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Memorandum

M4W41-SLF-08-684

To: H. Hampt E6-35 Date: July 10, 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 WSCF20081067

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 WSCF20081067:

- 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#: WSCF20081067
Data Deliverable Date: 09-jul-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
G08-003	B1TH59	W08P002580	WATER
	B1TH60	W08P002581	WATER
G08-005	B1V583	W08P002578	WATER
	B1V591	W08P002577	WATER
	B1V593	W08P002579	WATER
	B1V595	W08P002575	WATER
	B1V597	W08P002576	WATER
I08-037	B1V683	W08P002595	WATER
	B1V684	W08P002596	WATER
	B1V689	W08P002597	WATER
	B1V9X0	W08P002591	WATER
	B1V9X1	W08P002594	WATER
	B1V9X4	W08P002592	WATER
	B1V9X5	W08P002593	WATER
I08-038	B1V699	W08P002585	WATER
	B1V6B0	W08P002586	WATER
	B1V6B3	W08P002582	WATER
	B1V6B4	W08P002583	WATER
W08-004	B1V382	W08P002590	WATER
W08-005	B1V842	W08P002587	WATER
	B1V843	W08P002588	WATER
	B1V925	W08P002584	WATER
	B1V926	W08P002589	WATER

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ATTACHMENT 2

NARRATIVE

Consisting of 5 pages
Including cover page

Introduction

Twenty-three (23) groundwater samples were received at the WSCF Laboratory on May 27, 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 17 through 20, 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 pages 46 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 47 through 49 for QC details. Analytical Note(s):

- Sample results were D flagged if dilution(s) were required.
- Sample results that were less than the reportable limit, however greater than the method detection limit were B flagged.
- Phosphate (B1TH60) – Spike Relative Percent Difference (RPD) slightly exceeded established laboratory limits. No flags issued.

All QC controls are within the established limits.

Cyanide – 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 GRP Letter of Instruction. See page 50 for QC details.

All QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See pages 51 through 57 for QC details. Analytical Note(s):

- Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1V6J1 (SDG# 20081021) and B1V9X4 of this SDG.

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

All other QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See page 58 for QC details. Analytical Note(s):

- Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1V2J8 (SDG# 20081002) and B1V283 (SDG# 20081049).

    - Batch QC - B1V283 (Lead and Arsenic) – Sample results exceeded spiking levels by factor of 4X or greater. Spike recoveries are not valid. Additionally, Arsenic was reanalyzed due to CCV failure. Arsenic sample results were X flagged.

- Uranium – Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1V2J8 (SDG# 20081002) and B1V283 (SDG# 20081049). Due to technical difficulties, Batch QC was not recorded in LABCORE and is therefore offered below.

  B1V2J8 Batch QC

    - Matrix Spike recovery = 101.8%

    - Matrix Spike Duplicate recovery = 98.3%

    - Relative Percent Difference (RPD) = 3.5%

- B1V283 Batch QC

    - Matrix Spike recovery = 97.8%

    - Matrix Spike Duplicate recovery = 95.0%

    - Relative Percent Difference (RPD) = 2.8%

All other 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 59 for QC details. Analytical Note(s):

- Duplicates were analyzed on samples B1TT54 (SDG# 20081085, SAF# F08-076) and B1TH60 of this SDG.

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 60 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V289 (SDG# 20081049).

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 75 for QC details.

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 76 through 79 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.

- Pentachlorophenol – Matrix Spike and Matrix Spike Duplicate recoveries were less than established laboratory limits. No flags issued.

All other 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 80 for QC details.

All QC controls are within the established limits.

TPHG-WA – 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. See page 81 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 82 through 85 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.

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 104 through 108 for QC details. Analytical Note(s):

- Gross Beta – Blank result was greater than established laboratory limits. No flags issued.
- Technetium-99 – Duplicate and Matrix Spike were analyzed on sample# B1V2D0 (SDG# 20081049).
- Tritium – Duplicate Relative Percent Difference (RPD) exceeded established laboratory limits.

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-08-684

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 102 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

GPAP
Richland, WA 99352

Attention: Steve Trent E6-35

Analytical: S. Fitzgerald 7/10/08

Client Services: P.D. Mix 7/10/2008

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

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Report#: WSCF20081067
Report Date: 9-jul-2008
Report WGPP/ver. 5.2
GPAP

w13qlog v4.2 09-jul-2008 11:23:16

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20081067

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36463	2	36881	41234	BLANK		Anions by Ion Chromatography
36463	12	36881	41234	BLANK		Anions by Ion Chromatography
36463	26	36881	41234	BLANK		Anions by Ion Chromatography
36463	3	36881	41234	LCS		Anions by Ion Chromatography
36463	13	36881	41234	LCS		Anions by Ion Chromatography
36463	5	36881	41234	DUP	W08P002581	Anions by Ion Chromatography
36463	6	36881	41234	MS	W08P002581	Anions by Ion Chromatography
36463	7	36881	41234	MSD	W08P002581	Anions by Ion Chromatography
36463	4	36881	41234	SAMPLE	W08P002581	Anions by Ion Chromatography
36463	7	36881	41234	SPK-RPD	W08P002581	Anions by Ion Chromatography
36463	8	36881	41234	SAMPLE	W08P002583	Anions by Ion Chromatography
36463	9	36881	41234	SAMPLE	W08P002586	Anions by Ion Chromatography
36463	10	36881	41234	SAMPLE	W08P002588	Anions by Ion Chromatography
36463	18	36881	41234	SAMPLE	W08P002592	Anions by Ion Chromatography
36463	15	36881	41234	DUP	W08P002593	Anions by Ion Chromatography
36463	16	36881	41234	MS	W08P002593	Anions by Ion Chromatography
36463	17	36881	41234	MSD	W08P002593	Anions by Ion Chromatography
36463	14	36881	41234	SAMPLE	W08P002593	Anions by Ion Chromatography
36463	17	36881	41234	SPK-RPD	W08P002593	Anions by Ion Chromatography
36463	11	36881	41234	SAMPLE	W08P002595	Anions by Ion Chromatography
36463	19	36881	41234	SAMPLE	W08P002596	Anions by Ion Chromatography
36463	21	36881	41234	SAMPLE	W08P002597	Anions by Ion Chromatography
36528	1	36944	41302	BLANK		Cyanide by Midi/Spectrophotom
36528	2	36944	41302	LCS		Cyanide by Midi/Spectrophotom
36528	5	36944	41302	MS	W08GR01411	Cyanide by Midi/Spectrophotom
36528	6	36944	41302	MSD	W08GR01411	Cyanide by Midi/Spectrophotom
36528	6	36944	41302	SPK-RPD	W08GR01411	Cyanide by Midi/Spectrophotom
36528	13	36944	41302	MS	W08P002592	Cyanide by Midi/Spectrophotom
36528	14	36944	41302	MSD	W08P002592	Cyanide by Midi/Spectrophotom
36528	12	36944	41302	SAMPLE	W08P002592	Cyanide by Midi/Spectrophotom
36528	14	36944	41302	SPK-RPD	W08P002592	Cyanide by Midi/Spectrophotom
36528	16	36944	41302	SAMPLE	W08P002593	Cyanide by Midi/Spectrophotom
36544	3	36961	41315	BLANK		Ammonia (N) by IC
36544	9	36961	41315	BLANK		Ammonia (N) by IC
36544	1	36961	41315	LCS		Ammonia (N) by IC
36544	5	36961	41315	DUP	W08P002592	Ammonia (N) by IC
36544	6	36961	41315	MS	W08P002592	Ammonia (N) by IC
36544	7	36961	41315	MSD	W08P002592	Ammonia (N) by IC
36544	4	36961	41315	SAMPLE	W08P002592	Ammonia (N) by IC
36544	7	36961	41315	SPK-RPD	W08P002592	Ammonia (N) by IC
36544	8	36961	41315	SAMPLE	W08P002593	Ammonia (N) by IC
36589	1	37006	41351	LCS		Total Alkalinity as mg/L CaCO3
36589	14	37006	41351	LCS		Total Alkalinity as mg/L CaCO3
36589	22	37006	41351	LCS		Total Alkalinity as mg/L CaCO3
36589	3	37006	41351	DUP	W08GR01411	Total Alkalinity as mg/L CaCO3
36589	6	37006	41351	DUP	W08P002581	Total Alkalinity as mg/L CaCO3
36589	5	37006	41351	SAMPLE	W08P002581	Total Alkalinity as mg/L CaCO3
36589	7	37006	41351	SAMPLE	W08P002584	Total Alkalinity as mg/L CaCO3
36589	8	37006	41351	SAMPLE	W08P002588	Total Alkalinity as mg/L CaCO3

36589	9	37006	41351	SAMPLE	W08P002589	Total Alkalinity as mg/L CaCO3
36648	1	37064	41389	BLANK		ICP-200.8 MS All possible meta
36648	2	37064	41389	LCS		ICP-200.8 MS All possible meta
36648	4	37064	41389	MS	W08P002398	ICP-200.8 MS All possible meta
36648	5	37064	41389	MSD	W08P002398	ICP-200.8 MS All possible meta
36648	5	37064	41389	SPK-RPD	W08P002398	ICP-200.8 MS All possible meta
36648	4	37064	41389	MS	W08P002532	ICP-200.8 MS All possible meta
36648	5	37064	41389	MSD	W08P002532	ICP-200.8 MS All possible meta
36648	5	37064	41389	SPK-RPD	W08P002532	ICP-200.8 MS All possible meta
36648	34	37064	41389	SAMPLE	W08P002583	ICP-200.8 MS All possible meta
36648	35	37064	41389	SAMPLE	W08P002586	ICP-200.8 MS All possible meta
36648	36	37064	41389	SAMPLE	W08P002591	ICP-200.8 MS All possible meta
36648	37	37064	41389	SAMPLE	W08P002592	ICP-200.8 MS All possible meta
36648	38	37064	41389	SAMPLE	W08P002593	ICP-200.8 MS All possible meta
36648	39	37064	41389	SAMPLE	W08P002594	ICP-200.8 MS All possible meta
36648	40	37064	41389	SAMPLE	W08P002595	ICP-200.8 MS All possible meta
36648	41	37064	41389	SAMPLE	W08P002596	ICP-200.8 MS All possible meta
36648	42	37064	41389	SAMPLE	W08P002597	ICP-200.8 MS All possible meta
36758	1	37176	41519	BLANK		Total Organic Carbon
36758	2	37176	41519	METHSPIKE		Total Organic Carbon
36758	3	37176	41519	SPK-RSD		Total Organic Carbon
36758	4	37176	41519	MS	W08P002535	Total Organic Carbon
36758	5	37176	41519	MSD	W08P002535	Total Organic Carbon
36758	5	37176	41519	SPK-RPD	W08P002535	Total Organic Carbon
36758	11	37176	41519	SAMPLE	W08P002592	Total Organic Carbon
36758	12	37176	41519	SAMPLE	W08P002593	Total Organic Carbon
36884	1	37304	41672	BLANK		ICP Metals Analysis, Grd H20 P
36884	2	37304	41672	LCS		ICP Metals Analysis, Grd H20 P
36884	4	37304	41672	MS	W08P002495	ICP Metals Analysis, Grd H20 P
36884	5	37304	41672	MSD	W08P002495	ICP Metals Analysis, Grd H20 P
36884	5	37304	41672	SPK-RPD	W08P002495	ICP Metals Analysis, Grd H20 P
36884	16	37304	41672	SAMPLE	W08P002580	ICP Metals Analysis, Grd H20 P
36884	17	37304	41672	SAMPLE	W08P002581	ICP Metals Analysis, Grd H20 P
36884	18	37304	41672	SAMPLE	W08P002582	ICP Metals Analysis, Grd H20 P
36884	19	37304	41672	SAMPLE	W08P002583	ICP Metals Analysis, Grd H20 P
36884	20	37304	41672	SAMPLE	W08P002585	ICP Metals Analysis, Grd H20 P
36884	21	37304	41672	SAMPLE	W08P002586	ICP Metals Analysis, Grd H20 P
36884	22	37304	41672	SAMPLE	W08P002587	ICP Metals Analysis, Grd H20 P
36884	23	37304	41672	SAMPLE	W08P002588	ICP Metals Analysis, Grd H20 P
36884	24	37304	41672	SAMPLE	W08P002591	ICP Metals Analysis, Grd H20 P
36885	1	37305	41678	BLANK		ICP Metals Analysis, Grd H20 P
36885	2	37305	41678	LCS		ICP Metals Analysis, Grd H20 P
36885	4	37305	41678	MS	W08P002592	ICP Metals Analysis, Grd H20 P
36885	5	37305	41678	MSD	W08P002592	ICP Metals Analysis, Grd H20 P
36885	3	37305	41678	SAMPLE	W08P002592	ICP Metals Analysis, Grd H20 P
36885	5	37305	41678	SPK-RPD	W08P002592	ICP Metals Analysis, Grd H20 P
36885	6	37305	41678	SAMPLE	W08P002593	ICP Metals Analysis, Grd H20 P
36885	7	37305	41678	SAMPLE	W08P002594	ICP Metals Analysis, Grd H20 P

