57-12-5	49.3	98.600	% Recov	85.000	115.000				06/17/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081159
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 06/05/08
Receive Date:06/05/08

Lab ID: W08P002737
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	1001	100.100	% Recov	75.000	125.000				07/18/08
MS	Barium	7440-39-3	507.6	101.520	% Recov	75.000	125.000				07/18/08
MS	Beryllium	7440-41-7	556	111.200	% Recov	75.000	125.000				07/18/08
MS	Calcium	7440-70-2	1042	104.200	% Recov	75.000	125.000				07/18/08
MS	Cadmium	7440-43-9	1031	103.100	% Recov	75.000	125.000				07/18/08
MS	Cobalt	7440-48-4	1008	100.800	% Recov	75.000	125.000				07/18/08
MS	Chromium	7440-47-3	1019	101.900	% Recov	75.000	125.000				07/18/08
MS	Copper	7440-50-8	999.1	99.910	% Recov	75.000	125.000				07/18/08
MS	Iron	7439-89-6	1005	100.500	% Recov	75.000	125.000				07/18/08
MS	Potassium	7440-09-7	9527	95.270	% Recov	75.000	125.000				07/18/08
MS	Magnesium	7439-95-4	1025	102.500	% Recov	75.000	125.000				07/18/08
MS	Manganese	7439-96-5	1030	103.000	% Recov	75.000	125.000				07/18/08
MS	Sodium	7440-23-5	1080	108.000	% Recov	75.000	125.000				07/18/08
MS	Nickel	7440-02-0	1031	103.100	% Recov	75.000	125.000				07/18/08
MS	Antimony	7440-36-0	1047	104.700	% Recov	75.000	125.000				07/18/08
MS	Strontium	7440-24-6	528.3	105.660	% Recov	75.000	125.000				07/18/08
MS	Vanadium	7440-62-2	1014	101.400	% Recov	75.000	125.000				07/18/08
MS	Zinc	7440-66-6	1101	110.100	% Recov	75.000	125.000				07/18/08
MSD	Silver	7440-22-4	971.8	97.180	% Recov	75.000	125.000				07/18/08
MSD	Barium	7440-39-3	497.2	99.440	% Recov	75.000	125.000				07/18/08
MSD	Beryllium	7440-41-7	540.7	108.140	% Recov	75.000	125.000				07/18/08
MSD	Calcium	7440-70-2	990.9	99.090	% Recov	75.000	125.000				07/18/08
MSD	Cadmium	7440-43-9	990.6	99.060	% Recov	75.000	125.000				07/18/08
MSD	Cobalt	7440-48-4	966.8	96.680	% Recov	75.000	125.000				07/18/08
MSD	Chromium	7440-47-3	985.3	98.530	% Recov	75.000	125.000				07/18/08
MSD	Copper	7440-50-8	984.6	98.460	% Recov	75.000	125.000				07/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081159
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 06/05/08
Receive Date:06/05/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Iron	7439-89-6	1004	100.400	% Recov	75.000	125.000				07/18/08
MSD	Potassium	7440-09-7	9559	95.590	% Recov	75.000	125.000				07/18/08
MSD	Magnesium	7439-95-4	999.6	99.960	% Recov	75.000	125.000				07/18/08
MSD	Manganese	7439-96-5	996.2	99.620	% Recov	75.000	125.000				07/18/08
MSD	Sodium	7440-23-5	1034	103.400	% Recov	75.000	125.000				07/18/08
MSD	Nickel	7440-02-0	992.5	99.250	% Recov	75.000	125.000				07/18/08
MSD	Antimony	7440-36-0	1039	103.900	% Recov	75.000	125.000				07/18/08
MSD	Strontium	7440-24-6	517	103.400	% Recov	75.000	125.000				07/18/08
MSD	Vanadium	7440-62-2	984	98.400	% Recov	75.000	125.000				07/18/08
MSD	Zinc	7440-66-6	1058	105.800	% Recov	75.000	125.000				07/18/08
SPK-RPD	Silver	7440-22-4	97.180		RPD			2.960	20.000		07/18/08
SPK-RPD	Barium	7440-39-3	99.440		RPD			2.070	20.000		07/18/08
SPK-RPD	Beryllium	7440-41-7	108.140		RPD			2.790	20.000		07/18/08
SPK-RPD	Calcium	7440-70-2	99.090		RPD			5.027	20.000		07/18/08
SPK-RPD	Cadmium	7440-43-9	99.060		RPD			3.997	20.000		07/18/08
SPK-RPD	Cobalt	7440-48-4	96.680		RPD			4.173	20.000		07/18/08
SPK-RPD	Chromium	7440-47-3	98.530		RPD			3.363	20.000		07/18/08
SPK-RPD	Copper	7440-50-8	98.460		RPD			1.462	20.000		07/18/08
SPK-RPD	Iron	7439-89-6	100.400		RPD			0.100	20.000		07/18/08
SPK-RPD	Potassium	7440-09-7	95.590		RPD			0.335	20.000		07/18/08
SPK-RPD	Magnesium	7439-95-4	99.960		RPD			2.509	20.000		07/18/08
SPK-RPD	Manganese	7439-96-5	99.620		RPD			3.336	20.000		07/18/08
SPK-RPD	Sodium	7440-23-5	103.400		RPD			4.352	20.000		07/18/08
SPK-RPD	Nickel	7440-02-0	99.250		RPD			3.805	20.000		07/18/08
SPK-RPD	Antimony	7440-36-0	103.900		RPD			0.767	20.000		07/18/08
SPK-RPD	Strontium	7440-24-6	103.400		RPD			2.162	20.000		07/18/08
SPK-RPD	Vanadium	7440-62-2	98.400		RPD			3.003	20.000		07/18/08
SPK-RPD	Zinc	7440-66-6	105.800		RPD			3.983	20.000		07/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081159
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	Silver	7440-22-4	<5	n/a	ug/L					U	07/18/08
BLANK	Aluminum	7429-90-5	<52	n/a	ug/L					U	07/18/08
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	07/18/08
BLANK	Beryllium	7440-41-7	<4	n/a	ug/L					U	07/18/08
BLANK	Calcium	7440-70-2	<73	n/a	ug/L					U	07/18/08
BLANK	Cadmium	7440-43-9	<4	n/a	ug/L					U	07/18/08
BLANK	Cobalt	7440-48-4	<4	n/a	ug/L					U	07/18/08
BLANK	Chromium	7440-47-3	<13	n/a	ug/L					U	07/18/08
BLANK	Copper	7440-50-8	<6	n/a	ug/L					U	07/18/08
BLANK	Iron	7439-89-6	<25	n/a	ug/L					U	07/18/08
BLANK	Potassium	7440-09-7	<170	n/a	ug/L					U	07/18/08
BLANK	Lithium	7439-93-2	<4	n/a	ug/L					U	07/18/08
BLANK	Magnesium	7439-95-4	<50	n/a	ug/L					U	07/18/08
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	07/18/08
BLANK	Sodium	7440-23-5	<51	n/a	ug/L					U	07/18/08
BLANK	Nickel	7440-02-0	<4	n/a	ug/L					U	07/18/08
BLANK	Antimony	7440-36-0	<56	n/a	ug/L					U	07/18/08
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	07/18/08
BLANK	Vanadium	7440-62-2	<12	n/a	ug/L					U	07/18/08
BLANK	Zinc	7440-66-6	<9	n/a	ug/L					U	07/18/08
LCS	Silver	7440-22-4	1010	101.000	% Recov	80.000	120.000				07/18/08
LCS	Aluminum	7429-90-5	1038	103.800	% Recov	80.000	120.000				07/18/08
LCS	Barium	7440-39-3	519	103.800	% Recov	80.000	120.000				07/18/08
LCS	Beryllium	7440-41-7	568.7	113.740	% Recov	80.000	120.000				07/18/08
LCS	Calcium	7440-70-2	1058	105.800	% Recov	80.000	120.000				07/18/08
LCS	Cadmium	7440-43-9	1043	104.300	% Recov	80.000	120.000				07/18/08
LCS	Cobalt	7440-48-4	1025	102.500	% Recov	80.000	120.000				07/18/08
LCS	Chromium	7440-47-3	1038	103.800	% Recov	80.000	120.000				07/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081159
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	Copper	7440-50-8	1027	102.700	% Recov	80.000	120.000				07/18/08
LCS	Iron	7439-89-6	1023	102.300	% Recov	80.000	120.000				07/18/08
LCS	Potassium	7440-09-7	10050	100.500	% Recov	80.000	120.000				07/18/08
LCS	Lithium	7439-93-2	565.6	113.120	% Recov	80.000	120.000				07/18/08
LCS	Magnesium	7439-95-4	1051	105.100	% Recov	80.000	120.000				07/18/08
LCS	Manganese	7439-96-5	1046	104.600	% Recov	80.000	120.000				07/18/08
LCS	Sodium	7440-23-5	1110	111.000	% Recov	80.000	120.000				07/18/08
LCS	Nickel	7440-02-0	1044	104.400	% Recov	80.000	120.000				07/18/08
LCS	Antimony	7440-36-0	1043	104.300	% Recov	80.000	120.000				07/18/08
LCS	Strontium	7440-24-6	541.4	108.280	% Recov	80.000	120.000				07/18/08
LCS	Vanadium	7440-62-2	1031	103.100	% Recov	80.000	120.000				07/18/08
LCS	Zinc	7440-66-6	1119	111.900	% Recov	80.000	120.000				07/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081159
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 06/04/08
Receive Date:06/04/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002695											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	34.98	87.450	% Recov	70.000	130.000				06/24/08
MS	Mercury	7439-97-6	2.06	103.000	% Recov	70.000	130.000				06/24/08
MS	Lead	7439-92-1	37.71	94.275	% Recov	70.000	130.000				06/24/08
MS	Uranium	7440-61-1	38.48	96.200	% Recov	70.000	130.000				06/24/08
MSD	Arsenic	7440-38-2	35.04	87.600	% Recov	70.000	130.000				06/24/08
MSD	Mercury	7439-97-6	2.11	105.500	% Recov	70.000	130.000				06/24/08
MSD	Lead	7439-92-1	37.42	93.550	% Recov	70.000	130.000				06/24/08
MSD	Uranium	7440-61-1	38.56	96.400	% Recov	70.000	130.000				06/24/08
SPK-RPD	Arsenic	7440-38-2	87.600		RPD			0.171	20.000		06/25/08
SPK-RPD	Mercury	7439-97-6	105.500		RPD			2.398	20.000		06/25/08
SPK-RPD	Lead	7439-92-1	93.550		RPD			0.772	20.000		06/25/08
SPK-RPD	Uranium	7440-61-1	96.400		RPD			0.208	20.000		06/25/08
Lab ID: W08P002697											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	35.66	89.150	% Recov	70.000	130.000				06/24/08
MS	Mercury	7439-97-6	2.26	113.000	% Recov	70.000	130.000				06/24/08
MS	Lead	7439-92-1	39.59	98.975	% Recov	70.000	130.000				06/24/08
MS	Uranium	7440-61-1	44.87	112.175	% Recov	70.000	130.000				06/24/08
MSD	Arsenic	7440-38-2	34.53	86.325	% Recov	70.000	130.000				06/24/08
MSD	Mercury	7439-97-6	2.17	108.500	% Recov	70.000	130.000				06/24/08
MSD	Lead	7439-92-1	37.22	93.050	% Recov	70.000	130.000				06/24/08
MSD	Uranium	7440-61-1	40.54	101.350	% Recov	70.000	130.000				06/24/08
SPK-RPD	Arsenic	7440-38-2	86.325		RPD			3.220	20.000		06/25/08
SPK-RPD	Mercury	7439-97-6	108.500		RPD			4.063	20.000		06/25/08
SPK-RPD	Lead	7439-92-1	93.050		RPD			6.171	20.000		06/25/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081159
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 06/04/08
Receive Date:06/04/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Uranium	7440-61-1	101.350		RPD			10.139	20.000		06/25/08