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20081067

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			41401	BLANK		NWTPH-D TPH Diesel Range (Wa)
			41401	LCS		NWTPH-D TPH Diesel Range (Wa)
			41401	MS	W08P002592	NWTPH-D TPH Diesel Range (Wa)
			41401	MSD	W08P002592	NWTPH-D TPH Diesel Range (Wa)
			41401	SAMPLE	W08P002592	NWTPH-D TPH Diesel Range (Wa)
			41401	SPK-RPD	W08P002592	NWTPH-D TPH Diesel Range (Wa)
			41401	SURR	W08P002592	NWTPH-D TPH Diesel Range (Wa)
			41401	SAMPLE	W08P002593	NWTPH-D TPH Diesel Range (Wa)
			41401	SURR	W08P002593	NWTPH-D TPH Diesel Range (Wa)
			41406	BLANK		SW-846 8270C Semi-Vols
			41406	LCS		SW-846 8270C Semi-Vols
			41406	SAMPLE	W08P002592	SW-846 8270C Semi-Vols
			41406	SURR	W08P002592	SW-846 8270C Semi-Vols
			41406	MS	W08P002593	SW-846 8270C Semi-Vols
			41406	MSD	W08P002593	SW-846 8270C Semi-Vols
			41406	SAMPLE	W08P002593	SW-846 8270C Semi-Vols
			41406	SPK-RPD	W08P002593	SW-846 8270C Semi-Vols
			41406	SURR	W08P002593	SW-846 8270C Semi-Vols
36989	1	37411	41746	BLANK		Alcohols, Glycols - 8015
36989	2	37411	41746	LCS		Alcohols, Glycols - 8015
36989	4	37411	41746	DUP	W08P002592	Alcohols, Glycols - 8015
36989	5	37411	41746	MS	W08P002592	Alcohols, Glycols - 8015
36989	6	37411	41746	MSD	W08P002592	Alcohols, Glycols - 8015
36989	3	37411	41746	SAMPLE	W08P002592	Alcohols, Glycols - 8015
36989	6	37411	41746	SPK-RPD	W08P002592	Alcohols, Glycols - 8015
36989	7	37411	41746	SAMPLE	W08P002593	Alcohols, Glycols - 8015
36990	1	37412	41747	BLANK		NWTPH-GX TPH Gasoline Range
36990	2	37412	41747	LCS		NWTPH-GX TPH Gasoline Range
36990	4	37412	41747	DUP	W08P002592	NWTPH-GX TPH Gasoline Range
36990	5	37412	41747	MS	W08P002592	NWTPH-GX TPH Gasoline Range
36990	6	37412	41747	MSD	W08P002592	NWTPH-GX TPH Gasoline Range
36990	3	37412	41747	SAMPLE	W08P002592	NWTPH-GX TPH Gasoline Range
36990	6	37412	41747	SPK-RPD	W08P002592	NWTPH-GX TPH Gasoline Range
36990	7	37412	41747	SAMPLE	W08P002593	NWTPH-GX TPH Gasoline Range
			41756	BLANK		VOA Ground Water Protection
			41756	LCS		VOA Ground Water Protection
			41756	MS	W08P002583	VOA Ground Water Protection
			41756	MSD	W08P002583	VOA Ground Water Protection
			41756	SAMPLE	W08P002583	VOA Ground Water Protection
			41756	SPK-RPD	W08P002583	VOA Ground Water Protection
			41756	SURR	W08P002583	VOA Ground Water Protection
			41756	SAMPLE	W08P002586	VOA Ground Water Protection
			41756	SURR	W08P002586	VOA Ground Water Protection
			41756	SAMPLE	W08P002590	VOA Ground Water Protection
			41756	SURR	W08P002590	VOA Ground Water Protection
			41756	SAMPLE	W08P002592	VOA Ground Water Protection
			41756	SURR	W08P002592	VOA Ground Water Protection
			41756	SAMPLE	W08P002593	VOA Ground Water Protection

41756	SURR	W08P002593	VOA Ground Water Protection

w13qlog v4.2 09-jul-2008 11:23:16

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20081067

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36571	1	36988	41374	BLANK		Gross Alpha/Gross Beta (AB32)
36571	2	36988	41374	LCS		Gross Alpha/Gross Beta (AB32)
36571	3	36988	41374	DUP	W08P002575	Gross Alpha/Gross Beta (AB32)
36571	4	36988	41374	SAMPLE	W08P002575	Gross Alpha/Gross Beta (AB32)
36571	5	36988	41374	SAMPLE	W08P002576	Gross Alpha/Gross Beta (AB32)
36571	6	36988	41374	SAMPLE	W08P002577	Gross Alpha/Gross Beta (AB32)
36571	7	36988	41374	SAMPLE	W08P002578	Gross Alpha/Gross Beta (AB32)
36571	8	36988	41374	SAMPLE	W08P002579	Gross Alpha/Gross Beta (AB32)
36596	1	37013	41379	BLANK		TC99 by Liquid Scin.
36596	4	37013	41379	LCS		TC99 by Liquid Scin.
36596	3	37013	41379	DUP	W08P002545	TC99 by Liquid Scin.
36596	2	37013	41379	MS	W08P002545	TC99 by Liquid Scin.
36596	8	37013	41379	SAMPLE	W08P002583	TC99 by Liquid Scin.
36596	9	37013	41379	SAMPLE	W08P002586	TC99 by Liquid Scin.
36596	10	37013	41379	SAMPLE	W08P002588	TC99 by Liquid Scin.
36596	11	37013	41379	SAMPLE	W08P002592	TC99 by Liquid Scin.
36596	12	37013	41379	SAMPLE	W08P002593	TC99 by Liquid Scin.
36596	13	37013	41379	SAMPLE	W08P002595	TC99 by Liquid Scin.
36596	14	37013	41379	SAMPLE	W08P002596	TC99 by Liquid Scin.
36596	15	37013	41379	SAMPLE	W08P002597	TC99 by Liquid Scin.
36603	1	37020	41380	BLANK		Tritium by Liq Sct column prep
36603	4	37020	41380	LCS		Tritium by Liq Sct column prep
36603	3	37020	41380	DUP	W08P002581	Tritium by Liq Sct column prep
36603	2	37020	41380	MS	W08P002581	Tritium by Liq Sct column prep
36603	6	37020	41380	SAMPLE	W08P002581	Tritium by Liq Sct column prep
36603	7	37020	41380	SAMPLE	W08P002584	Tritium by Liq Sct column prep
36603	8	37020	41380	SAMPLE	W08P002588	Tritium by Liq Sct column prep
36603	9	37020	41380	SAMPLE	W08P002589	Tritium by Liq Sct column prep
36603	10	37020	41380	SAMPLE	W08P002592	Tritium by Liq Sct column prep
36603	11	37020	41380	SAMPLE	W08P002593	Tritium by Liq Sct column prep
36603	12	37020	41380	SAMPLE	W08P002595	Tritium by Liq Sct column prep
36603	13	37020	41380	SAMPLE	W08P002596	Tritium by Liq Sct column prep
36603	14	37020	41380	SAMPLE	W08P002597	Tritium by Liq Sct column prep
36629	1	37046	41392	BLANK		Gross Alpha on Alpha Plateau
36629	2	37046	41392	LCS		Gross Alpha on Alpha Plateau
36629	3	37046	41392	DUP	W08P002581	Gross Alpha on Alpha Plateau
36629	4	37046	41392	SAMPLE	W08P002581	Gross Alpha on Alpha Plateau
36599	1	37016	41458	BLANK		Gross Alpha/Gross Beta (AB32)
36599	2	37016	41458	LCS		Gross Alpha/Gross Beta (AB32)
36599	3	37016	41458	DUP	W08P002581	Gross Alpha/Gross Beta (AB32)
36599	4	37016	41458	SAMPLE	W08P002581	Gross Alpha/Gross Beta (AB32)
36642	1	37063	41459	BLANK		Strontium 89/90
36642	2	37063	41459	LCS		Strontium 89/90
36642	3	37063	41459	DUP	W08P002592	Strontium 89/90
36642	4	37063	41459	SAMPLE	W08P002592	Strontium 89/90
36642	5	37063	41459	SURR	W08P002592	Strontium 89/90
36642	6	37063	41459	SAMPLE	W08P002593	Strontium 89/90

36642 7 37063 41459 SURR W08P002593 Strontium 89/90

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_GB**	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: G08-003
Sample # W08P002580
Client ID: B1TH59 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		1.21e+04	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		3.39e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		6.04e+03	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		30.4	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/01/08
Calcium	7440-70-2	LA-505-411		4.23e+04	ug/L			1.00	73		07/01/08
Strontium	7440-24-6	LA-505-411		310	ug/L			1.00	4.0		07/01/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: G08-003
Sample # W08P002581
Client ID: B1TH60 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	DU	< 0.0420	mg/L			2.00	0.042		05/28/08
Chloride	16887-00-6	LA-533-410	D	11.2	mg/L			2.00	0.22		05/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		05/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	9.34	mg/L			2.00	0.072		05/28/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 0.0640	mg/L			2.00	0.064		05/28/08
Sulfate	14808-79-8	LA-533-410	D	65.6	mg/L			2.00	0.15		05/28/08
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		1.27e+04	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		3.54e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		6.20e+03	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		31.7	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/01/08
Calcium	7440-70-2	LA-505-411		4.34e+04	ug/L			1.00	73		07/01/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: G08-003
Sample # W08P002581
Client ID: B1TH60 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Strontium	7440-24-6	LA-505-411		326	ug/L			1.00	4.0		07/01/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		55.0	mg/L			1.00	1.0		06/05/08

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

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J - Analyte < lowest calibration but > = MDL.(org)
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D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
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• - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-038
Sample # W08P002582
Client ID: B1V6B3 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		1.04e+04	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		4.36e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411		5.00	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		1.08e+05	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		39.4	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411		60.7	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411		39.7	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/01/08
Calcium	7440-70-2	LA-505-411		3.37e+04	ug/L			1.00	73		07/01/08
Strontium	7440-24-6	LA-505-411		195	ug/L			1.00	4.0		07/01/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: I08-038
Sample # W08P002583
Client ID: B1V6B4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	D	1.91	mg/L			2.00	0.042		05/28/08
Chloride	16887-00-6	LA-533-410	D	13.8	mg/L			2.00	0.22		05/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		05/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	49.4	mg/L			10.00	0.36		05/28/08
Sulfate	14808-79-8	LA-533-410	D	48.0	mg/L			2.00	0.15		05/28/08
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		71.2	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		1.04e+04	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		4.35e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411		5.10	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		1.07e+05	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		39.2	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411		64.4	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411		42.0	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411		12.2	ug/L			1.00	9.0		07/01/08
Calcium	7440-70-2	LA-505-411		3.36e+04	ug/L			1.00	73		07/01/08
Strontium	7440-24-6	LA-505-411		194	ug/L			1.00	4.0		07/01/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: I08-038
Sample # W08P002583
Client ID: B1V6B4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

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		07/01/08
ICP-200.8 MS All possible meta Prep											**06/09/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		4.55	ug/L			1.00	0.0500		06/09/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: W08-005
Sample # W08P002584
Client ID: B1V925 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		140	mg/L			1.00	1.0		06/05/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-038
Sample # W08P002585
Client ID: B1V699 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		1.04e+04	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		4.38e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		1.07e+05	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		39.7	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411		62.1	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411		37.5	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/01/08
Calcium	7440-70-2	LA-505-411		3.42e+04	ug/L			1.00	73		07/01/08
Strontium	7440-24-6	LA-505-411		195	ug/L			1.00	4.0		07/01/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-038
Sample # W08P002586
Client ID: B1V6B0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	D	1.95	mg/L			2.00	0.042		05/28/08
Chloride	16887-00-6	LA-533-410	D	13.7	mg/L			2.00	0.22		05/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		05/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	49.2	mg/L			10.00	0.36		05/28/08
Sulfate	14808-79-8	LA-533-410	D	48.3	mg/L			2.00	0.15		05/28/08
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		56.7	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		1.05e+04	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		4.43e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		1.10e+05	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		40.7	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411		69.9	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411		44.4	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411		13.6	ug/L			1.00	9.0		07/01/08
Calcium	7440-70-2	LA-505-411		3.47e+04	ug/L			1.00	73		07/01/08
Strontium	7440-24-6	LA-505-411		198	ug/L			1.00	4.0		07/01/08

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

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

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U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-038
Sample # W08P002586
Client ID: B1V6B0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

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		07/01/08
ICP-200.8 MS All possible meta Prep											**06/09/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		2.84	ug/L			1.00	0.0500		06/09/08

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

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-005
Sample # W08P002587
Client ID: B1V842 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		1.96e+04	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		5.70e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		2.66e+04	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		60.6	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411		20.8	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/01/08
Calcium	7440-70-2	LA-505-411		6.20e+04	ug/L			1.00	73		07/01/08
Strontium	7440-24-6	LA-505-411		256	ug/L			1.00	4.0		07/01/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08

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

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X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-005
Sample # W08P002588
Client ID: B1V843 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

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	0.326	mg/L			2.00	0.042		05/28/08
Chloride	16887-00-6	LA-533-410	D	32.2	mg/L			10.00	1.1		05/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		05/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	27.6	mg/L			10.00	0.36		05/28/08
Sulfate	14808-79-8	LA-533-410	D	44.3	mg/L			2.00	0.15		05/28/08
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		34.8	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		1.95e+04	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411		4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		5.62e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411		5.10	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		2.64e+04	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		60.3	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411		15.1	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411		20.7	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/01/08
Calcium	7440-70-2	LA-505-411		6.22e+04	ug/L			1.00	73		07/01/08
Strontium	7440-24-6	LA-505-411		255	ug/L			1.00	4.0		07/01/08

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

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-005
Sample # W08P002588
Client ID: B1V843 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

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		07/01/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		100	mg/L			1.00	1.0		06/05/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-005
Sample # W08P002589
Client ID: B1V926 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		140	mg/L			1.00	1.0		06/05/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002591
Client ID: B1V9X0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		7.41e+03	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411		4.90	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		3.88e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		2.05e+04	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		23.8	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411		25.4	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/01/08
Calcium	7440-70-2	LA-505-411		2.74e+04	ug/L			1.00	73		07/01/08
Lithium	7439-93-2	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Strontium	7440-24-6	LA-505-411		118	ug/L			1.00	4.0		07/01/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
ICP-200.8 MS All possible meta Prep											**06/09/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/09/08
Mercury	7439-97-6	LA-505-412		0.0800	ug/L			1.00	0.0500		06/09/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: I08-037
Sample # W08P002591
Client ID: B1V9X0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Arsenic	7440-38-2	LA-505-412	X	4.34	ug/L			2.00	0.800		06/10/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: I08-037
Sample # W08P002592
Client ID: B1V9X4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

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	0.284	mg/L			2.00	0.042		05/28/08
Chloride	16887-00-6	LA-533-410	D	6.24	mg/L			2.00	0.22		05/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		05/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	3.82	mg/L			2.00	0.072		05/28/08
Sulfate	14808-79-8	LA-533-410	D	18.6	mg/L			2.00	0.15		05/28/08
Cyanide											
Cyanide	57-12-5	LA-695-402	U	< 4.00	ug/L			1.00	4.0		06/02/08
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		29.6	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		7.76e+03	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411		8.00	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		3.97e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		2.09e+04	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		24.8	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411		26.2	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/01/08

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

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J - Analyte < lowest calibration but > = MDL.(org)
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U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002592
Client ID: B1V9X4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411		2.81e+04	ug/L			1.00	73		07/01/08
Lithium	7439-93-2	LA-505-411		4.10	ug/L			1.00	4.0		07/01/08
Strontium	7440-24-6	LA-505-411		123	ug/L			1.00	4.0		07/01/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
ICP-200.8 MS All possible meta Prep											**06/09/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/09/08
Mercury	7439-97-6	LA-505-412		0.0500	ug/L			1.00	0.0500		06/09/08
Uranium	7440-61-1	LA-505-412		2.49	ug/L			1.00	0.0500		06/09/08
Arsenic	7440-38-2	LA-505-412	X	4.19	ug/L			2.00	0.800		06/10/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	U	< 9.32e-03	mg/L			1.00	9.3e-03		06/03/08
Total organic carbon											
Total organic carbon	TOC	LA-344-406		0.525	mg/L			1.00	0.30		06/13/08

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

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D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002593
Client ID: B1V9X5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