BATCH QC

BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	06/24/08
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	06/24/08
BLANK	Lead	7439-92-1	<0.1	n/a	ug/L					U	06/24/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	06/24/08
LCS	Arsenic	7440-38-2	34.39	85.975	% Recov	85.000	115.000				06/24/08
LCS	Mercury	7439-97-6	2.05	102.500	% Recov	85.000	115.000				06/24/08
LCS	Lead	7439-92-1	38.26	95.650	% Recov	85.000	115.000				06/24/08
LCS	Uranium	7440-61-1	39.18	97.950	% Recov	85.000	115.000				06/24/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081159
Matrix: WATER
Test: Total Alkalinity as mg/L CaCO3

Sample Date: 06/09/08
Receive Date:06/09/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002755											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	93.5		RPD			5.721	20.000		06/12/08
BATCH QC											
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	115.4	100.348	%Recove	80.000	120.000				06/12/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	115.2	100.174	%Recove	80.000	120.000				06/12/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	114.4	99.478	%Recove	80.000	120.000				06/12/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081159
Matrix: WATER
Test: Total Organic Carbon

Sample Date: 06/05/08
Receive Date:06/05/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002725											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Total Organic Carbon	TOC	2.024	101.200	% Recov	75.000	125.000				06/19/08
MSD	Total Organic Carbon	TOC	2.028	101.400	% Recov	75.000	125.000				06/19/08
SPK-RPD	Total Organic Carbon	TOC	101.400		RPD			0.197	20.000		06/19/08
BATCH QC											
BLANK	Total Organic Carbon	TOC	< 0.045	n/a	mg/L	0.000	300.000			U	06/19/08
METHSPIKE	Total Organic Carbon	TOC	2.007	100.350	% Recov	80.000	120.000				06/19/08
SPK-RSD	Total Organic Carbon	TOC	0.1836	0.184	% RSD	0.000	20.000				06/19/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081159
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Cyanide: Spike recovery below 75%. "N" flag
				ICP-AES: No zirconium present in the LCS. Check and high standards are used to ensure calcium, sodium, and magnesium linearity because sample results are greater than the calibration standard.

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: I08-043
Sample # W08P002743
Client ID: B1VKT6 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Organic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Alcohols, Glycols - 8015 Prep											**06/18/08**
Alcohols, Glycols - 8015											
Ethyl acetate	141-78-6	Organics	U	< 5.00e+03	ug/L			1.00	5.0e+03		06/19/08
NWTPH-D TPH Diesel Range (Wa) Prep											**06/16/08**
NWTPH-D TPH Diesel Range (Wa)											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 71.0	ug/L			1.00	71		06/17/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 71.0	ug/L			1.00	71		06/17/08
NWTPH-GX TPH Gasoline Range Prep											**06/17/08**
NWTPH-GX TPH Gasoline Range											
Total Pet. Hydrocarbons Gas	TPHGASOLINE	LA-523-443	U	< 50.0	ug/L			1.00	50		06/17/08
SW-846 8270C Semi-Vols Prep											**06/16/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 0.950	ug/L			1.00	0.95		06/23/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.30	ug/L			1.00	1.3		06/23/08
Phenol	108-95-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.10	ug/L			1.00	2.1		06/23/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
Pyrene	129-00-0	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.570	ug/L			1.00	0.57		06/23/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.50	ug/L			1.00	2.5		06/23/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.40	ug/L			1.00	1.4		06/23/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	< 0.760	ug/L			1.00	0.76		06/23/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-043
Sample # W08P002743
Client ID: B1VKT6 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Organic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
2-Nitrophenol	88-75-5	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
Naphthalene	91-20-3	LA-523-456	U	< 2.00	ug/L			1.00	2.0		06/23/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
Benzothiazole	95-16-9	LA-523-456	U	< 0.570	ug/L			1.00	0.57		06/23/08
2-Picoline	109-06-8	LA-523-456	U	< 4.80	ug/L			1.00	4.8		06/23/08
Total cresols	1319-77-3	LA-523-456	U	< 0.950	ug/L			1.00	0.95		06/23/08
Tris-2-chloroethyl phosphate	115-96-8	LA-523-456	U	< 0.620	ug/L			1.00	0.62		06/23/08
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Carbon tetrachloride	56-23-5	LA-523-455		11.0	ug/L			1.00	1.0		06/17/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Chloroform	67-66-3	LA-523-455	J	1.20	ug/L			1.00	1.0		06/17/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-043
Sample # W08P002743
Client ID: B1VKT6 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Organic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		06/17/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/17/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/17/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-043
Sample # W08P002745
Client ID: B1VKV4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Organic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Alcohols, Glycols - 8015 Prep											**06/18/08**
Alcohols, Glycols - 8015											
Ethyl acetate	141-78-6	Organics	U	< 5.00e+03	ug/L			1.00	5.0e+03		06/19/08
NWTPH-D TPH Diesel Range (Wa) Prep											**06/16/08**
NWTPH-D TPH Diesel Range (Wa)											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 71.0	ug/L			1.00	71		06/17/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 71.0	ug/L			1.00	71		06/17/08
NWTPH-GX TPH Gasoline Range Prep											**06/17/08**
NWTPH-GX TPH Gasoline Range											
Total Pet. Hydrocarbons Gas	TPHGASOLINE	LA-523-443	U	< 50.0	ug/L			1.00	50		06/17/08
SW-846 8270C Semi-Vols Prep											**06/16/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 0.950	ug/L			1.00	0.95		06/23/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.30	ug/L			1.00	1.3		06/23/08
Phenol	108-95-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.10	ug/L			1.00	2.1		06/23/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
Pyrene	129-00-0	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.570	ug/L			1.00	0.57		06/23/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.50	ug/L			1.00	2.5		06/23/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.40	ug/L			1.00	1.4		06/23/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	< 0.760	ug/L			1.00	0.76		06/23/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-043
Sample # W08P002745
Client ID: B1VKV4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Organic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
2-Nitrophenol	88-75-5	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
Naphthalene	91-20-3	LA-523-456	U	< 2.00	ug/L			1.00	2.0		06/23/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/23/08
Benzothiazole	95-16-9	LA-523-456	U	< 0.570	ug/L			1.00	0.57		06/23/08
2-Picoline	109-06-8	LA-523-456	U	< 4.80	ug/L			1.00	4.8		06/23/08
Total cresols	1319-77-3	LA-523-456	U	< 0.950	ug/L			1.00	0.95		06/23/08
Tris-2-chloroethyl phosphate	115-96-8	LA-523-456	U	< 0.620	ug/L			1.00	0.62		06/23/08
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Carbon tetrachloride	56-23-5	LA-523-455		9.50	ug/L			1.00	1.0		06/17/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-043
Sample # W08P002745
Client ID: B1VKV4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Organic
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		06/17/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/17/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/17/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/17/08

MDL=Minimum Detection Limit
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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081159
Matrix: WATER
Test: Alcohols, Glycols - 8015