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	0.290	mg/L			2.00	0.042		05/28/08
Chloride	16887-00-6	LA-533-410	D	3.79	mg/L			2.00	0.22		05/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		05/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	0.672	mg/L			2.00	0.072		05/28/08
Sulfate	14808-79-8	LA-533-410	D	12.7	mg/L			2.00	0.15		05/28/08
Cyanide											
Cyanide	57-12-5	LA-695-402	U	< 4.00	ug/L			1.00	4.0		06/02/08
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		34.6	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		6.09e+03	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411		16.5	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		3.09e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		2.11e+04	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		23.0	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411		18.2	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/01/08

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

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J - Analyte < lowest calibration but >= MDL.(org)
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U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002593
Client ID: B1V9X5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411		1.92e+04	ug/L			1.00	73		07/01/08
Lithium	7439-93-2	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Strontium	7440-24-6	LA-505-411		83.3	ug/L			1.00	4.0		07/01/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
ICP-200.8 MS All possible meta Prep											**06/09/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/09/08
Mercury	7439-97-6	LA-505-412		0.0800	ug/L			1.00	0.0500		06/09/08
Uranium	7440-61-1	LA-505-412		2.17	ug/L			1.00	0.0500		06/09/08
Arsenic	7440-38-2	LA-505-412	X	3.93	ug/L			2.00	0.800		06/10/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401		0.0315	mg/L			1.00	9.3e-03		06/03/08
Total organic carbon											
Total organic carbon	TOC	LA-344-406		1.38	mg/L			1.00	0.30		06/13/08

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

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J - Analyte < lowest calibration but >= MDL.(org)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002594
Client ID: B1V9X1 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**06/30/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/01/08
Magnesium	7439-95-4	LA-505-411		6.14e+03	ug/L			1.00	50		07/01/08
Manganese	7439-96-5	LA-505-411		15.2	ug/L			1.00	4.0		07/01/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Potassium	7440-09-7	LA-505-411		3.13e+03	ug/L			1.00	1.7e+02		07/01/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/01/08
Sodium	7440-23-5	LA-505-411		2.14e+04	ug/L			1.00	51		07/01/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/01/08
Barium	7440-39-3	LA-505-411		22.7	ug/L			1.00	4.0		07/01/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/01/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/01/08
Vanadium	7440-62-2	LA-505-411		27.3	ug/L			1.00	12		07/01/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/01/08
Calcium	7440-70-2	LA-505-411		1.93e+04	ug/L			1.00	73		07/01/08
Lithium	7439-93-2	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
Strontium	7440-24-6	LA-505-411		83.6	ug/L			1.00	4.0		07/01/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/01/08
ICP-200.8 MS All possible meta Prep											**06/09/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/09/08
Mercury	7439-97-6	LA-505-412		0.0800	ug/L			1.00	0.0500		06/09/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002594
Client ID: B1V9X1 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Arsenic	7440-38-2	LA-505-412	X	4.92	ug/L			2.00	0.800		06/10/08

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

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J - Analyte < lowest calibration but >= MDL.(org)
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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: I08-037
Sample # W08P002595
Client ID: B1V683 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

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	0.215	mg/L			2.00	0.042		05/28/08
Chloride	16887-00-6	LA-533-410	D	20.7	mg/L			2.00	0.22		05/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	BD	0.144	mg/L			2.00	0.020		05/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	22.7	mg/L			10.00	0.36		05/28/08
Sulfate	14808-79-8	LA-533-410	D	39.8	mg/L			2.00	0.15		05/28/08
ICP-200.8 MS All possible meta Prep											**06/09/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		4.48	ug/L			1.00	0.0500		06/09/08

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

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002596
Client ID: B1V684 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	DU	< 0.0420	mg/L			2.00	0.042		05/28/08
Chloride	16887-00-6	LA-533-410	DU	< 0.220	mg/L			2.00	0.22		05/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		05/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0720	mg/L			2.00	0.072		05/28/08
Sulfate	14808-79-8	LA-533-410	DU	< 0.154	mg/L			2.00	0.15		05/28/08
ICP-200.8 MS All possible meta Prep											**06/09/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/09/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002597
Client ID: B1V689 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Inorganic
Sampled: 05/27/08
Received: 05/27/08

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	0.190	mg/L			2.00	0.042		05/28/08
Chloride	16887-00-6	LA-533-410	D	35.0	mg/L			2.00	0.22		05/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		05/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	4.49	mg/L			2.00	0.072		05/28/08
Sulfate	14808-79-8	LA-533-410	D	37.1	mg/L			2.00	0.15		05/28/08
ICP-200.8 MS All possible meta Prep											**06/09/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		0.850	ug/L			1.00	0.0500		06/09/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
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WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081067
Matrix: WATER
Test: Ammonia (N) by IC

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002592											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Ammonia (N) by IC	7664-41-7	<9.32e-3		RPD			n/a	20.000	U	06/03/08
MS	Ammonia (N) by IC	7664-41-7	0.5521	110.863	% Recov	80.000	120.000				06/03/08
MSD	Ammonia (N) by IC	7664-41-7	0.5513	110.703	% Recov	80.000	120.000				06/03/08
SPK-RPD	Ammonia (N) by IC	7664-41-7	110.703		RPD			0.144	20.000		06/03/08
BATCH QC											
BLANK	Ammonia (N) by IC	7664-41-7	<9.32e-3	n/a	mg/L	0.000	0.002			U	06/03/08
BLANK	Ammonia (N) by IC	7664-41-7	<9.32e-3	n/a	mg/L	0.000	0.002			U	06/03/08
LCS	Ammonia (N) by IC	7664-41-7	105.6094	105.609	% Recov	80.000	120.000				06/03/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081067
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 05/27/08
Receive Date:05/27/08

Lab ID: W08P002581
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
DUP	Chloride	16887-00-6	11.3122		RPD			0.793	20.000		05/28/08
DUP	Fluoride	16984-48-8	<4.2e-2		RPD			n/a	20.000	U	05/28/08
DUP	Nitrogen in Nitrite	NO2-N	<1.98e-2		RPD			n/a	20.000	U	05/28/08
DUP	Nitrogen in Nitrate	NO3-N	9.4307		RPD			0.979	20.000		05/28/08
DUP	Phosphate (P) by IC	PO4-P	<6.4e-2		RPD			n/a	20.000	U	05/28/08
DUP	Sulfate	14808-79-8	65.7775		RPD			0.331	20.000		05/28/08
MS	Chloride	16887-00-6	1.09375	109.925	% Recov	80.000	120.000				05/28/08
MS	Fluoride	16984-48-8	0.4788	97.120	% Recov	80.000	120.000				05/28/08
MS	Nitrogen in Nitrite	NO2-N	0.4798	97.520	% Recov	80.000	120.000				05/28/08
MS	Nitrogen in Nitrate	NO3-N	0.41515	93.083	% Recov	80.000	120.000				05/28/08
MS	Phosphate (P) by IC	PO4-P	0.86155	90.026	% Recov	80.000	120.000				05/28/08
MS	Sulfate	14808-79-8	1.7883	91.240	% Recov	80.000	120.000				05/28/08
MSD	Chloride	16887-00-6	1.0988	110.432	% Recov	80.000	120.000				05/28/08
MSD	Fluoride	16984-48-8	0.51185	103.824	% Recov	80.000	120.000				05/28/08
MSD	Nitrogen in Nitrite	NO2-N	0.47895	97.348	% Recov	80.000	120.000				05/28/08
MSD	Nitrogen in Nitrate	NO3-N	0.44995	100.886	% Recov	80.000	120.000				05/28/08
MSD	Phosphate (P) by IC	PO4-P	1.0662	111.411	% Recov	80.000	120.000				05/28/08
MSD	Sulfate	14808-79-8	1.95115	99.548	% Recov	80.000	120.000				05/28/08
SPK-RPD	Chloride	16887-00-6	110.432		RPD			0.460	20.000		05/28/08
SPK-RPD	Fluoride	16984-48-8	103.824		RPD			6.673	20.000		05/28/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	97.348		RPD			0.177	20.000		05/28/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	100.886		RPD			8.046	20.000		05/28/08
SPK-RPD	Phosphate (P) by IC	PO4-P	111.411		RPD			21.232	20.000 •		05/28/08
SPK-RPD	Sulfate	14808-79-8	99.548		RPD			8.709	20.000		05/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081067
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002593											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	3.6891		RPD			2.608	20.000		05/28/08
DUP	Fluoride	16984-48-8	0.3139		RPD			7.778	20.000		05/28/08
DUP	Nitrogen in Nitrite	NO2-N	<1.98e-2		RPD			n/a	20.000	U	05/28/08
DUP	Nitrogen in Nitrate	NO3-N	0.6667		RPD			0.762	20.000		05/28/08
DUP	Sulfate	14808-79-8	12.6468		RPD			0.643	20.000		05/28/08
MS	Chloride	16887-00-6	0.9713	97.618	% Recov	80.000	120.000				05/28/08
MS	Fluoride	16984-48-8	0.5182	105.112	% Recov	80.000	120.000				05/28/08
MS	Nitrogen in Nitrite	NO2-N	0.5197	105.630	% Recov	80.000	120.000				05/28/08
MS	Nitrogen in Nitrate	NO3-N	0.4583	102.758	% Recov	80.000	120.000				05/28/08
MS	Sulfate	14808-79-8	1.93435	98.691	% Recov	80.000	120.000				05/28/08
MSD	Chloride	16887-00-6	0.89865	90.317	% Recov	80.000	120.000				05/28/08
MSD	Fluoride	16984-48-8	0.50025	101.471	% Recov	80.000	120.000				05/28/08
MSD	Nitrogen in Nitrite	NO2-N	0.49515	100.640	% Recov	80.000	120.000				05/28/08
MSD	Nitrogen in Nitrate	NO3-N	0.4713	105.673	% Recov	80.000	120.000				05/28/08
MSD	Sulfate	14808-79-8	1.8916	96.510	% Recov	80.000	120.000				05/28/08
SPK-RPD	Chloride	16887-00-6	90.317		RPD			7.770	20.000		05/28/08
SPK-RPD	Fluoride	16984-48-8	101.471		RPD			3.525	20.000		05/28/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	100.640		RPD			4.838	20.000		05/28/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	105.673		RPD			2.797	20.000		05/28/08
SPK-RPD	Sulfate	14808-79-8	96.510		RPD			2.235	20.000		05/28/08
BATCH QC											
BLANK	Chloride	16837-00-6	<0.11	n/a	mg/L	0.000	0.030			U	05/28/08
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	05/28/08
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	05/28/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	05/28/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	05/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081067
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	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	05/28/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	05/28/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	05/28/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	05/28/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	05/28/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	05/28/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	05/28/08
BLANK	Phosphate (P) by IC	PO4-P	<3.2e-2	n/a	mg/L	0.000	0.200			U	05/28/08
BLANK	Phosphate (P) by IC	PO4-P	<3.2e-2	n/a	mg/L	0.000	0.200			U	05/28/08
BLANK	Phosphate (P) by IC	PO4-P	<3.2e-2	n/a	mg/L	0.000	0.200			U	05/28/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	05/28/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	05/28/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	05/28/08
LCS	Chloride	16887-00-6	202.7558	100.874	% Recov	80.000	120.000				05/28/08
LCS	Chloride	16887-00-6	204.8254	101.903	% Recov	80.000	120.000				05/28/08
LCS	Fluoride	16984-48-8	104.7529	105.174	% Recov	80.000	120.000				05/28/08
LCS	Fluoride	16984-48-8	101.1327	101.539	% Recov	80.000	120.000				05/28/08
LCS	Nitrogen in Nitrite	NO2-N	100.1934	100.798	% Recov	80.000	120.000				05/28/08
LCS	Nitrogen in Nitrite	NO2-N	99.0363	99.634	% Recov	80.000	120.000				05/28/08
LCS	Nitrogen in Nitrate	NO3-N	95.1429	105.597	% Recov	80.000	120.000				05/28/08
LCS	Nitrogen in Nitrate	NO3-N	93.7914	104.097	% Recov	80.000	120.000				05/28/08
LCS	Phosphate (P) by IC	PO4-P	200.931	103.894	% Recov	80.000	120.000				05/28/08
LCS	Phosphate (P) by IC	PO4-P	189.0135	97.732	% Recov	80.000	120.000				05/28/08
LCS	Sulfate	14808-79-8	404.755	102.211	% Recov	80.000	120.000				05/28/08
LCS	Sulfate	14808-79-8	401.4825	101.384	% Recov	80.000	120.000				05/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081067
Matrix: WATER
Test: Cyanide by Midi/Spectrophotom

Sample Date: 05/28/08
Receive Date:05/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01411											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cyanide by Midi/Spectrophotom	57-12-5	54	135.000	% Recov	75.000	125.000		*		06/02/08
MSD	Cyanide by Midi/Spectrophotom	57-12-5	97	242.500	% Recov	75.000	125.000		*		06/02/08
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	242.500		RPD			56.954	20.000 *		06/02/08
Lab ID: W08P002592											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cyanide by Midi/Spectrophotom	57-12-5	41.9	104.750	% Recov	75.000	125.000				06/02/08
MSD	Cyanide by Midi/Spectrophotom	57-12-5	41.9	104.750	% Recov	75.000	125.000				06/02/08
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	104.750		RPD			0.000	20.000		06/02/08
BATCH QC											
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	< 4	n/a	ug/L	-4.000	4.000			U	06/02/08
LCS	Cyanide by Midi/Spectrophotom	57-12-5	52.7	105.400	% Recov	85.000	115.000				06/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081067
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 05/19/08
Receive Date:05/19/08

Lab ID: W08P002495
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	1016	101.600	% Recov	75.000	125.000				07/01/08
MS	Barium	7440-39-3	495.4	99.080	% Recov	75.000	125.000				07/01/08
MS	Beryllium	7440-41-7	525.7	105.140	% Recov	75.000	125.000				07/01/08
MS	Calcium	7440-70-2	1030	103.000	% Recov	75.000	125.000				07/01/08
MS	Cadmium	7440-43-9	1004	100.400	% Recov	75.000	125.000				07/01/08
MS	Cobalt	7440-48-4	1022	102.200	% Recov	75.000	125.000				07/01/08
MS	Chromium	7440-47-3	992.4	99.240	% Recov	75.000	125.000				07/01/08
MS	Copper	7440-50-8	998.3	99.830	% Recov	75.000	125.000				07/01/08
MS	Iron	7439-89-6	956.6	95.660	% Recov	75.000	125.000				07/01/08
MS	Potassium	7440-09-7	10303	103.030	% Recov	75.000	125.000				07/01/08
MS	Magnesium	7439-95-4	850	85.000	% Recov	75.000	125.000				07/01/08
MS	Manganese	7439-96-5	1013.5	101.350	% Recov	75.000	125.000				07/01/08
MS	Sodium	7440-23-5	720	72.000	% Recov	75.000	125.000				07/01/08
MS	Nickel	7440-02-0	992.1	99.210	% Recov	75.000	125.000				07/01/08
MS	Antimony	7440-36-0	1009	100.900	% Recov	75.000	125.000				07/01/08
MS	Strontium	7440-24-6	513.9	102.780	% Recov	75.000	125.000				07/01/08
MS	Vanadium	7440-62-2	977.5	97.750	% Recov	75.000	125.000				07/01/08
MS	Zinc	7440-66-6	988.7	98.870	% Recov	75.000	125.000				07/01/08
MSD	Silver	7440-22-4	1012	101.200	% Recov	75.000	125.000				07/01/08
MSD	Barium	7440-39-3	493.6	98.720	% Recov	75.000	125.000				07/01/08
MSD	Beryllium	7440-41-7	524.3	104.860	% Recov	75.000	125.000				07/01/08
MSD	Calcium	7440-70-2	790	79.000	% Recov	75.000	125.000				07/01/08
MSD	Cadmium	7440-43-9	1001	100.100	% Recov	75.000	125.000				07/01/08
MSD	Cobalt	7440-48-4	1019	101.900	% Recov	75.000	125.000				07/01/08
MSD	Chromium	7440-47-3	995.8	99.580	% Recov	75.000	125.000				07/01/08
MSD	Copper	7440-50-8	1000	100.000	% Recov	75.000	125.000				07/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081067
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 05/19/08
Receive Date:05/19/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Iron	7439-89-6	965.6	96.560	% Recov	75.000	125.000				07/01/08
MSD	Potassium	7440-09-7	10293	102.930	% Recov	75.000	125.000				07/01/08
MSD	Magnesium	7439-95-4	850	85.000	% Recov	75.000	125.000				07/01/08
MSD	Manganese	7439-96-5	1010.5	101.050	% Recov	75.000	125.000				07/01/08
MSD	Sodium	7440-23-5	710	71.000	% Recov	75.000	125.000				07/01/08
MSD	Nickel	7440-02-0	998.1	99.810	% Recov	75.000	125.000				07/01/08
MSD	Antimony	7440-36-0	1028	102.800	% Recov	75.000	125.000				07/01/08
MSD	Strontium	7440-24-6	513.5	102.700	% Recov	75.000	125.000				07/01/08
MSD	Vanadium	7440-62-2	983.4	98.340	% Recov	75.000	125.000				07/01/08
MSD	Zinc	7440-66-6	988.7	98.870	% Recov	75.000	125.000				07/01/08
SPK-RPD	Silver	7440-22-4	101.200		RPD			0.394	20.000		07/01/08
SPK-RPD	Barium	7440-39-3	98.720		RPD			0.364	20.000		07/01/08
SPK-RPD	Beryllium	7440-41-7	104.860		RPD			0.267	20.000		07/01/08
SPK-RPD	Calcium	7440-70-2	79.000		RPD			26.374	20.000 *		07/01/08
SPK-RPD	Cadmium	7440-43-9	100.100		RPD			0.299	20.000		07/01/08
SPK-RPD	Cobalt	7440-48-4	101.900		RPD			0.294	20.000		07/01/08
SPK-RPD	Chromium	7440-47-3	99.580		RPD			0.342	20.000		07/01/08
SPK-RPD	Copper	7440-50-8	100.000		RPD			0.170	20.000		07/01/08
SPK-RPD	Iron	7439-89-6	96.560		RPD			0.936	20.000		07/01/08
SPK-RPD	Potassium	7440-09-7	102.930		RPD			0.097	20.000		07/01/08
SPK-RPD	Magnesium	7439-95-4	85.000		RPD			0.000	20.000		07/01/08
SPK-RPD	Manganese	7439-96-5	101.050		RPD			0.296	20.000		07/01/08
SPK-RPD	Sodium	7440-23-5	71.000		RPD			1.399	20.000		07/01/08
SPK-RPD	Nickel	7440-02-0	99.810		RPD			0.603	20.000		07/01/08
SPK-RPD	Antimony	7440-36-0	102.800		RPD			1.865	20.000		07/01/08
SPK-RPD	Strontium	7440-24-6	102.700		RPD			0.078	20.000		07/01/08
SPK-RPD	Vanadium	7440-62-2	98.340		RPD			0.602	20.000		07/01/08
SPK-RPD	Zinc	7440-66-6	98.870		RPD			0.000	20.000		07/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081067
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	07/01/08
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	07/01/08
BLANK	Beryllium	7440-41-7	<4	n/a	ug/L					U	07/01/08
BLANK	Calcium	7440-70-2	<73	n/a	ug/L					U	07/01/08
BLANK	Cadmium	7440-43-9	<4	n/a	ug/L					U	07/01/08
BLANK	Cobalt	7440-48-4	<4	n/a	ug/L					U	07/01/08
BLANK	Chromium	7440-47-3	<13	n/a	ug/L					U	07/01/08
BLANK	Copper	7440-50-8	<6	n/a	ug/L					U	07/01/08
BLANK	Iron	7439-89-6	<25	n/a	ug/L					U	07/01/08
BLANK	Potassium	7440-09-7	<170	n/a	ug/L					U	07/01/08
BLANK	Lithium	7439-93-2	<4	n/a	ug/L					U	07/01/08
BLANK	Magnesium	7439-95-4	<50	n/a	ug/L					U	07/01/08
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	07/01/08
BLANK	Sodium	7440-23-5	<51	n/a	ug/L					U	07/01/08
BLANK	Nickel	7440-02-0	<4	n/a	ug/L					U	07/01/08
BLANK	Antimony	7440-36-0	<56	n/a	ug/L					U	07/01/08
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	07/01/08
BLANK	Vanadium	7440-62-2	<12	n/a	ug/L					U	07/01/08
BLANK	Zinc	7440-66-6	<9	n/a	ug/L					U	07/01/08
LCS	Silver	7440-22-4	1017	101.700	% Recov	80.000	120.000				07/01/08
LCS	Barium	7440-39-3	487.1	97.420	% Recov	80.000	120.000				07/01/08
LCS	Beryllium	7440-41-7	532.6	106.520	% Recov	80.000	120.000				07/01/08
LCS	Calcium	7440-70-2	1102	110.200	% Recov	80.000	120.000				07/01/08
LCS	Cadmium	7440-43-9	1028	102.800	% Recov	80.000	120.000				07/01/08
LCS	Cobalt	7440-48-4	1073	107.300	% Recov	80.000	120.000				07/01/08
LCS	Chromium	7440-47-3	1024	102.400	% Recov	80.000	120.000				07/01/08
LCS	Copper	7440-50-8	1013	101.300	% Recov	80.000	120.000				07/01/08
LCS	Iron	7439-89-6	981.5	98.150	% Recov	80.000	120.000				07/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081067
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	Potassium	7440-09-7	10630	106.300	% Recov	80.000	120.000				07/01/08
LCS	Lithium	7439-93-2	493.8	98.760	% Recov	80.000	120.000				07/01/08
LCS	Magnesium	7439-95-4	970.4	97.040	% Recov	80.000	120.000				07/01/08
LCS	Manganese	7439-96-5	1026	102.600	% Recov	80.000	120.000				07/01/08
LCS	Sodium	7440-23-5	1044	104.400	% Recov	80.000	120.000				07/01/08
LCS	Nickel	7440-02-0	1033	103.300	% Recov	80.000	120.000				07/01/08
LCS	Antimony	7440-36-0	1041	104.100	% Recov	80.000	120.000				07/01/08
LCS	Strontium	7440-24-6	507.4	101.480	% Recov	80.000	120.000				07/01/08
LCS	Vanadium	7440-62-2	986.8	98.680	% Recov	80.000	120.000				07/01/08
LCS	Zinc	7440-66-6	997	99.700	% Recov	80.000	120.000				07/01/08

Lab ID: W08P002592
BATCH QC ASSOCIATED WITH SAMPLE

MS	Silver	7440-22-4	994.7	99.470	% Recov	75.000	125.000				07/01/08
MS	Barium	7440-39-3	489.6	97.920	% Recov	75.000	125.000				07/01/08
MS	Beryllium	7440-41-7	524.2	104.840	% Recov	75.000	125.000				07/01/08
MS	Calcium	7440-70-2	1470	147.000	% Recov	75.000	125.000				07/01/08
MS	Cadmium	7440-43-9	997.3	99.730	% Recov	75.000	125.000				07/01/08
MS	Cobalt	7440-48-4	1015	101.500	% Recov	75.000	125.000				07/01/08
MS	Chromium	7440-47-3	988.6	98.860	% Recov	75.000	125.000				07/01/08
MS	Copper	7440-50-8	990.4	99.040	% Recov	75.000	125.000				07/01/08
MS	Iron	7439-89-6	981.4	98.140	% Recov	75.000	125.000				07/01/08
MS	Potassium	7440-09-7	10267	102.670	% Recov	75.000	125.000				07/01/08
MS	Lithium	7439-93-2	491.8	98.360	% Recov	70.000	130.000				07/01/08
MS	Magnesium	7439-95-4	1042	104.200	% Recov	75.000	125.000				07/01/08
MS	Manganese	7439-96-5	1000	100.000	% Recov	75.000	125.000				07/01/08
MS	Sodium	7440-23-5	1220	122.000	% Recov	75.000	125.000				07/01/08
MS	Nickel	7440-02-0	994	99.400	% Recov	75.000	125.000				07/01/08
MS	Antimony	7440-36-0	1012	101.200	% Recov	75.000	125.000				07/01/08
MS	Strontium	7440-24-6	510.7	102.140	% Recov	75.000	125.000				07/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081067
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Vanadium	7440-62-2	976.8	97.680	% Recov	75.000	125.000				07/01/08
MS	Zinc	7440-66-6	991.1	99.110	% Recov	75.000	125.000				07/01/08
MSD	Silver	7440-22-4	899.2	89.920	% Recov	75.000	125.000				07/01/08
MSD	Barium	7440-39-3	436.4	87.280	% Recov	75.000	125.000				07/01/08
MSD	Beryllium	7440-41-7	469.4	93.880	% Recov	75.000	125.000				07/01/08
MSD	Calcium	7440-70-2	-1730	-173.000	% Recov	75.000	125.000			•	07/01/08
MSD	Cadmium	7440-43-9	903.8	90.380	% Recov	75.000	125.000				07/01/08
MSD	Cobalt	7440-48-4	908.5	90.850	% Recov	75.000	125.000				07/01/08
MSD	Chromium	7440-47-3	877.3	87.730	% Recov	75.000	125.000				07/01/08
MSD	Copper	7440-50-8	876.2	87.620	% Recov	75.000	125.000				07/01/08
MSD	Iron	7439-89-6	891.9	89.190	% Recov	75.000	125.000				07/01/08
MSD	Potassium	7440-09-7	8787	87.870	% Recov	75.000	125.000				07/01/08
MSD	Lithium	7439-93-2	429.6	85.920	% Recov	75.000	125.000				07/01/08
MSD	Magnesium	7439-95-4	1	0.100	% Recov	75.000	125.000			•	07/01/08
MSD	Manganese	7439-96-5	900.4	90.040	% Recov	75.000	125.000				07/01/08
MSD	Sodium	7440-23-5	-1530	-153.000	% Recov	75.000	125.000			•	07/01/08
MSD	Nickel	7440-02-0	896.7	89.670	% Recov	75.000	125.000				07/01/08
MSD	Antimony	7440-36-0	929.2	92.920	% Recov	75.000	125.000				07/01/08
MSD	Strontium	7440-24-6	441.6	88.320	% Recov	75.000	125.000				07/01/08
MSD	Vanadium	7440-62-2	875.9	87.590	% Recov	75.000	125.000				07/01/08
MSD	Zinc	7440-66-6	892.6	89.260	% Recov	75.000	125.000				07/01/08
SPK-RPD	Silver	7440-22-4	89.920		RPD			10.085	20.000		07/01/08
SPK-RPD	Barium	7440-39-3	87.280		RPD			11.490	20.000		07/01/08
SPK-RPD	Beryllium	7440-41-7	93.880		RPD			11.031	20.000		07/01/08
SPK-RPD	Calcium	7440-70-2	-173.000		RPD			-2461.538	20.000	•	07/01/08
SPK-RPD	Cadmium	7440-43-9	90.380		RPD			9.836	20.000		07/01/08
SPK-RPD	Cobalt	7440-48-4	90.850		RPD			11.074	20.000		07/01/08
SPK-RPD	Chromium	7440-47-3	87.730		RPD			11.930	20.000		07/01/08
SPK-RPD	Copper	7440-50-8	87.620		RPD			12.236	20.000		07/01/08
SPK-RPD	Iron	7439-89-6	89.190		RPD			9.555	20.000		07/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081067
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Potassium	7440-09-7	87.870		RPD			15.535	20.000		07/01/08
SPK-RPD	Lithium	7439-93-2	85.920		RPD			13.501	20.000		07/01/08
SPK-RPD	Magnesium	7439-95-4	0.100		RPD			199.616	20.000 *		07/01/08
SPK-RPD	Manganese	7439-96-5	90.040		RPD			10.482	20.000		07/01/08
SPK-RPD	Sodium	7440-23-5	-153.000		RPD			-1774.194	20.000 *		07/01/08
SPK-RPD	Nickel	7440-02-0	89.670		RPD			10.292	20.000		07/01/08
SPK-RPD	Antimony	7440-36-0	92.920		RPD			8.531	20.000		07/01/08
SPK-RPD	Strontium	7440-24-6	88.320		RPD			14.512	20.000		07/01/08
SPK-RPD	Vanadium	7440-62-2	87.590		RPD			10.892	20.000		07/01/08
SPK-RPD	Zinc	7440-66-6	89.260		RPD			10.458	20.000		07/01/08