Sample Date: 06/04/08
Receive Date:06/04/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002695											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	2-Bromoethanol	540-51-2	17100		RPD			2.882	25.000		06/19/08
DUP	Ethyl acetate	141-78-6	<5000		RPD			n/a	25.000	U	06/19/08
Lab ID: W08P002743											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	2-Bromoethanol	540-51-2	14900	84.659	% Recov	70.000	125.000				06/19/08
MS	Ethyl acetate	141-78-6	7700	85.556	% Recov	75.000	125.000				06/19/08
MSD	2-Bromoethanol	540-51-2	13700	77.841	% Recov	70.000	125.000				06/19/08
MSD	Ethyl acetate	141-78-6	7500	83.333	% Recov	75.000	125.000				06/19/08
SPK-RPD	2-Bromoethanol	540-51-2	77.841		RPD			8.391	20.000		06/19/08
SPK-RPD	Ethyl acetate	141-78-6	83.333		RPD			2.632	20.000		06/19/08
BATCH QC											
BLANK	2-Bromoethanol	540-51-2	17200	97.727	% Recov	75.000	125.000				06/19/08
BLANK	Ethyl acetate	141-78-6	<5000	n/a	ug/L	0.000	5.000			U	06/19/08
LCS	2-Bromoethanol	540-51-2	16300	92.614	% Recov	70.000	130.000				06/19/08
LCS	Ethyl acetate	141-78-6	7700	85.556	% Recov	70.000	130.000				06/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081159
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 06/09/08
Receive Date:06/09/08