BATCH QC

BLANK	Silver	7440-22-4	<5	n/a	ug/L					U	07/01/08
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	07/01/08
BLANK	Beryllium	7440-41-7	<4	n/a	ug/L					U	07/01/08
BLANK	Calcium	7440-70-2	<73	n/a	ug/L					U	07/01/08
BLANK	Cadmium	7440-43-9	<4	n/a	ug/L					U	07/01/08
BLANK	Cobalt	7440-48-4	<4	n/a	ug/L					U	07/01/08
BLANK	Chromium	7440-47-3	<13	n/a	ug/L					U	07/01/08
BLANK	Copper	7440-50-8	<6	n/a	ug/L					U	07/01/08
BLANK	Iron	7439-89-6	<25	n/a	ug/L					U	07/01/08
BLANK	Potassium	7440-09-7	<170	n/a	ug/L					U	07/01/08
BLANK	Lithium	7439-93-2	<4	n/a	ug/L					U	07/01/08
BLANK	Magnesium	7439-95-4	<50	n/a	ug/L					U	07/01/08
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	07/01/08
BLANK	Sodium	7440-23-5	<51	n/a	ug/L					U	07/01/08
BLANK	Nickel	7440-02-0	<4	n/a	ug/L					U	07/01/08
BLANK	Antimony	7440-36-0	<56	n/a	ug/L					U	07/01/08
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	07/01/08
BLANK	Vanadium	7440-62-2	<12	n/a	ug/L					U	07/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081067
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
BLANK	Zinc	7440-66-6	<9	n/a	ug/L					U	07/01/08
LCS	Silver	7440-22-4	994.9	99.490	% Recov	80.000	120.000				07/01/08
LCS	Barium	7440-39-3	480.9	96.180	% Recov	80.000	120.000				07/01/08
LCS	Beryllium	7440-41-7	521.1	104.220	% Recov	80.000	120.000				07/01/08
LCS	Calcium	7440-70-2	1070	107.000	% Recov	80.000	120.000				07/01/08
LCS	Cadmium	7440-43-9	997	99.700	% Recov	80.000	120.000				07/01/08
LCS	Cobalt	7440-48-4	1024	102.400	% Recov	80.000	120.000				07/01/08
LCS	Chromium	7440-47-3	966.1	96.610	% Recov	80.000	120.000				07/01/08
LCS	Copper	7440-50-8	991.9	99.190	% Recov	80.000	120.000				07/01/08
LCS	Iron	7439-89-6	982	98.200	% Recov	80.000	120.000				07/01/08
LCS	Potassium	7440-09-7	10180	101.800	% Recov	80.000	120.000				07/01/08
LCS	Lithium	7439-93-2	475	95.000	% Recov	80.000	120.000				07/01/08
LCS	Magnesium	7439-95-4	957.9	95.790	% Recov	80.000	120.000				07/01/08
LCS	Manganese	7439-96-5	1002	100.200	% Recov	80.000	120.000				07/01/08
LCS	Sodium	7440-23-5	1014	101.400	% Recov	80.000	120.000				07/01/08
LCS	Nickel	7440-02-0	1006	100.600	% Recov	80.000	120.000				07/01/08
LCS	Antimony	7440-36-0	1017	101.700	% Recov	80.000	120.000				07/01/08
LCS	Strontium	7440-24-6	497.8	99.560	% Recov	80.000	120.000				07/01/08
LCS	Vanadium	7440-62-2	968.1	96.810	% Recov	80.000	120.000				07/01/08
LCS	Zinc	7440-66-6	980.6	98.060	% Recov	80.000	120.000				07/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081067
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 05/15/08
Receive Date:05/16/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002398											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	38.95	97.375	% Recov	70.000	130.000				06/09/08
MS	Lead	7439-92-1	39.2	98.000	% Recov	70.000	130.000				06/09/08
MSD	Arsenic	7440-38-2	38.59	96.475	% Recov	70.000	130.000				06/09/08
MSD	Lead	7439-92-1	38.73	96.825	% Recov	70.000	130.000				06/09/08
SPK-RPD	Arsenic	7440-38-2	96.475		RPD			0.929	20.000		06/09/08
SPK-RPD	Lead	7439-92-1	96.825		RPD			1.206	20.000		06/09/08
Lab ID: W08P002532											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	35.9	89.750	% Recov	70.000	130.000				06/09/08
MS	Lead	7439-92-1	50.9	127.250	% Recov	70.000	130.000				06/09/08
MSD	Arsenic	7440-38-2	5.9	14.750	% Recov	70.000	130.000		•		06/09/08
MSD	Lead	7439-92-1	41.3	103.250	% Recov	70.000	130.000				06/09/08
SPK-RPD	Arsenic	7440-38-2	14.750		RPD			143.541	20.000 •		06/09/08
SPK-RPD	Lead	7439-92-1	103.250		RPD			20.824	20.000 •		06/09/08
BATCH QC											
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	06/09/08
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	06/09/08
BLANK	Lead	7439-92-1	<0.1	n/a	ug/L					U	06/09/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	06/09/08
LCS	Arsenic	7440-38-2	41.44	103.600	% Recov	85.000	115.000				06/09/08
LCS	Mercury	7439-97-6	2	100.000	% Recov	85.000	115.000				06/09/08
LCS	Lead	7439-92-1	39.44	98.600	% Recov	85.000	115.000				06/09/08
LCS	Uranium	7440-61-1	39.88	99.700	% Recov	85.000	115.000				06/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081067
Matrix: WATER
Test: Total Alkalinity as mg/L CaCO3

Sample Date: 05/28/08
Receive Date:05/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01411											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	84.6		RPD			0.000	20.000		06/05/08
Lab ID: W08P002581											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	54.8		RPD			0.182	20.000		06/05/08
BATCH QC											
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	114.3	99.391	%Recove	80.000	120.000				06/05/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	114.5	99.565	%Recove	80.000	120.000				06/05/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	117.3	102.000	%Recove	80.000	120.000				06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081067
Matrix: WATER
Test: Total Organic Carbon

Sample Date: 05/22/08
Receive Date:05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002535											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Total Organic Carbon	TOC	4.223	105.575	% Recov	75.000	125.000				06/13/08
MSD	Total Organic Carbon	TOC	4.223	105.575	% Recov	75.000	125.000				06/13/08
SPK-RPD	Total Organic Carbon	TOC	105.575		RPD			0.000	20.000		06/13/08
BATCH QC											
BLANK	Total Organic Carbon	TOC	< 0.045	n/a	mg/L	0.000	300.000			U	06/13/08
METHSPIKE	Total Organic Carbon	TOC	1.983	99.150	% Recov	80.000	120.000				06/13/08
SPK-RSD	Total Organic Carbon	TOC	0.1716	0.172	% RSD	0.000	20.000				06/13/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081067
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		SVOA: Something in the chemical matrix of B1TV9X5 seriously affected the recovery of pentachlorophenol in both the MS and MSD. The low recovery of pentachlorophenol in the MS/MSD is due to chemical matrix as the LCS and other spikes in the batch had normal pentachlorophenol recoveries. cgc W08P002581,W08P002584, W08P002588-89, W08P002592-93, W08P002595-97/H-3 batch dup is flagged for poor RPD. Since all the other QC checks came out fine, this batch has been approved. lmh W08P002581/Gross beta method blank is flagged because the result is high. Since all the other QC checks came out fine, this batch has been approved. lmh ICP-MS: Arsenic rerun due to CCV failure. "X" flag ICP-AES: [Samples W08P2580-2583; 2585-2588; 2591] No zirconium present in the LCS. Sodium, magnesium, and calcium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. High and check standards are used to ensure calcium, sodium, and magnesium linearity because sample results are greater

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 COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081067
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
				than the calibration standard.
				ICP-AES: [Samples W08P2592-2594] No zirconium present in the LCS. Sodium, magnesium, and calcium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. Check standard is used to ensure calcium and sodium 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: I08-038
Sample # W08P002583
Client ID: B1V6B4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Trichloroethene	79-01-6	LA-523-455	J	3.20	ug/L			1.00	1.0		06/05/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Carbon tetrachloride	56-23-5	LA-523-455		620	ug/L			1.00	20		06/09/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Chloroform	67-66-3	LA-523-455		6.40	ug/L			1.00	1.0		06/05/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		06/05/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/05/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08

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

B - The analyte < the RDL but >= the IDL/MDL (inorg)
J - Analyte < lowest calibration but >= MDL.(org)
U - Analyzed for but not detected above limiting criteria.(org)
D - Analyte was identified at a secondary dilution factor(inorg)
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X - Other flags/notes described in the comments/narrative(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: I08-038
Sample # W08P002583
Client ID: B1V6B4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/05/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08

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

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

Attention: Steve Trent E6-35
SAF Number: I08-038
Sample # W08P002586
Client ID: B1V6B0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Trichloroethene	79-01-6	LA-523-455	J	3.00	ug/L			1.00	1.0		06/05/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Carbon tetrachloride	56-23-5	LA-523-455		650	ug/L			1.00	20		06/09/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Chloroform	67-66-3	LA-523-455		6.30	ug/L			1.00	1.0		06/05/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		06/05/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/05/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08

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

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

Attention: Steve Trent E6-35
SAF Number: I08-038
Sample # W08P002586
Client ID: B1V6B0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/05/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08

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: W08-004
Sample # W08P002590
Client ID: B1V382 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		06/05/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/05/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08

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

B - The analyte < the RDL but >= the IDL/MDL (inorg)
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X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-004
Sample # W08P002590
Client ID: B1V382 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/05/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08

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: I08-037
Sample # W08P002592
Client ID: B1V9X4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Alcohols, Glycols - 8015 Prep											**06/10/08**
Alcohols, Glycols - 8015											
Ethyl acetate	141-78-6	Organics	U	< 5.00e+03	ug/L			1.00	5.0e+03		06/10/08
NWTPH-D TPH Diesel Range (Wa) Prep											**06/03/08**
NWTPH-D TPH Diesel Range (Wa)											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 71.0	ug/L			1.00	71		06/09/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 71.0	ug/L			1.00	71		06/09/08
NWTPH-GX TPH Gasoline Range Prep											**06/05/08**
NWTPH-GX TPH Gasoline Range											
Total Pet. Hydrocarbons Gas	TPHGASOLINE	LA-523-443	U	< 50.0	ug/L			1.00	50		06/05/08
SW-846 8270C Semi-Vols Prep											**06/02/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 0.950	ug/L			1.00	0.95		06/05/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.30	ug/L			1.00	1.3		06/05/08
Phenol	108-95-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.10	ug/L			1.00	2.1		06/05/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
Pyrene	129-00-0	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.570	ug/L			1.00	0.57		06/05/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.50	ug/L			1.00	2.5		06/05/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.40	ug/L			1.00	1.4		06/05/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	J	2.30	ug/L			1.00	0.76		06/05/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08

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

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002592
Client ID: B1V9X4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

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		06/05/08
Naphthalene	91-20-3	LA-523-456	U	< 2.00	ug/L			1.00	2.0		06/05/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
Benzothiazole	95-16-9	LA-523-456	U	< 0.570	ug/L			1.00	0.57		06/05/08
2-Picoline	109-06-8	LA-523-456	U	< 4.80	ug/L			1.00	4.8		06/05/08
Total cresols	1319-77-3	LA-523-456	U	< 0.950	ug/L			1.00	0.95		06/05/08
Tris-2-chloroethyl phosphate	115-96-8	LA-523-456	U	< 0.620	ug/L			1.00	0.62		06/05/08
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Carbon tetrachloride	56-23-5	LA-523-455		24.0	ug/L			1.00	1.0		06/05/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Chloroform	67-66-3	LA-523-455	J	1.60	ug/L			1.00	1.0		06/05/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002592
Client ID: B1V9X4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

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		06/05/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		06/05/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/05/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/05/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002593
Client ID: B1V9X5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Alcohols, Glycols - 8015 Prep											**06/10/08**
Alcohols, Glycols - 8015											
Ethyl acetate	141-78-6	Organics	U	< 5.00e+03	ug/L			1.00	5.0e+03		06/10/08
NWTPH-D TPH Diesel Range (Wa) Prep											**06/03/08**
NWTPH-D TPH Diesel Range (Wa)											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 71.0	ug/L			1.00	71		06/09/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 71.0	ug/L			1.00	71		06/09/08
NWTPH-GX TPH Gasoline Range Prep											**06/05/08**
NWTPH-GX TPH Gasoline Range											
Total Pet. Hydrocarbons Gas	TPHGASOLINE	LA-523-443	U	< 50.0	ug/L			1.00	50		06/05/08
SW-846 8270C Semi-Vols Prep											**06/02/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 0.950	ug/L			1.00	0.95		06/05/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.30	ug/L			1.00	1.3		06/05/08
Phenol	108-95-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.10	ug/L			1.00	2.1		06/05/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
Pyrene	129-00-0	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.570	ug/L			1.00	0.57		06/05/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.50	ug/L			1.00	2.5		06/05/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.40	ug/L			1.00	1.4		06/05/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	< 0.760	ug/L			1.00	0.76		06/05/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: I08-037
Sample # W08P002593
Client ID: B1V9X5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

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		06/05/08
Naphthalene	91-20-3	LA-523-456	U	< 2.00	ug/L			1.00	2.0		06/05/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/05/08
Benzothiazole	95-16-9	LA-523-456	U	< 0.570	ug/L			1.00	0.57		06/05/08
2-Picoline	109-06-8	LA-523-456	U	< 4.80	ug/L			1.00	4.8		06/05/08
Total cresols	1319-77-3	LA-523-456	U	< 0.950	ug/L			1.00	0.95		06/05/08
Tris-2-chloroethyl phosphate	115-96-8	LA-523-456	U	< 0.620	ug/L			1.00	0.62		06/05/08
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Carbon tetrachloride	56-23-5	LA-523-455		45.0	ug/L			1.00	1.0		06/05/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Chloroform	67-66-3	LA-523-455	J	1.40	ug/L			1.00	1.0		06/05/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002593
Client ID: B1V9X5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Organic
Sampled: 05/27/08
Received: 05/27/08

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		06/05/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		06/05/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/05/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/05/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/05/08

MDL=Minimum Detection Limit
RQ=Result Qualifier
TP Err=Total Propagated Error
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B - The analyte < the RDL but > = the IDL/MDL (inorg)
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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081067
Matrix: WATER
Test: Alcohols, Glycols - 8015

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002592											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	2-Bromoethanol	540-51-2	14100		RPD			22.082	25.000		06/10/08
DUP	Ethyl acetate	141-78-6	<5000		RPD			n/a	25.000	U	06/10/08
MS	2-Bromoethanol	540-51-2	14700	83.523	% Recov	70.000	125.000				06/10/08
MS	Ethyl acetate	141-78-6	7800	86.667	% Recov	75.000	125.000				06/10/08
MSD	2-Bromoethanol	540-51-2	16700	94.886	% Recov	70.000	125.000				06/10/08
MSD	Ethyl acetate	141-78-6	7400	82.222	% Recov	75.000	125.000				06/10/08
SPK-RPD	2-Bromoethanol	540-51-2	94.886		RPD			12.738	20.000		06/10/08
SPK-RPD	Ethyl acetate	141-78-6	82.222		RPD			5.264	20.000		06/10/08
BATCH QC											
BLANK	2-Bromoethanol	540-51-2	16300	92.614	% Recov	75.000	125.000				06/10/08
BLANK	Ethyl acetate	141-78-6	<5000	n/a	ug/L	0.000	5.000			U	06/10/08
LCS	2-Bromoethanol	540-51-2	18200	103.409	% Recov	70.000	130.000				06/10/08
LCS	Ethyl acetate	141-78-6	6900	76.667	% Recov	70.000	130.000				06/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081067
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002592											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	2-Fluorophenol(Surr)	367-12-4	15.625	82.000	% Recov	50.000	110.000				06/05/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	19.852	104.000	% Recov	58.000	109.000				06/05/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	18.998	99.700	% Recov	60.000	118.000				06/05/08
SURR	Phenol-d5(Surr)	4165-62-2	18.557	97.400	% Recov	59.000	116.000				06/05/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	19.341	102.000	% Recov	60.000	120.000				06/05/08
SURR	Terphenyl-d14(Surr)	98904-43-9	19.208	101.000	% Recov	60.000	120.000				06/05/08
Lab ID: W08P002593											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,2,4-Trichlorobenzene	120-82-1	19.552	92.900	% Recov	50.000	120.000				06/05/08
MS	1,4-Dichlorobenzene	106-46-7	18.700	88.800	% Recov	41.000	113.000				06/05/08
MS	2,4-Dinitrotoluene	121-14-2	19.246	91.400	% Recov	65.000	109.000				06/05/08
MS	2-Fluorophenol(Surr)	367-12-4	16.083	76.400	% Recov	50.000	110.000				06/05/08
MS	Acenaphthene	83-32-9	20.522	97.500	% Recov	62.000	112.000				06/05/08
MS	4-Chloro-3-methylphenol	59-50-7	30.673	97.100	% Recov	59.000	115.000				06/05/08
MS	2-Chlorophenol	95-57-8	28.998	91.800	% Recov	69.000	111.000				06/05/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	19.352	91.900	% Recov	69.000	115.000				06/05/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	19.632	93.300	% Recov	58.000	109.000				06/05/08
MS	Phenol	108-95-2	29.779	94.300	% Recov	59.000	115.000				06/05/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	19.943	94.700	% Recov	60.000	118.000				06/05/08
MS	4-Nitrophenol	100-02-7	17.817	56.400	% Recov	32.000	130.000				06/05/08
MS	Pentachlorophenol	87-86-5	12.645	40.000	% Recov	51.000	121.000				06/05/08
MS	Phenol-d5(Surr)	4165-62-2	19.264	91.500	% Recov	59.000	116.000				06/05/08
MS	Pyrene	129-00-0	18.447	87.600	% Recov	58.000	116.000				06/05/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	20.471	97.200	% Recov	60.000	120.000				06/05/08
MS	Terphenyl-d14(Surr)	98904-43-9	19.621	93.200	% Recov	60.000	120.000				06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081067
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	1,2,4-Trichlorobenzene	120-82-1	19.154	91.000	% Recov	50.000	120.000				06/05/08
MSD	1,4-Dichlorobenzene	106-46-7	18.439	87.600	% Recov	41.000	113.000				06/05/08
MSD	2,4-Dinitrotoluene	121-14-2	19.253	91.500	% Recov	65.000	109.000				06/05/08
MSD	2-Fluorophenol(Surr)	367-12-4	16.323	77.500	% Recov	50.000	110.000				06/05/08
MSD	Acenaphthene	83-32-9	19.868	94.400	% Recov	62.000	112.000				06/05/08
MSD	4-Chloro-3-methylphenol	59-50-7	29.148	92.300	% Recov	59.000	115.000				06/05/08
MSD	2-Chlorophenol	95-57-8	28.232	89.400	% Recov	69.000	111.000				06/05/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	18.576	88.200	% Recov	69.000	115.000				06/05/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	20.381	96.800	% Recov	58.000	109.000				06/05/08
MSD	Phenol	108-95-2	28.434	90.000	% Recov	59.000	115.000				06/05/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	20.280	96.300	% Recov	60.000	118.000				06/05/08
MSD	4-Nitrophenol	100-02-7	19.952	63.200	% Recov	32.000	130.000				06/05/08
MSD	Pentachlorophenol	87-86-5	15.151	48.000	% Recov	51.000	121.000				06/05/08
MSD	Phenol-d5(Surr)	4165-62-2	19.643	93.300	% Recov	59.000	116.000				06/05/08
MSD	Pyrene	129-00-0	18.268	86.800	% Recov	58.000	116.000				06/05/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	20.848	99.000	% Recov	60.000	120.000				06/05/08
MSD	Terphenyl-d14(Surr)	98904-43-9	20.522	97.500	% Recov	60.000	120.000				06/05/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	91.000		RPD			2.066	25.000		06/05/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	87.600		RPD			1.361	25.000		06/05/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	91.500		RPD			0.109	25.000		06/05/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	77.500		RPD			1.429	25.000		06/05/08
SPK-RPD	Acenaphthene	83-32-9	94.400		RPD			3.231	25.000		06/05/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	92.300		RPD			5.069	25.000		06/05/08
SPK-RPD	2-Chlorophenol	95-57-8	89.400		RPD			2.649	25.000		06/05/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	88.200		RPD			4.109	25.000		06/05/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	96.800		RPD			3.682	25.000		06/05/08
SPK-RPD	Phenol	108-95-2	90.000		RPD			4.666	16.000		06/05/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	96.300		RPD			1.675	25.000		06/05/08
SPK-RPD	4-Nitrophenol	100-02-7	63.200		RPD			11.371	25.000		06/05/08
SPK-RPD	Pentachlorophenol	87-86-5	48.000		RPD			18.182	25.000		06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081067
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Phenol-d5(Surr)	4165-62-2	93.300		RPD			1.948	25.000		06/05/08
SPK-RPD	Pyrene	129-00-0	86.800		RPD			0.917	25.000		06/05/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	99.000		RPD			1.835	25.000		06/05/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	97.500		RPD			4.510	25.000		06/05/08
SURR	2-Fluorophenol(Surr)	367-12-4	30.053	78.900	% Recov	50.000	110.000				06/05/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	36.701	96.300	% Recov	58.000	109.000				06/05/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	36.157	94.900	% Recov	60.000	118.000				06/05/08
SURR	Phenol-d5(Surr)	4165-62-2	35.071	92.100	% Recov	59.000	116.000				06/05/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	36.332	95.400	% Recov	60.000	120.000				06/05/08
SURR	Terphenyl-d14(Surr)	98904-43-9	35.828	94.000	% Recov	60.000	120.000				06/05/08

BATCH QC

BLANK	1,2,4-Trichlorobenzene	120-82-1	< 2.2	n/a	ug/L					U	06/05/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.4	n/a	ug/L					U	06/05/08
BLANK	2,4-Dichlorophenol	120-83-2	< 0.50	n/a	ug/L					U	06/05/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 0.50	n/a	ug/L					U	06/05/08
BLANK	2-Fluorophenol(Surr)	367-12-4	15.218	76.100	% Recov	50.000	110.000				06/05/08
BLANK	2-Methylphenol (cresol, o-)	95-48-7	< 0.50	n/a	ug/L					U	06/05/08
BLANK	2-Nitrophenol	88-75-5	< 0.50	n/a	ug/L					U	06/05/08
BLANK	2-Picoline	109-06-8	< 5.0	n/a	ug/L					U	06/05/08
BLANK	3 & 4 Methylphenol Total	65794-96-9	< 0.50	n/a	ug/L	0.000	5.000			U	06/05/08
BLANK	Acenaphthene	83-32-9	< 2.6	n/a	ug/L					U	06/05/08
BLANK	Bis(2-ethylhexyl) phthalate	117-81-7	< 0.80	n/a	ug/L					U	06/05/08
BLANK	Benzothiazole	95-16-9	< 0.60	n/a	ug/L	0.000	300.000			U	06/05/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 0.50	n/a	ug/L					U	06/05/08
BLANK	2-Chlorophenol	95-57-8	< 0.50	n/a	ug/L					U	06/05/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 0.60	n/a	ug/L					U	06/05/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	17.294	86.500	% Recov	58.000	109.000				06/05/08
BLANK	Phenol	108-95-2	< 0.50	n/a	ug/L					U	06/05/08
BLANK	Naphthalene	91-20-3	< 2.1	n/a	ug/L					U	06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081067
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	17.670	88.400	% Recov	60.000	118.000				06/05/08
BLANK	4-Nitrophenol	100-02-7	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Pentachlorophenol	87-86-5	< 1.5	n/a	ug/L					U	06/05/08
BLANK	Phenol-d5(Surr)	4165-62-2	18.199	91.000	% Recov	59.000	116.000				06/05/08
BLANK	Pyrene	129-00-0	< 0.50	n/a	ug/L					U	06/05/08
BLANK	Tris-2-chloroethyl phosphate	115-96-8	< 0.65	n/a	ug/L	0.000	300.000			U	06/05/08
BLANK	Tributyl phosphate	126-73-8	< 0.50	n/a	ug/L					U	06/05/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	16.133	80.700	% Recov	60.000	120.000				06/05/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	19.622	98.100	% Recov	60.000	120.000				06/05/08
LCS	1,2,4-Trichlorobenzene	120-82-1	16.293	81.500	% Recov	46.000	107.000				06/05/08
LCS	1,4-Dichlorobenzene	106-46-7	15.953	79.800	% Recov	42.000	111.000				06/05/08
LCS	2,4-Dinitrotoluene	121-14-2	17.968	89.800	% Recov	59.000	106.000				06/05/08
LCS	2-Fluorophenol(Surr)	367-12-4	15.586	77.900	% Recov	50.000	110.000				06/05/08
LCS	Acenaphthene	83-32-9	18.755	93.800	% Recov	61.000	116.000				06/05/08
LCS	4-Chloro-3-methylphenol	59-50-7	27.114	90.400	% Recov	61.000	106.000				06/05/08
LCS	2-Chlorophenol	95-57-8	27.198	90.700	% Recov	66.000	106.000				06/05/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	17.616	88.100	% Recov	71.000	114.000				06/05/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	18.472	92.400	% Recov	58.000	109.000				06/05/08
LCS	Phenol	108-95-2	27.155	90.500	% Recov	67.000	105.000				06/05/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	18.726	93.600	% Recov	60.000	118.000				06/05/08
LCS	4-Nitrophenol	100-02-7	28.177	93.900	% Recov	32.000	118.000				06/05/08
LCS	Pentachlorophenol	87-86-5	28.142	93.800	% Recov	62.000	114.000				06/05/08
LCS	Phenol-d5(Surr)	4165-62-2	18.851	94.300	% Recov	59.000	116.000				06/05/08
LCS	Pyrene	129-00-0	18.084	90.400	% Recov	66.000	118.000				06/05/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	19.762	98.800	% Recov	60.000	120.000				06/05/08
LCS	Terphenyl-d14(Surr)	98904-43-9	20.350	102.000	% Recov	60.000	120.000				06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20081067
Matrix: WATER
Test: NWTPH-D TPH Diesel Range (Wa)

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002592											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	ortho-Terphenyl Surr	84-15-1	466.46	98.000	% Recov	70.000	130.000				06/09/08
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2436.7	102.000	% Recov	75.000	125.000				06/09/08
MSD	ortho-Terphenyl Surr	84-15-1	490.82	103.000	% Recov	70.000	130.000				06/09/08
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2486.9	104.000	% Recov	75.000	125.000				06/09/08
SPK-RPD	ortho-Terphenyl Surr	84-15-1	103.000		RPD			4.975	20.000		06/09/08
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	104.000		RPD			1.942	20.000		06/09/08
SURR	ortho-Terphenyl Surr	84-15-1	527.64	111.000	% Recov	70.000	130.000				06/09/08
Lab ID: W08P002593											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	ortho-Terphenyl Surr	84-15-1	499.38	105.000	% Recov	70.000	130.000				06/09/08
BATCH QC											
BLANK	Kerosene	TPHKEROSENE	< 75	n/a	ug/L					U	06/09/08
BLANK	ortho-Terphenyl Surr	84-15-1	523.21	105.000	% Recov	70.000	130.000				06/09/08
BLANK	Total Pet. Hydrocarbons Diesel	TPHDIESEL	< 75	n/a	ug/L					U	06/09/08
LCS	ortho-Terphenyl Surr	84-15-1	473.65	94.700	% Recov	70.000	130.000				06/09/08
LCS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2207.4	88.300	% Recov	80.000	120.000				06/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081067
Matrix: WATER
Test: NWTPH-GX TPH Gasoline Range

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002592											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<50		RPD			n/a	20.000	U	06/05/08
MS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	2600	104.000	% Recov	75.000	125.000				06/05/08
MSD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	2800	112.000	% Recov	75.000	125.000				06/05/08
SPK-RPD	Total Pet. Hydrocarbons Gas	TPHGASOLINE	112.000		RPD			7.407	20.000		06/05/08
BATCH QC											
BLANK	Total Pet. Hydrocarbons Gas	TPHGASOLINE	<50	n/a	mg/L	0.000	300.000			U	06/05/08
LCS	Total Pet. Hydrocarbons Gas	TPHGASOLINE	2500	100.000	%rec	80.000	120.000				06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081067
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 05/27/08
Receive Date:05/27/08

Lab ID: W08P002583
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	26.010	104.000	% Recov	63.000	117.000				06/05/08
MS	Benzene	71-43-2	24.180	96.700	% Recov	75.000	129.000				06/05/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	54.860	110.000	% Recov	75.000	125.000				06/05/08
MS	Chlorobenzene	108-90-7	25.930	104.000	% Recov	79.000	119.000				06/05/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.740	117.000	% Recov	75.000	125.000				06/05/08
MS	Toluene-d8(Surr)	2037-26-5	51.300	103.000	% Recov	75.000	125.000				06/05/08
MS	Toluene	108-88-3	24.700	98.800	% Recov	76.000	120.000				06/05/08
MS	Trichloroethene	79-01-6	23.845	95.400	% Recov	73.000	123.000				06/05/08
MSD	1,1-Dichloroethene	75-35-4	24.120	96.500	% Recov	63.000	117.000				06/05/08
MSD	Benzene	71-43-2	23.840	95.400	% Recov	75.000	129.000				06/05/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	54.690	109.000	% Recov	75.000	125.000				06/05/08
MSD	Chlorobenzene	108-90-7	26.130	105.000	% Recov	79.000	119.000				06/05/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	59.280	119.000	% Recov	75.000	125.000				06/05/08
MSD	Toluene-d8(Surr)	2037-26-5	51.860	104.000	% Recov	75.000	125.000				06/05/08
MSD	Toluene	108-88-3	24.960	99.800	% Recov	76.000	120.000				06/05/08
MSD	Trichloroethene	79-01-6	23.255	93.000	% Recov	73.000	123.000				06/05/08
SPK-RPD	1,1-Dichloroethene	75-35-4	96.500		RPD			7.481	20.000		06/05/08
SPK-RPD	Benzene	71-43-2	95.400		RPD			1.353	20.000		06/05/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	109.000		RPD			0.913	20.000		06/05/08
SPK-RPD	Chlorobenzene	108-90-7	105.000		RPD			0.957	20.000		06/05/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	119.000		RPD			1.695	20.000		06/05/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	104.000		RPD			0.966	20.000		06/05/08
SPK-RPD	Toluene	108-88-3	99.800		RPD			1.007	20.000		06/05/08
SPK-RPD	Trichloroethene	79-01-6	93.000		RPD			2.548	20.000		06/05/08
SURR	4-Bromofluorobenzene(Surr)	460-00-4	54.520	109.000	% Recov	75.000	125.000				06/05/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	56.570	113.000	% Recov	75.000	125.000				06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081067
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 05/27/08
Receive Date:05/27/08