Lab ID: W08P002743
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	1,2,4-Trichlorobenzene	120-82-1	17.719	93.000	% Recov	50.000	120.000				06/23/08
MS	1,4-Dichlorobenzene	106-46-7	17.674	92.800	% Recov	41.000	113.000				06/23/08
MS	2,4-Dinitrotoluene	121-14-2	19.275	101.000	% Recov	65.000	109.000				06/23/08
MS	2-Fluorophenol(Surr)	367-12-4	15.578	81.800	% Recov	50.000	110.000				06/23/08
MS	Acenaphthene	83-32-9	19.478	102.000	% Recov	62.000	112.000				06/23/08
MS	4-Chloro-3-methylphenol	59-50-7	28.101	98.400	% Recov	59.000	115.000				06/23/08
MS	2-Chlorophenol	95-57-8	27.208	95.200	% Recov	69.000	111.000				06/23/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	18.616	97.700	% Recov	69.000	115.000				06/23/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	20.028	105.000	% Recov	58.000	109.000				06/23/08
MS	Phenol	108-95-2	28.023	98.100	% Recov	59.000	115.000				06/23/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	19.838	104.000	% Recov	60.000	118.000				06/23/08
MS	4-Nitrophenol	100-02-7	31.170	109.000	% Recov	32.000	130.000				06/23/08
MS	Pentachlorophenol	87-86-5	29.521	103.000	% Recov	51.000	121.000				06/23/08
MS	Phenol-d5(Surr)	4165-62-2	19.008	99.800	% Recov	59.000	116.000				06/23/08
MS	Pyrene	129-00-0	16.236	85.200	% Recov	58.000	116.000				06/23/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	20.379	107.000	% Recov	60.000	120.000				06/23/08
MS	Terphenyl-d14(Surr)	98904-43-9	17.908	94.000	% Recov	60.000	120.000				06/23/08
MSD	1,2,4-Trichlorobenzene	120-82-1	17.466	91.700	% Recov	50.000	120.000				06/23/08
MSD	1,4-Dichlorobenzene	106-46-7	16.892	88.700	% Recov	41.000	113.000				06/23/08
MSD	2,4-Dinitrotoluene	121-14-2	18.578	97.500	% Recov	65.000	109.000				06/23/08
MSD	2-Fluorophenol(Surr)	367-12-4	15.939	83.700	% Recov	50.000	110.000				06/23/08
MSD	Acenaphthene	83-32-9	18.480	97.000	% Recov	62.000	112.000				06/23/08
MSD	4-Chloro-3-methylphenol	59-50-7	26.846	94.000	% Recov	59.000	115.000				06/23/08
MSD	2-Chlorophenol	95-57-8	26.944	94.300	% Recov	69.000	111.000				06/23/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	18.176	95.400	% Recov	69.000	115.000				06/23/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	19.336	102.000	% Recov	58.000	109.000				06/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081159
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 06/09/08
Receive Date:06/09/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Phenol	108-95-2	27.260	95.400	% Recov	59.000	115.000				06/23/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	18.829	98.900	% Recov	60.000	118.000				06/23/08
MSD	4-Nitrophenol	100-02-7	30.496	107.000	% Recov	32.000	130.000				06/23/08
MSD	Pentachlorophenol	87-86-5	28.589	100.000	% Recov	51.000	121.000				06/23/08
MSD	Phenol-d5(Surr)	4165-62-2	18.461	96.900	% Recov	59.000	116.000				06/23/08
MSD	Pyrene	129-00-0	15.932	83.600	% Recov	58.000	116.000				06/23/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	18.924	99.400	% Recov	60.000	120.000				06/23/08
MSD	Terphenyl-d14(Surr)	98904-43-9	15.814	83.000	% Recov	60.000	120.000				06/23/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	91.700		RPD			1.408	25.000		06/23/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	88.700		RPD			4.518	25.000		06/23/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	97.500		RPD			3.526	25.000		06/23/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	83.700		RPD			2.296	25.000		06/23/08
SPK-RPD	Acenaphthene	83-32-9	97.000		RPD			5.025	25.000		06/23/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	94.000		RPD			4.574	25.000		06/23/08
SPK-RPD	2-Chlorophenol	95-57-8	94.300		RPD			0.950	25.000		06/23/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	95.400		RPD			2.382	25.000		06/23/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	102.000		RPD			2.899	25.000		06/23/08
SPK-RPD	Phenol	108-95-2	95.400		RPD			2.791	16.000		06/23/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	98.900		RPD			5.027	25.000		06/23/08
SPK-RPD	4-Nitrophenol	100-02-7	107.000		RPD			1.852	25.000		06/23/08
SPK-RPD	Pentachlorophenol	87-86-5	100.000		RPD			2.956	25.000		06/23/08
SPK-RPD	Phenol-d5(Surr)	4165-62-2	96.900		RPD			2.949	25.000		06/23/08
SPK-RPD	Pyrene	129-00-0	83.600		RPD			1.896	25.000		06/23/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	99.400		RPD			7.364	25.000		06/23/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	83.000		RPD			12.429	25.000		06/23/08
SURR	2-Fluorophenol(Surr)	367-12-4	16.511	86.700	% Recov	50.000	110.000				06/23/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	20.008	105.000	% Recov	58.000	109.000				06/23/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	19.044	100.000	% Recov	60.000	118.000				06/23/08
SURR	Phenol-d5(Surr)	4165-62-2	18.207	95.600	% Recov	59.000	116.000				06/23/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	18.854	99.000	% Recov	60.000	120.000				06/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081159
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 06/09/08
Receive Date:06/09/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Terphenyl-d14(Surr)	98904-43-9	17.726	93.100	% Recov	60.000	120.000				06/23/08
Lab ID: W08P002745											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	2-Fluorophenol(Surr)	367-12-4	14.415	75.700	% Recov	50.000	110.000				06/23/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	18.019	94.600	% Recov	58.000	109.000				06/23/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	17.826	93.600	% Recov	60.000	118.000				06/23/08