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	52.590	105.000	% Recov	75.000	125.000				06/05/08
Lab ID: W08P002586											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	55.050	110.000	% Recov	75.000	125.000				06/05/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.580	117.000	% Recov	75.000	125.000				06/05/08
SURR	Toluene-d8(Surr)	2037-26-5	52.140	104.000	% Recov	75.000	125.000				06/05/08
Lab ID: W08P002590											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	50.190	100.000	% Recov	75.000	125.000				06/05/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.990	118.000	% Recov	75.000	125.000				06/05/08
SURR	Toluene-d8(Surr)	2037-26-5	54.190	108.000	% Recov	75.000	125.000				06/05/08
Lab ID: W08P002592											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	55.200	110.000	% Recov	75.000	125.000				06/05/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.690	115.000	% Recov	75.000	125.000				06/05/08
SURR	Toluene-d8(Surr)	2037-26-5	52.500	105.000	% Recov	75.000	125.000				06/05/08
Lab ID: W08P002593											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	55.510	111.000	% Recov	75.000	125.000				06/05/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.840	118.000	% Recov	75.000	125.000				06/05/08
SURR	Toluene-d8(Surr)	2037-26-5	52.790	106.000	% Recov	75.000	125.000				06/05/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	06/05/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L					U	06/05/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L					U	06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081067
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	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L					U	06/05/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L					U	06/05/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.0	n/a	ug/L					U	06/05/08
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	06/05/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	06/05/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	55.260	111.000	% Recov	75.000	125.000				06/05/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	06/05/08
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/L					U	06/05/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.750	118.000	% Recov	75.000	125.000				06/05/08
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Ethyl cyanide	107-12-0	< 2.0	n/a	ug/L					U	06/05/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	0.000	5.000			U	06/05/08
BLANK	Tetrahydrofuran	109-99-9	< 2.0	n/a	ug/L					U	06/05/08
BLANK	Toluene-d8(Surr)	2037-26-5	51.400	103.000	% Recov	75.000	125.000				06/05/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	06/05/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	06/05/08
LCS	1,1-Dichloroethene	75-35-4	21.750	87.000	% Recov	75.000	125.000				06/05/08
LCS	Benzene	71-43-2	24.080	96.300	% Recov	75.000	125.000				06/05/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	55.080	110.000	% Recov	75.000	125.000				06/05/08
LCS	Chlorobenzene	108-90-7	25.940	104.000	% Recov	75.000	125.000				06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081067
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
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.800	118.000	% Recov	75.000	125.000				06/05/08
LCS	Toluene-d8(Surr)	2037-26-5	52.030	104.000	% Recov	75.000	125.000				06/05/08
LCS	Toluene	108-88-3	24.740	99.000	% Recov	75.000	125.000				06/05/08
LCS	Trichloroethene	79-01-6	20.700	82.800	% Recov	75.000	125.000				06/05/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081067
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		SVOA: Something in the chemical matrix of B1TV9X5 seriously affected the recovery of pentachlorophenol in both the MS and MSD. The low recovery of pentachlorophenol in the MS/MSD is due to chemical matrix as the LCS and other spikes in the batch had normal pentachlorophenol recoveries. cgc W08P002581,W08P002584, W08P002588-89, W08P002592-93, W08P002595-97/H-3 batch dup is flagged for poor RPD. Since all the other QC checks came out fine, this batch has been approved. lmh W08P002581/Gross beta method blank is flagged because the result is high. Since all the other QC checks came out fine, this batch has been approved. lmh ICP-MS: Arsenic rerun due to CCV failure. "X" flag ICP-AES: [Samples W08P2580-2583; 2585-2588; 2591] No zirconium present in the LCS. Sodium, magnesium, and calcium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. High and check standards are used to ensure calcium, sodium, and magnesium linearity because sample results are greater

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 COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081067
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
				than the calibration standard. ICP-AES: [Samples W08P2592-2594] No zirconium present in the LCS. Sodium, magnesium, and calcium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. Check standard is used to ensure calcium and sodium 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: G08-005
Sample # W08P002575
Client ID: B1V595 PNNL-GPP WSCF
Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		1.70e+04	pCi/L	+-1.70e+03	pCi/L	1.00	46		06/04/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: G08-005
Sample # W08P002576
Client ID: B1V597 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		5.60	pCi/L	+-1.74	pCi/L	1.00	2.4		06/04/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: G08-005
Sample # W08P002577
Client ID: B1V591 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		930	pCi/L	+-93.0	pCi/L	1.00	2.5		06/04/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: G08-005
Sample # W08P002578
Client ID: B1V583 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		520	pCi/L	+-52.0	pCi/L	1.00	2.5		06/04/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: G08-005
Sample # W08P002579
Client ID: B1V593 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		1.90e+03	pCi/L	+-190	pCi/L	1.00	2.4		06/04/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: G08-003
Sample # W08P002581
Client ID: B1TH60 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha on Alpha Plateau											
Gross alpha on alpha plateau	12587-46-1	LA-508-415	U	1.30	pCi/L	+-1.16	pCi/L	1.00	1.8		06/09/08
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		3.60e+03	pCi/L	+-360	pCi/L	1.00	3.8		06/06/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		1.10e+04	pCi/L	+-2.20e+03	pCi/L	1.00	2.3e+02		06/03/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: I08-038
Sample # W08P002583
Client ID: B1V6B4 PNNL-GPP WSCF
Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

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		100	pCi/L	+-21.0	pCi/L	1.00	5.7		06/04/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: W08-005
Sample # W08P002584
Client ID: B1V925 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		6.90e+03	pCi/L	+-1.38e+03	pCi/L	1.00	2.3e+02		06/03/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(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: I08-038
Sample # W08P002586
Client ID: B1V6B0 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

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		110	pCi/L	+-22.0	pCi/L	1.00	5.7		06/04/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-005
Sample # W08P002588
Client ID: B1V843 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

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		2.30e+03	pCi/L	+-460	pCi/L	1.00	5.7		06/04/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		4.90e+03	pCi/L	+-1.03e+03	pCi/L	1.00	2.3e+02		06/03/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-005
Sample # W08P002589
Client ID: B1V926 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		7.00e+03	pCi/L	+-1.40e+03	pCi/L	1.00	2.3e+02		06/03/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002592
Client ID: B1V9X4 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

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		2.80	pCi/L	+-2.04	pCi/L	1.00	1.5		06/11/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		68.4	Percent			1.00	0.0		06/11/08
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		410	pCi/L	+-82.0	pCi/L	1.00	5.7		06/04/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		1.90e+04	pCi/L	+-3.80e+03	pCi/L	1.00	2.3e+02		06/03/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002593
Client ID: B1V9X5 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

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	-0.700	pCi/L	+-1.51	pCi/L	1.00	1.3		06/11/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		82.0	Percent			1.00	0.0		06/11/08
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421	U	-1.30	pCi/L	+-3.52	pCi/L	1.00	5.7		06/04/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	29.0	pCi/L	+-28.4	pCi/L	1.00	2.3e+02		06/03/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002595
Client ID: B1V683 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

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		300	pCi/L	+-60.0	pCi/L	1.00	5.7		06/04/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		7.00e+03	pCi/L	+-1.40e+03	pCi/L	1.00	2.3e+02		06/03/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002596
Client ID: B1V684 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421	U	-0.500	pCi/L	+-3.66	pCi/L	1.00	5.7		06/04/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	-68.0	pCi/L	+-68.0	pCi/L	1.00	2.3e+02		06/03/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: I08-037
Sample # W08P002597
Client ID: B1V689 PNNL-GPP WSCF

Matrix: WATER

Group #: WSCF20081067
Department: Radiochemistry
Sampled: 05/27/08
Received: 05/27/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421	U	-0.500	pCi/L	+-3.80	pCi/L	1.00	5.7		06/04/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	58.0	pCi/L	+-76.6	pCi/L	1.00	2.3e+02		06/03/08

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

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

D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
X - Other flags/notes described in the comments/narrative(inorg)

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081067
Matrix: WATER
Test: Gross Alpha on Alpha Plateau

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002581											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross alpha on alpha plateau	12587-46-1	2.5		RPD			n/a	20.000		06/09/08
BATCH QC											
BLANK	Gross alpha on alpha plateau	12587-46-1-ap	U-4.4E-01	n/a	pCi/L	-100.000	100.000				06/09/08
LCS	Gross alpha on alpha plateau	12587-46-1-ap	73.4	94.832	% Recov	80.000	120.000				06/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081067
Matrix: WATER
Test: Gross Alpha/Gross Beta (AB32)

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002575											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross beta	12587-47-2	1.9E+04		RPD			11.111	20.000		06/04/08
BATCH QC											
BLANK	Gross beta	12587-47-2	U-1.8	n/a	pCi/L	-10.000	10.000				06/04/08
LCS	Gross beta	12587-47-2	130.0	115.865	% Recov	80.000	120.000				06/04/08
Lab ID: W08P002581											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross beta	12587-47-2	3.8E+03		RPD			5.405	20.000		06/06/08
BATCH QC											
BLANK	Gross beta	12587-47-2	1.1E+01	11.000	pCi/L	-10.000	10.000				06/06/08
LCS	Gross beta	12587-47-2	25.9	115.470	% Recov	80.000	120.000				06/06/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081067
Matrix: WATER
Test: Strontium 89/90

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002592											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	80.9	80.900	% Recov	30.000	105.000				06/11/08
DUP	Strontium-89/90	SR-RAD	U-1.3		RPD			n/a	20.000		06/11/08
SURR	Sr-85 Tracer by Beta Counting	SR85	68.4	68.400	% Recov	30.000	105.000				06/11/08
Lab ID: W08P002593											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	82.0	82.000	% Recov	30.000	105.000				06/11/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	102	102.000	% Recov	30.000	105.000				06/11/08
BLANK	Strontium-89/90	10098-97-2	U-5.3E-01	n/a	pCi/L	-10.000	100.000				06/11/08
LCS	Sr-85 Tracer by Beta Counting	SR85	92.4	92.400	% Recov	30.000	105.000				06/11/08
LCS	Strontium-89/90	10098-97-2	154	108.680	% Recov	80.000	120.000				06/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081067
Matrix: WATER
Test: TC99 by Liquid Scin.

Sample Date: 05/22/08
Receive Date:05/22/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002545											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tc-99 by Liquid Scin.	14133-76-7	2.7E+02		RPD			7.692	20.000		06/04/08
MS	Tc-99 by Liquid Scin.	14133-76-7	750.0	99.701	% Recov	75.000	125.000				06/04/08
BATCH QC											
BLANK	Tc-99 by Liquid Scin.	14133-76-7	U3.6E-02	n/a	pCi/L	-10.000	10.000				06/04/08
LCS	Tc-99 by Liquid Scin.	14133-76-7	200	106.326	% Recov	80.000	120.000				06/04/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081067
Matrix: WATER
Test: Tritium by Liq Sct column prep

Sample Date: 05/27/08
Receive Date:05/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002581											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tritium	10028-17-8	1.5E+04		RPD			30.769	20.000 *		06/03/08
MS	Tritium	10028-17-8	27700	106.806	% Recov	75.000	125.000				06/03/08
BATCH QC											
BLANK	Tritium	10028-17-8	U7.6E+01	n/a	pCi/L	-10.000	1000.000				06/03/08
LCS	Tritium	10028-17-8	3230.0	93.958	% Recov	80.000	120.000				06/03/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081067
Department: Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		SVOA: Something in the chemical matrix of B1TV9X5 seriously affected the recovery of pentachlorophenol in both the MS and MSD. The low recovery of pentachlorophenol in the MS/MSD is due to chemical matrix as the LCS and other spikes in the batch had normal pentachlorophenol recoveries. cgc W08P002581,W08P002584, W08P002588-89, W08P002592-93, W08P002595-97/H-3 batch dup is flagged for poor RPD. Since all the other QC checks came out fine, this batch has been approved. lmh W08P002581/Gross beta method blank is flagged because the result is high. Since all the other QC checks came out fine, this batch has been approved. lmh ICP-MS: Arsenic rerun due to CCV failure. "X" flag ICP-AES: [Samples W08P2580-2583; 2585-2588; 2591] No zirconium present in the LCS. Sodium, magnesium, and calcium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. High and check standards are used to ensure calcium, sodium, and magnesium linearity because sample results are greater

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 COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081067
Department: Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
				than the calibration standard. ICP-AES: [Samples W08P2592-2594] No zirconium present in the LCS. Sodium, magnesium, and calcium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. Check standard is used to ensure calcium and sodium 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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M4W41-SLF-08-684

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 22 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

ACKNOWLEDGMENT OF SAMPLES RECEIVED

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081067

The following samples were received from you on 05/27/08. 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
W08P002575	B1V595	PNNL-GPP @AB-32	Water	05/27/08
W08P002576	B1V597	PNNL-GPP @AB-32	Water	05/27/08
W08P002577	B1V591	PNNL-GPP @AB-32	Water	05/27/08
W08P002578	B1V583	PNNL-GPP @AB-32	Water	05/27/08
W08P002579	B1V593	PNNL-GPP @AB-32	Water	05/27/08
W08P002580	B1TH59	PNNL-GPP @GPP6010	Water	05/27/08
W08P002581	B1TH60	PNNL-GPP @AB-32 @ALPHA @GPP6010 @H3-33 @IC-30 ALKALI	Water	05/27/08
W08P002582	B1V6B3	PNNL-GPP @GPP6010	Water	05/27/08
W08P002583	B1V6B4	PNNL-GPP @2008 @GPP6010 @IC-30 @TC99-30 @VOA-GPP	Water	05/27/08
W08P002584	B1V925	PNNL-GPP @H3-33 ALKALI	Water	05/27/08
W08P002585	B1V699	PNNL-GPP @GPP6010	Water	05/27/08
W08P002586	B1V6B0	PNNL-GPP @2008 @GPP6010 @IC-30 @TC99-30 @VOA-GPP	Water	05/27/08
W08P002587	B1V842	PNNL-GPP @GPP6010	Water	05/27/08
W08P002588	B1V843	PNNL-GPP @GPP6010 @H3-33 @IC-30 @TC99-30 ALKALI	Water	05/27/08
W08P002589	B1V926	PNNL-GPP @H3-33 ALKALI	Water	05/27/08