SURR	Phenol-d5(Surr)	4165-62-2	17.318	90.900	% Recov	59.000	116.000				06/23/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	16.958	89.000	% Recov	60.000	120.000				06/23/08
SURR	Terphenyl-d14(Surr)	98904-43-9	16.718	87.800	% Recov	60.000	120.000				06/23/08
BATCH QC											
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 2.2	n/a	ug/L					U	06/23/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.4	n/a	ug/L					U	06/23/08
BLANK	2,4-Dichlorophenol	120-83-2	< 0.50	n/a	ug/L					U	06/23/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 0.50	n/a	ug/L					U	06/23/08
BLANK	2-Fluorophenol(Surr)	367-12-4	15.720	78.600	% Recov	50.000	110.000				06/23/08
BLANK	2-Methylphenol (cresol, o-)	95-48-7	< 0.50	n/a	ug/L					U	06/23/08
BLANK	2-Nitrophenol	88-75-5	< 0.50	n/a	ug/L					U	06/23/08
BLANK	2-Picoline	109-06-8	< 5.0	n/a	ug/L					U	06/23/08
BLANK	3 & 4 Methylphenol Total	65794-96-9	< 0.50	n/a	ug/L	0.000	5.000			U	06/23/08
BLANK	Acenaphthene	83-32-9	< 2.6	n/a	ug/L					U	06/23/08
BLANK	Bis(2-ethylhexyl) phthalate	117-81-7	< 0.80	n/a	ug/L					U	06/23/08
BLANK	Benzothiazole	95-16-9	< 0.60	n/a	ug/L	0.000	300.000			U	06/23/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 0.50	n/a	ug/L					U	06/23/08
BLANK	2-Chlorophenol	95-57-8	< 0.50	n/a	ug/L					U	06/23/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 0.60	n/a	ug/L					U	06/23/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	16.787	83.900	% Recov	58.000	109.000				06/23/08
BLANK	Phenol	108-95-2	< 0.50	n/a	ug/L					U	06/23/08
BLANK	Naphthalene	91-20-3	< 2.1	n/a	ug/L					U	06/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081159
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	17.633	88.200	% Recov	60.000	118.000				06/23/08
BLANK	4-Nitrophenol	100-02-7	< 1.0	n/a	ug/L					U	06/23/08
BLANK	Pentachlorophenol	87-86-5	< 1.5	n/a	ug/L					U	06/23/08
BLANK	Phenol-d5(Surr)	4165-62-2	17.513	87.600	% Recov	59.000	116.000				06/23/08
BLANK	Pyrene	129-00-0	< 0.50	n/a	ug/L					U	06/23/08
BLANK	Tris-2-chloroethyl phosphate	115-96-8	< 0.65	n/a	ug/L	0.000	300.000			U	06/23/08
BLANK	Tributyl phosphate	126-73-8	< 0.50	n/a	ug/L					U	06/23/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	16.441	82.200	% Recov	60.000	120.000				06/23/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	17.481	87.400	% Recov	60.000	120.000				06/23/08
LCS	1,2,4-Trichlorobenzene	120-82-1	14.990	75.000	% Recov	46.000	107.000				06/23/08
LCS	1,4-Dichlorobenzene	106-46-7	14.533	72.700	% Recov	42.000	111.000				06/23/08
LCS	2,4-Dinitrotoluene	121-14-2	15.690	78.400	% Recov	59.000	106.000				06/23/08
LCS	2-Fluorophenol(Surr)	367-12-4	15.088	75.400	% Recov	50.000	110.000				06/23/08
LCS	Acenaphthene	83-32-9	16.576	82.900	% Recov	61.000	116.000				06/23/08
LCS	4-Chloro-3-methylphenol	59-50-7	23.381	77.900	% Recov	61.000	106.000				06/23/08
LCS	2-Chlorophenol	95-57-8	23.509	78.400	% Recov	66.000	106.000				06/23/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	15.344	76.700	% Recov	71.000	114.000				06/23/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	16.718	83.600	% Recov	58.000	109.000				06/23/08
LCS	Phenol	108-95-2	24.124	80.400	% Recov	67.000	105.000				06/23/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	16.709	83.500	% Recov	60.000	118.000				06/23/08
LCS	4-Nitrophenol	100-02-7	24.127	80.400	% Recov	32.000	118.000				06/23/08
LCS	Pentachlorophenol	87-86-5	25.148	83.800	% Recov	62.000	114.000				06/23/08
LCS	Phenol-d5(Surr)	4165-62-2	16.814	84.100	% Recov	59.000	116.000				06/23/08
LCS	Pyrene	129-00-0	14.510	72.600	% Recov	66.000	118.000				06/23/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	17.628	88.100	% Recov	60.000	120.000				06/23/08
LCS	Terphenyl-d14(Surr)	98904-43-9	16.885	84.400	% Recov	60.000	120.000				06/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081159
Matrix: WATER
Test: NWTPH-D TPH Diesel Range (Wa)

Sample Date: 06/09/08
Receive Date:06/09/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002743											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	ortho-Terphenyl Surr	84-15-1	458.84	96.400	% Recov	70.000	130.000				06/17/08
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2260.8	95.000	% Recov	75.000	125.000				06/17/08
MSD	ortho-Terphenyl Surr	84-15-1	447.25	93.900	% Recov	70.000	130.000				06/17/08
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2166.6	91.000	% Recov	75.000	125.000				06/17/08
SPK-RPD	ortho-Terphenyl Surr	84-15-1	93.900		RPD			2.627	20.000		06/17/08
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	91.000		RPD			4.301	20.000		06/17/08
SURR	ortho-Terphenyl Surr	84-15-1	473.70	99.500	% Recov	70.000	130.000				06/17/08
Lab ID: W08P002745											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	ortho-Terphenyl Surr	84-15-1	462.10	97.000	% Recov	70.000	130.000				06/17/08
BATCH QC											
BLANK	Kerosene	TPHKEROSENE	< 75	n/a	ug/L					U	06/17/08
BLANK	ortho-Terphenyl Surr	84-15-1	404.26	80.900	% Recov	70.000	130.000				06/17/08
BLANK	Total Pet. Hydrocarbons Diesel	TPHDIESEL	< 75	n/a	ug/L					U	06/17/08
LCS	ortho-Terphenyl Surr	84-15-1	512.96	103.000	% Recov	70.000	130.000				06/17/08
LCS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2534.1	101.000	% Recov	80.000	120.000				06/17/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081159
Matrix: WATER
Test: NWTPH-GX TPH Gasoline Range

Sample Date: 06/09/08
Receive Date:06/09/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002743											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<50		RPD			n/a	20.000	U	06/17/08
MS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	2700	108.000	% Recov	75.000	125.000				06/17/08
MSD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	2600	104.000	% Recov	75.000	125.000				06/17/08
SPK-RPD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	104.000		RPD			3.774	20.000		06/17/08
BATCH QC											
BLANK	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<50	n/a	mg/L	0.000	300.000			U	06/17/08
LCS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	2500	100.000	%rec	80.000	120.000				06/17/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081159
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 06/09/08
Receive Date:06/09/08

Lab ID: W08P002743
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	1,1-Dichloroethene	75-35-4	27.240	109.000	% Recov	63.000	117.000				06/17/08
MS	Benzene	71-43-2	25.640	103.000	% Recov	75.000	129.000				06/17/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	56.000	112.000	% Recov	75.000	125.000				06/17/08
MS	Chlorobenzene	108-90-7	26.510	106.000	% Recov	79.000	119.000				06/17/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.690	115.000	% Recov	75.000	125.000				06/17/08
MS	Toluene-d8(Surr)	2037-26-5	51.670	103.000	% Recov	75.000	125.000				06/17/08
MS	Toluene	108-88-3	26.120	104.000	% Recov	76.000	120.000				06/17/08
MS	Trichloroethene	79-01-6	23.370	93.500	% Recov	73.000	123.000				06/17/08
MSD	1,1-Dichloroethene	75-35-4	28.390	114.000	% Recov	63.000	117.000				06/17/08
MSD	Benzene	71-43-2	26.040	104.000	% Recov	75.000	129.000				06/17/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	55.340	111.000	% Recov	75.000	125.000				06/17/08
MSD	Chlorobenzene	108-90-7	27.170	109.000	% Recov	79.000	119.000				06/17/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.120	116.000	% Recov	75.000	125.000				06/17/08
MSD	Toluene-d8(Surr)	2037-26-5	51.560	103.000	% Recov	75.000	125.000				06/17/08
MSD	Toluene	108-88-3	26.550	106.000	% Recov	76.000	120.000				06/17/08
MSD	Trichloroethene	79-01-6	23.980	95.900	% Recov	73.000	123.000				06/17/08
SPK-RPD	1,1-Dichloroethene	75-35-4	114.000		RPD			4.484	20.000		06/17/08
SPK-RPD	Benzene	71-43-2	104.000		RPD			0.966	20.000		06/17/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	111.000		RPD			0.897	20.000		06/17/08
SPK-RPD	Chlorobenzene	108-90-7	109.000		RPD			2.791	20.000		06/17/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	116.000		RPD			0.866	20.000		06/17/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	103.000		RPD			0.000	20.000		06/17/08
SPK-RPD	Toluene	108-88-3	106.000		RPD			1.905	20.000		06/17/08
SPK-RPD	Trichloroethene	79-01-6	95.900		RPD			2.534	20.000		06/17/08
SURR	4-Bromofluorobenzene(Surr)	460-00-4	55.240	110.000	% Recov	75.000	125.000				06/17/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.770	118.000	% Recov	75.000	125.000				06/17/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081159
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 06/09/08
Receive Date:06/09/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Toluene-d8(Surr)	2037-26-5	52.540	105.000	% Recov	75.000	125.000				06/17/08

Lab ID: W08P002745
BATCH QC ASSOCIATED WITH SAMPLE

SURR	4-Bromofluorobenzene(Surr)	460-00-4	55.810	112.000	% Recov	75.000	125.000				06/17/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	59.130	118.000	% Recov	75.000	125.000				06/17/08
SURR	Toluene-d8(Surr)	2037-26-5	52.070	104.000	% Recov	75.000	125.000				06/17/08

BATCH QC

BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	06/17/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L					U	06/17/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L					U	06/17/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L					U	06/17/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L					U	06/17/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.0	n/a	ug/L					U	06/17/08
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	06/17/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/L					U	06/17/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L					U	06/17/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	06/17/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	55.730	111.000	% Recov	75.000	125.000				06/17/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	06/17/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	06/17/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L					U	06/17/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	06/17/08
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/L					U	06/17/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	56.640	113.000	% Recov	75.000	125.000				06/17/08
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L					U	06/17/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L					U	06/17/08
BLANK	Ethyl cyanide	107-12-0	< 2.0	n/a	ug/L					U	06/17/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	06/17/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081159
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	Methylenechloride	75-09-2	< 1.0	n/a	ug/L					U	06/17/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L					U	06/17/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	0.000	5.000			U	06/17/08
BLANK	Tetrahydrofuran	109-99-9	< 2.0	n/a	ug/L					U	06/17/08
BLANK	Toluene-d8(Surr)	2037-26-5	51.660	103.000	% Recov	75.000	125.000				06/17/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	06/17/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	06/17/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	06/17/08
LCS	1,1-Dichloroethene	75-35-4	26.480	106.000	% Recov	75.000	125.000				06/17/08
LCS	Benzene	71-43-2	25.260	101.000	% Recov	75.000	125.000				06/17/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	56.080	112.000	% Recov	75.000	125.000				06/17/08
LCS	Chlorobenzene	108-90-7	25.060	100.000	% Recov	75.000	125.000				06/17/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.450	117.000	% Recov	75.000	125.000				06/17/08
LCS	Toluene-d8(Surr)	2037-26-5	51.160	102.000	% Recov	75.000	125.000				06/17/08
LCS	Toluene	108-88-3	26.900	108.000	% Recov	75.000	125.000				06/17/08
LCS	Trichloroethene	79-01-6	23.460	93.800	% Recov	75.000	125.000				06/17/08

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-006
Sample # W08P002739
Client ID: B1VRM2 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Radiochemistry
Sampled: 06/09/08
Received: 06/09/08