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081067

Sample#	Sample Id	Tests Scheduled	Matrix					Sample Date
W08P002590	B1V382	PNNL-GPP	Water					05/27/08
		@VOA-GPP						
W08P002591	B1V9X0	PNNL-GPP	Water					05/27/08
		@2008	@GPP6010					
W08P002592	B1V9X4	PNNL-GPP	Water					05/27/08
		@2008	@8015GPP	@GPP6010	@H3-33	@IC-30		
		@SR89_90	@SVOCGPP	@TC99-30	@TPHD-WA	@TPHG-WA	@VOA-	
		CN-02	NH4-IC	TOC-30				
W08P002593	B1V9X5	PNNL-GPP	Water					05/27/08
		@2008	@8015GPP	@GPP6010	@H3-33	@IC-30		
		@SR89_90	@SVOCGPP	@TC99-30	@TPHD-WA	@TPHG-WA	@VOA-	
		CN-02	NH4-IC	TOC-30				
W08P002594	B1V9X1	PNNL-GPP	Water					05/27/08
		@2008	@GPP6010					
W08P002595	B1V683	PNNL-GPP	Water					05/27/08
		@2008	@H3-33	@IC-30	@TC99-30			
W08P002596	B1V684	PNNL-GPP	Water					05/27/08
		@2008	@H3-33	@IC-30	@TC99-30			
W08P002597	B1V689	PNNL-GPP	Water					05/27/08
		@2008	@H3-33	@IC-30	@TC99-30			

Test Acronym Description

Test Acronym	Description
@2008	ICP-200.8 MS All possible meta
@8015GPP	Alcohols, Glycols - 8015
@AB-32	Gross Alpha/Gross Beta (AB32)
@ALPHA	Gross Alpha on Alpha Plateau
@GPP6010	ICP Metals Analysis, Grd H20 P
@H3-33	Tritium by Liq Sct column prep
@IC-30	Anions by Ion Chromatography
@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

07/09/08 20081067

G08-005-14

Collector: R. Ellingsworth	Contact/Requester: Steve Trent	Telephone No.: 509-376-5869 MSIN FAX
SAF No.: G08-005	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 1NR2-RB, MAY 2008	HWF-N-506-1L	Ice Chest No.: SML-600 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 ☐
100 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V595 ✓ WO	8P002575	W	5/27/08	1317	1x500-mL G/P	Gross Beta	HNO3 to pH <2

ICED

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
R. Ellingsworth	R. Ellingsworth	1410 MAY 27 2008	OM Hudson	OM Hudson	MAY 27 2008 1410
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

G08-005-16

Collector: R. Ellingsworth	Contact/Requester: Steve Trent	Telephone No.: 509-376-5869 MSIN FAX
SAF No.: G08-005	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 1NR2-RB, MAY 2008	HNF-N-506-16	Ice Chest No.: SML-600 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
100 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V597	2576	W	5/27/08	1242	1x500-mL G/P	Gross Beta	HNO3 to pH <2

ICED

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
R. Ellingsworth	[signature]	1410 MAY 27 2008	CA Hudson	[signature]	1410 MAY 27 2008
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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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

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FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

G08-005-10

Collector: R. Ellingsworth	Contact/Requester: Steve Trent	Telephone No.: 509-376-5869 MSIN FAX
SAF No.: G08-005	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 1NR2-RB, MAY 2008	HWF-W-505-16	Ice Chest No.: SML-600 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
100 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V591 V	2577	W	5/27/08	1018	1x500-mL G/P	Gross Beta	HNO3 to pH <2

ICED

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
R. Ellingsworth		MAY 27 2008 1410	CA Hudon		MAY 27 2008 1410
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

G08-005-2

Collector R. Ellingsworth	Contact/Requester Steve Trent	Telephone No. 509-376-5869 MSIN FAX
SAF No. G08-005	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 1NR2-RB, MAY 2008	HWF-N-506-16	Ice Chest No. SmL-100 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
100 Area Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V583	2578	W	5/27/08	1051	1x500-mL G/P	Gross Beta	HNO3 to pH <2

ICED

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
R. Ellingsworth		1410 MAY 27 2008			1410 MAY 27 2008
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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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

G08-005-12

Collector: R. Ellingsworth	Contact/Requester: Steve Trent	Telephone No.: 509-376-5869 MSIN FAX
SAF No.: G08-005	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 1NR2-RB, MAY 2008	HNF-N-306-16	Ice Chest No.: SML-600 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 ☐
100 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V593	2579	W	5/27/08	1140	1x500-mL G/P	Gross Beta	HNO3 to pH <2

ICED

Relinquished By	Date/Time	Received By	Date/Time
Print: R. Ellingsworth Sign: [signature]	1410 MAY 27 2008	Print: C. Attridge Sign: [signature]	1410 MAY 27 2008
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

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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

G08-003-9

Collector R. Ellingsworth	Contact/Requester Steve Trent	Telephone No. 509-373-5869 MSIN FAX
SAF No. G08-003	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 1NR2-RB, MARCH 2008	HNF-N-506-12	Ice Chest No. SML-600 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 ☐
100 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1TH59 (F)	2580	W	5/27/08	0919	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1TH60	2581	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1TH60		W			1x500-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1TH60		W			1x500-mL P	300.0_ANIONS_IC:List-1+Phosphate (6)	Cool~4C
B1TH60		W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	HNO3 to pH <2
B1TH60		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R. Ellingsworth			MAY 27 2008	CA Hudson			MAY 27 2008 1410
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-038-5

Collector R. D. Julian	Contact/Requester Steve Trent	Telephone No. 509-373-5869 MSIN FAX
SAF No. I08-038	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 2ZPL MAY 2008	HNF-N-506-12	Ice Chest No. 3ML-461 Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol CERCLA	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
B1V6B3 (F) ✓	2582	W	5-27-08	1210	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1V6B4 ✓	2583	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1V6B4 ✓		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V6B4 ✓		W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1V6B4 ✓		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V6B4 ✓		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
R.D. Julian			1500 MAY 27 2008				1500 MAY 27 2008
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

W08-005-198

Collector: R. D. Julien	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: W08-005	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: RCRA, MAY 2008	HNF-N-506-12	Ice Chest No.: SMC-461 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
B1V925 ✓	2584	W	5-27-08	1210	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1V925 ✓	↓	W	↓	↓	1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R. D. Julien			1505 MAY 27 2008		RA Hudon		1505 MAY 27 2008
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# **I08-038-4**

Collector: R. D. Julian	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: I08-038	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 2ZP1, MAY 2008	HNF-N-506-12	Ice Chest No.: SML-461 Temp.
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: CERCLA	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
B1V699 (F)	2585	W	5-27-08	1210	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1V6B0	2586	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1V6B0		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V6B0		W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1V6B0		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V6B0		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
R. D. Julian			MAY 27 2008 1505				MAY 27 2008 1505
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W08-005-330

Collector R.D. Julian	Contact/Requester Steve Trent	Telephone No. 509-373-5869 MSIN FAX
SAF No. W08-005	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title RCRA MAY 2008	HNF-N-506-12	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 2587 5-27-08	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V842 (F)	~~2587~~	W	5-27-08	1401	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1V843	2588	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1V843		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1V843		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V843		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None
B1V843		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
R.D. Julian			1505 MAY 27 2008				MAY 27 2008 1505
5-27-08							

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W08-005-199

Collector: R. D. Julien	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: W08-005	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: RCRA, MAY 2008	HNF-N-506-12	Ice Chest No.: 3ML-461 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
Site-Wide Generator Knowledge Information Form applies.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V926	2589	W	5-27-08	1210	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1V926		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None

ICED

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
R. D. Julien		MAY 27 2008 1505			MAY 27 2008 1505
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

FINAL SAMPLE DISPOSITION

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

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FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

W08-004-191

Collector: R. D. Julian	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: W08-004	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: RCRA APRIL 2008	HNF-IN-506-12	Ice Chest No.: 5 ML-461 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.

5-27-08

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V382 ✓	2590	W	5-27-08	1210	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1V382 ✓	↓	W	↓	↓	1x20-mL P	Activity Scan	None

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Relinquished By	Received By
Print: R. D. Julian Sign: Date/Time: MAY 27 2008 1505	Print: CA Hooker Sign: Date/Time: MAY 27 2008 1505
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I08-037-103

Collector: Roy Sickle	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: I08-037	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 2UP1 MAY 2008	HNF-N-506-13	Ice Chest No. GW-1 Temp.
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 45 Days	Offsite Property No.

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V9X0 (F)	0308P02591	W	5/27/08	0957	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1V9X0 (F)		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1V9X0 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-3 + Lithium (19)	HNO3 to pH <2
B1V9X4	2592	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1V9X4		W			3x40-mL aGs*	Alcohols, Glycols, & Ketones - 8015	Cool~4C
B1V9X4		W			4x1000-mL aG	8270_SVOA_GCMS: List-1 + Cresol (14)	Cool~4C
B1V9X4		W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1V9X4		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1V9X4		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V9X4		W			1x500-mL G/P	6010_METALS_ICP: List-3 + Lithium (19)	HNO3 to pH <2
B1V9X4		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V9X4		W			1x250-mL G/P	300.7_CATIONS_IC: Ammonia (1)	H2SO4 to pH <2
B1V9X4		W			1x250-mL G/P	335.2_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool~4C
B1V9X4		W			1x1-L G/P	Strontium-90	HNO3 to pH <2
B1V9X4		W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
B1V9X4		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None

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Relinquished By	Received By
Print: Roy Sickle Sign: Date/Time: 1520 MAY 27 2008	Print: CAHudson Sign: Date/Time: 1520 MAY 27 2008
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I08-037-103

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
I08-037	Steve Trent	509-373-5869		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V9X4		W	5/27/08	0957	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool~4C
B1V9X4		W			3x1000-mL aG	TPH-DieselKerosene Range - WTPH-D	HCl to pH <2 Cool~4C
B1V9X4		W			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
	Roy Sickle		MAY 27 2008 1525		CA Hudson		MAY 27 2008 1520
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-037-104

Collector Roy Sickle	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. I08-037	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 2UPL MAY 2008	HNF-N-506-13	**Ice Chest No.** GW-1 **Temp.**
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** Govt. Vehicle	**Bill of Lading/Air Bill No.**
Protocol SURV	**Priority:** 45 Days	**Offsite Property No.**

POSSIBLE SAMPLE HAZARDS/REMARKS
** **

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

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V9X1 (F)	2594	W	5/27/08	1113	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1V9X1 (F)		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1V9X1 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-3 + Lithium (19)	HNO3 to pH <2
B1V9X5	2593	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1V9X5		W			3x40-mL aGs*	Alcohols, Glycols, & Ketones - 8015	Cool~4C
B1V9X5		W			4x1000-mL aG	8270_SVOA_GCMS: List-1 + Cresol (14)	Cool~4C
B1V9X5		W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1V9X5		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1V9X5		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V9X5		W			1x500-mL G/P	6010_METALS_ICP: List-3 + Lithium (19)	HNO3 to pH <2
B1V9X5		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V9X5		W			1x250-mL G/P	300.7_CATIONS_IC: Ammonia (1)	H2SO4 to pH <2
B1V9X5		W			1x250-mL G/P	335.2_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool~4C
B1V9X5		W			1x1-L G/P	Strontium-90	HNO3 to pH <2
B1V9X5		W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
B1V9X5		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None

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Relinquished By: Roy Sickle Print Sign 1520 MAY 27 2008 Date/Time	Received By: CA Hudson Print Sign 5/27/08 1520 Date/Time	**Matrix ***
Relinquished By Date/Time	Received By Date/Time	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solid, DL = Drum Liquid, T = Tissue, WI = Wine, L = Liquid, V = Vegetation, X = Other
Relinquished By Date/Time	Received By Date/Time	
Relinquished By Date/Time	Received By Date/Time	

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

I08-037-104

SAF No.	Contact/Requestor	Telephone No.	MSIN	FAX
I08-037	Steve Trent	509-373-5869		

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V9X5		W	5/27/08	1113	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool~4C
B1V9X5		W			3x1000-mL aG	TPH-DieselKerosene Range - WTPH-D	HCl to pH <2 Cool~4C
B1V9X5		W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	HCl to pH <2 Cool~4C

ICED

Relinquished By	Date/Time	Received By	Date/Time
Print: Roy Sickle Sign:	MAY 27 2008 1520	Print: CA Hudson Sign:	5/27/08 1520
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-037-41

Collector: Roy Sickle	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: I08-037	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 2UP1 MAY 2008	HNF-N-506-13	Ice Chest No. GW-1 Temp.
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol: SURV	Priority: 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
B1V683	2595	W	5/27/08	1318	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V683	↓	W	↓	↓	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V683	↓	W	↓	↓	1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
B1V683	↓	W	↓	↓	1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None

ICED

Relinquished By	Received By
Roy Sickle Print / Sign / Date/Time MAY 27 2008 1520	Print / Sign / Date/Time 5/27/08 1520
Relinquished By / Date/Time	Received By / Date/Time
Relinquished By / Date/Time	Received By / Date/Time
Relinquished By / Date/Time	Received By / Date/Time

Matrix *

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

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

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FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-037-42

Collector: Roy Sickle	Contact/Requester: Steve Trent	Telephone No.: 509-373-5869 MSIN FAX
SAF No.: I08-037	Sampling Origin: Hanford Site	Purchase Order/Charge Code
Project Title: 2UP1, MAY 2008	HNF-N-506-13	Ice Chest No: CW-1 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
B1V684	2596	W	5/27/08	1318	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V684		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V684		W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
B1V684		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None

ICED

Relinquished By	Received By
Print Roy Sickle Sign Date/Time 1526 MAY 27 2008	Print CA Hudson Sign Date/Time 5/27/08 1526
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time
Relinquished By Date/Time	Received By Date/Time

Matrix *

S = Soil		DS = Drum Solid	
SF = 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

I08-037-49

Collector Roy Sickle	Contact/Requester Steve Trent	Telephone No. 509-373-5869 MSIN FAX
SAF No. I08-037	Sampling Origin Hanford Site	Purchase Order/Charge Code
Project Title 2UP1 MAY 2008	HNF-N-506-13	Ice Chest No. GW-1 Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol SURV	Priority: 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
B1V689	2597	W	5/27/08	1440	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V689		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V689		W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
B1V689		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None

ICED

Relinquished By Roy Sickle Print Sign Date/Time 5/27/08 1520 MAY 27 2008	Received By CA Hudson Print Sign Date/Time 5/27/08 1520	Matrix *
Relinquished By Date/Time	Received By Date/Time	S = Soil, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solid, DL = Drum Liquid, T = Tissue, WI = Wine, L = Liquid, V = Vegetation, X = Other
Relinquished By Date/Time	Received By Date/Time	
Relinquished By Date/Time	Received By Date/Time	

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