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		6.40e+04	pCi/L	+-1.28e+04	pCi/L	1.00	5.7		06/16/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-006
Sample # W08P002741
Client ID: B1VRM4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Radiochemistry
Sampled: 06/09/08
Received: 06/09/08

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		6.70e+04	pCi/L	+-1.34e+04	pCi/L	1.00	5.7		06/16/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-043
Sample # W08P002743
Client ID: B1VKT6 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Radiochemistry
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-1.20	pCi/L	+-1.57	pCi/L	1.00	1.0		06/16/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		85.4	Percent			1.00	0.0		06/16/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		1.90e+03	pCi/L	+-418	pCi/L	1.00	2.2e+02		06/20/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-043
Sample # W08P002745
Client ID: B1VKV4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Radiochemistry
Sampled: 06/09/08
Received: 06/09/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-1.40	pCi/L	+-1.50	pCi/L	1.00	1.1		06/16/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		83.3	Percent			1.00	0.0		06/16/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		1.90e+03	pCi/L	+-418	pCi/L	1.00	2.2e+02		06/20/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-006
Sample # W08P002746
Client ID: B1VRJ1 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Radiochemistry
Sampled: 06/09/08
Received: 06/09/08

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		600	pCi/L	+-120	pCi/L	1.00	5.7		06/16/08

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

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)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-006
Sample # W08P002747
Client ID: B1VRJ2 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081159
Department: Radiochemistry
Sampled: 06/09/08
Received: 06/09/08

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		590	pCi/L	+-118	pCi/L	1.00	5.7		06/16/08

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

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)

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

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081159
Matrix: WATER
Test: Strontium 89/90

Sample Date: 06/04/08
Receive Date:06/04/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002695											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	84.2	84.200	% Recov	30.000	105.000				06/16/08
DUP	Strontium-89/90	SR-RAD	U-2.6		RPD			n/a	20.000		06/16/08
Lab ID: W08P002743											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	85.4	85.400	% Recov	30.000	105.000				06/16/08
Lab ID: W08P002745											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	83.3	83.300	% Recov	30.000	105.000				06/16/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	90.9	90.900	% Recov	30.000	105.000				06/16/08
BLANK	Strontium-89/90	10098-97-2	U-1.3	n/a	pCi/L	-10.000	100.000				06/16/08
LCS	Sr-85 Tracer by Beta Counting	SR85	91.6	91.600	% Recov	30.000	105.000				06/16/08
LCS	Strontium-89/90	10098-97-2	128	92.199	% Recov	80.000	120.000				06/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081159
Matrix: WATER
Test: TC99 by Liquid Scin.

Sample Date: 06/05/08
Receive Date:06/05/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002731											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tc-99 by Liquid Scin.	14133-76-7	1.0E+03		RPD			0.000	20.000		06/16/08
MS	Tc-99 by Liquid Scin.	14133-76-7	770.0	102.360	% Recov	75.000	125.000				06/16/08
BATCH QC											
BLANK	Tc-99 by Liquid Scin.	14133-76-7	U1.1	n/a	pCi/L	-10.000	10.000				06/16/08
LCS	Tc-99 by Liquid Scin.	14133-76-7	193.7	102.977	% Recov	80.000	120.000				06/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081159
Matrix: WATER
Test: Tritium by Liq Sct column prep

Sample Date: 06/09/08
Receive Date:06/09/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002743											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tritium	10028-17-8	2.1E+03		RPD			10.000	20.000		06/20/08
MS	Tritium	10028-17-8	21800.0	84.224	% Recov	75.000	125.000				06/20/08
BATCH QC											
BLANK	Tritium	10028-17-8	U-1.0E+02	n/a	pCi/L	-10.000	1000.000				06/20/08
LCS	Tritium	10028-17-8	3920.0	114.256	% Recov	80.000	120.000				06/20/08

M4W41-SLF-08-761

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 11 pages
Including cover page

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

File
07/23/08

ACKNOWLEDGMENT OF SAMPLES RECEIVED

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081159

The following samples were received from you on 06/09/08. 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
W08P002738	B1VRM1	PNNL-GPP @GPP6010	Water	06/09/0
W08P002739	B1VRM2	PNNL-GPP @GPP6010 @IC-30 @TC99-30 ALKALI	Water	06/09/0
W08P002740	B1VRM3	PNNL-GPP @GPP6010	Water	06/09/0
W08P002741	B1VRM4	PNNL-GPP @GPP6010 @IC-30 @TC99-30 ALKALI	Water	06/09/0
W08P002742	B1VKT5	PNNL-GPP @2008 @GPP6010	Water	06/09/0
W08P002743	B1VKT6	PNNL-GPP @2008 @8015GPP @GPP6010 @H3-33 @SR89_90 @SVOCGPP @TPHD-WA @TPHG-WA @VOA-GPP CN-02 NH4- TOC-30	Water	06/09/0
W08P002744	B1VKV3	PNNL-GPP @2008 @GPP6010	Water	06/09/0
W08P002745	B1VKV4	PNNL-GPP @2008 @8015GPP @GPP6010 @H3-33 @SR89_90 @SVOCGPP @TPHD-WA @TPHG-WA @VOA-GPP CN-02 NH4- TOC-30	Water	06/09/0
W08P002746	B1VRJ1	PNNL-GPP @IC-30 @TC99-30 ALKALI	Water	06/09/0
W08P002747	B1VRJ2	PNNL-GPP @IC-30 @TC99-30 ALKALI	Water	06/09/0

Test Acronym Description

Test Acronym	Description
@2008	ICP-200.8 MS All possible meta
@8015GPP	Alcohols, Glycols - 8015
@GPP6010	ICP Metals Analysis, Grd H20 P
@H3-33	Tritium by Liq Sct column prep
@IC-30	Anions by Ion Chromatography

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081159

Test Acronym Description

Test Acronym	Description
@SR89_90	Strontium 89/90
@SVOCGPP	SW-846 8270C Semi-Vols
@TC99-30	TC99 by Liquid Scin.
@TPHD-WA	NWTPH-D TPH Diesel Range (Wa)
@TPHG-WA	NWTPH-GX TPH Gasoline Range
@VOA-GPP	VOA Ground Water Protection
ALKALI	Total Alkalinity as mg/L CaCO3
CN-02	Cyanide by Midi/Spectrophotom
NH4-IC	Ammonia (N) by IC
TOC-30	Total Organic Carbon

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

07/23/08 20081159

W08-006-342

Collector Scott E. Hamaker	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. W08-006	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title RCRA, JUNE 2008	HNF-N-506-16	**Ice Chest No.** **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol RCRA	**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
B1VRM1 (F)	W08P002738	W	6/9/08	0913	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1VRM2	2739	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1VRM2		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1VRM2		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1VRM2		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		JUN 09 2008 1245	F M Hall			JUN 09 2008 1245
F M Hall			6-9-08 1300	TA Frazim			6-9-08 1300

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

W08-006-343

Collector Scott E. Hamaker	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. W08-006	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title RCRA JUNE 2008	NNF-N-506-16	**Ice Chest No.** **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol RCRA	**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
B1VRM3 (F)	2740	W	6-9-08	0913	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1VRM4	2741	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1VRM4		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1VRM4		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1VRM4		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		1245 JUN 09 2008	F M Hall			1245 JUN 09 2008
F M Hall			1300 6-9-08	TARNAZIM			1300 6-9-08

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

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FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-043-15

Collector KE Hamilton	Contact/Requester Steve Trent	Telephone No. 509-373-5869 MSIN FAX
SAF No. I08-043	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 2UP1 JUNE 2008	HNF-N-506-15	Ice Chest No. GRP-03-017 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 ☐
200 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1VKT5 (F)	WCSP002742	W	6-9-08	1018	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1VKT5 (F)		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1VKT5 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 + Lithium (20)	HNO3 to pH <2
B1VKT6	2743	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1VKT6		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1VKT6		W			1x1-L G/P	Strontium-89,90 -- Total Sr	HNO3 to pH <2
B1VKT6		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None
B1VKT6		W			3x40-mL aGs*	Alcohols, Glycols, & Ketones - 8015	Cool~4C
B1VKT6		W			4x1000-mL aG	8270_SVOA_GCMS: List-1 + Cresol (14)	Cool~4C
B1VKT6		W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1VKT6		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1VKT6		W			1x500-mL G/P	6010_METALS_ICP: List-1 + Lithium (20)	HNO3 to pH <2
B1VKT6		W			1x250-mL G/P	300.7_CATIONS_IC: Ammonia (1)	H2SO4 to pH <2
B1VKT6		W			1x250-mL G/P	335.2_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool~4C
B1VKT6		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool~4C
B1VKT6		W			3x1000-mL aG	TPH-DieselKerosene Range - WTPH-D	HCl to pH <2 Cool~4C

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
KE Hamilton	Kevin E Hamilton		JUN 09 2008 1130	RM Arnold	RM Arnold		JUN 09 2008 1130
RM Arnold	RM Arnold		6/9/08 1315	TA Finazzi	Terry Finazzi		6/9/08 1315
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

I08-043-15

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
I08-043	Steve Trent	509-373-5869		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1VKT6	↓	W	6-9-08	1018	4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	HCl to pH <2 Cool~4C

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Relinquished By	Date/Time	Received By	Date/Time
Print: KE Hamilton Sign: Kim E Hamilton	JUN 09 2008 1130	Print: RM Arnold Sign: RM Arnold	JUN 09 2008 1130
Print: RM Arnold Sign: RM Arnold	6/9/08 1315	Print: TA Finazzi Sign: Teresa Finazzi	6/9/08 1315
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

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FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-043-16

Collector KE Hamilton	Contact/Requester Steve Trent	Telephone No. 509-373-5869 MSIN FAX
SAF No. I08-043	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 2UP1, JUNE 2008	HNF-N-506-15	Ice Chest No. GWS D28 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
200 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1VKV3 (F)	2744	W	6.9.08	1018	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1VKV3 (F)		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1VKV3 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-1 + Lithium (20)	HNO3 to pH <2
B1VKV4	2745	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1VKV4		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1VKV4		W			1x1-L G/P	Strontium-89,90 -- Total Sr	HNO3 to pH <2
B1VKV4		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None
B1VKV4		W			3x40-mL aGs*	Alcohols, Glycols, & Ketones - 8015	Cool~4C
B1VKV4		W			4x1000-mL aG	8270_SVOA_GCMS: List-1 + Cresol (14)	Cool~4C
B1VKV4		W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1VKV4		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1VKV4		W			1x500-mL G/P	6010_METALS_ICP: List-1 + Lithium (20)	HNO3 to pH <2
B1VKV4		W			1x250-mL G/P	300.7_CATIONS_IC: Ammonia (1)	H2SO4 to pH <2
B1VKV4		W			1x250-mL G/P	335.2_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool~4C
B1VKV4		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool~4C
B1VKV4		W			3x1000-mL aG	TPH-DieselKerosene Range - WTPH-D	HCl to pH <2 Cool~4C

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
KE Hamilton			JUN 09 2008 1130	RM Arnold	RM Arnold		JUN 09 2008 1130
RM Arnold			6/9/08 1315	TA Phazier			6/9/08 1315

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

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FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-043-16

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
I08-043	Steve Trent	509-373-5869		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1VKV4	1	W	6-9-08	1015	4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	HCl to pH <2 Cool~4C

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Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
KE Hamilton	Kevin E Hamilton		JUN 09 2008 1130	RM Arnold	RM Arnold		JUN 09 2008 1130
RM Arnold	RM Arnold		6/9/08 1315	TA Frazier	Teresa Frazier		6/9/08 1315
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	
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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

W08-006-302

Collector KE Hamilton	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. W08-006	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title RCRA JUNE 2008	HNF-N-506-15	**Ice Chest No.** GW5015 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol RCRA	**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
B1VRJ1	2746	W	6-9-08	1018	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1VRJ1	↓	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1VRJ1	↓	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
KE Hamilton	Kim E Hamilton	JUN 09 2008	1130	RM Arnold	RM Arnold	JUN 09 2008	1130
RM Arnold	RM Arnold		6/9/08 1315	TA Frazin	Teresa Frazin		6/9/08 1315
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

W08-006-303

Collector KE Hamilton	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. W08-006	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title RCRA JUNE 2008	HNF-N-506-15	**Ice Chest No.** GW5015 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol RCRA	**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
B1VRJ2	2747	W	6-9-08	1018	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1VRJ2	↓	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1VRJ2	↓	W	↓	↓	1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2

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Relinquished By	Received By
Print: KE Hamilton Sign: [signature] Date/Time: JUN 09 2008 1130	Print: RM Arnold Sign: [signature] Date/Time: JUN 09 2008 1130
Print: RM Arnold Sign: [signature] Date/Time: 6-9-08 1315	Print: TA Fnazin Sign: [signature] Date/Time: 6/9/08 1315
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