0079789

RECEIVED AUGUST 5, 2008

Fluor Hanford
WSCF Analytical Lab
P.O. Box 1000
Richland, WA 99352
Telephone 373-7495
Telefax 372-0456

FLUOR

Memorandum

M4W41-SLF-08-775

To:	H. Hampt	E6-35	Date:	August 4, 2008
From:	S. L. Fitzgerald, Manager WSCF Analytical Lab	by Shellen L Fitzgerald		
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 WSCF20081134

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 WSCF20081134:

- Cover Sheet (Attachment 1)
- Narrative (Attachment 2)
- Issue Resolution Form (Attachment 3)
- Analytical Results (Attachment 4)
- Sample Receipt Information (Attachment 5)

SLF/cmj

Attachments 5

RECEIVED
JAN 13 2009
EDMC

M4W41-SLF-08-775

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20081134
Data Deliverable Date: 17-jul-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
I08-037	B1V653	W08P002694	WATER
	B1V654	W08P002695	WATER
	B1V661	W08P002696	WATER
	B1V662	W08P002697	WATER
	B1V9R9	W08P002699	WATER
	B1V9T0	W08P002698	WATER
	B1V9T4	W08P002693	WATER
S08-005	B1V7H1	W08P002691	WATER
	B1V7H2	W08P002692	WATER
	B1V7H5	W08P002687	WATER
	B1V7H6	W08P002690	WATER
W08-004	B1V385	W08P002686	WATER

M4W41-SLF-08-7775

ATTACHMENT 2

NARRATIVE

Consisting of 5 pages
Including cover page

Introduction

Twelve (12) groundwater samples were received at the WSCF Laboratory on June 4, 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. Copies of Issue Resolution Forms #08-083 and #08-119, documenting 8015 hold time violation and improper TOC preservation, respectively, are included as Attachment 3. A Data Summary Report (Attachment 4) 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 5.

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 20-23 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 43 for QC details. Analytical Note(s):

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

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 44-46 for QC details. Analytical Note(s):

- Duplicates, Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1RTN8 (SDG# 20081136) and B1V7H6 of this SDG.

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 47 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1VHX8 (SDG# 20081117, SAF# F08-094).

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 48-54 for QC details. Analytical Note(s):

- Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1V9P4 (SDG# 20081079) and B1V9R9 of this SDG.

- <u>Batch QC - B1V9P4</u>
  - Calcium, Manganese, Magnesium and Sodium sample results exceeded the spiking levels by a factor of four. Spike recoveries are not valid. Check standard was analyzed to ensure um linearity because sample results were greater than the calibration standard.

- <u>Batch QC - B1V9R9</u>
  - Calcium, Magnesium and Sodium sample results exceeded the spiking levels by a factor of four. Spike recoveries are not valid. Check standard was analyzed to ensure linearity because sample results were greater than the calibration standard.

All QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See page 55-56 for QC details.

All QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See page 57 for QC details. Analytical Note(s):

- Duplicate QC was analyzed on sample# B1TH60 (SDG# 20081067).

All QC controls are within the established limits.

Total Organic Carbon – The hold time requirement for this analysis was not met. See comment below. A Matrix Spike, Matrix Spike Duplicate, Blank and Method Spike were analyzed with this delivery group per the GRP Letter of Instruction. See page 58 for QC details. Analytical Note(s):

- Missed Hold Time – Samples were collected in the field and delivered to the WSCF Laboratory on June 4, 2008. Final analysis of samples however was delayed due to issues with the sample preservation in the field. Refer to IRF #08—119 (Attachment 3) documenting improper field preservation.

- Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1VN95 (SDG# 20081195) and B1V654 of this SDG.

All QC controls are within the established limits.

Total Organic Halides – 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 page 59 for QC details.

All QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was not met. See comment below. 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. Analytical Note(s):

- Missed Hold Time – The regulatory hold time requirement was exceeded by one day. Refer to IRF #08-083 (Attachment 3) for detail.
- Duplicate QC was analyzed on sample# B1V654 of this SDG.
- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1VKT6 (SDG# 20081159).

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 76-80 for QC details.

All QC controls are within the established limits.

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See page 81 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 82 for QC details. Analytical Note(s):

- Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V9X4 (SDG# 20081067).

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 83-86 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, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See page 92-98 for QC details. Analytical Note(s):

- Gross Alpha/Gross Beta – Duplicate QC was analyzed on sample# B1TH60 (SDG# 20081067). Blank result was greater than established laboratory limits. No flags issued.
- Neptunium-237 – Duplicates, Matrix Spikes (tracer) and Matrix Spike Duplicates (tracer) were analyzed on samples B1V577 (SDG# 20081261, SAF# F08-103) and B1V654 of this SDG. Tracer recoveries on sample B1V577 were slightly low. No flags issued.
- Technetium-99 – Duplicate and Matrix Spike were analyzed on sample# B1V7J6 (SDG# 20081110).
- Tritium – Duplicate and Matrix Spike were analyzed on sample# B1V6F7 (SDG# 20081110).

All other 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-08-775

ATTACHMENT 3

ISSUE RESOLUTION FORM

Consisting of 3 pages
Including cover page

ISSUE RESOLUTION FORM

PNNL TRACKING NUMBER: 08-083
Date : **6-19-2008** SAF No.

SDG: **WSCF20081134** LOGIN No.: TEST: Ethyl Acetate by 8015

Sample No.(s)	**B1V654**	**W08P002695**
	B1V662	**W08P002697**
	B1V9T0	**W08P002698**

Submitted By:	J. Trechter	Submitted To:	H Hampt
Phone No.	373-7046	Phone No.	376-4319
Fax No.	372-0456	Fax No	

ISSUE	PROPOSED RESOLUTION
Samples were taken and submitted to WSCF on 6/4/08, with a holding time limit date of 6/18/08. Due to an unplanned ventilation shut down on 6/18/08, the holding time was missed. The analysis was started on 6/19/08, making the holding time off by one day.	Accept the analysis one day past the holding time with appropriate comments in the report narrative.

GRP COMMENTS
Accept proposed resolution.

Heidi Hampt 7/1/08
Signature and Date

ISSUE RESOLUTION FORM

PNNL TRACKING NUMBER: 08-119
Date : **07-28-2008** SAF No. **I08-037**

SDG: **WSCF20081134** LOGIN No.: TEST: TOC-30

Sample No.(s) **B1V654, B1V662, B1V9T0**

(W08P002695, W08P002697, W08P002698)

Submitted By:	WW Baird	Submitted To:	H Hampt
Phone No.	373-7189	Phone No.	376-4319
Fax No.	372-0456	Fax No	

ISSUE	PROPOSED RESOLUTION
On June 4, 2008, GPAP samples (identified above) were collected and delivered to the WSCF Laboratory with improper preservation. Samples were not acidified as per COC requirements. Samples were acidified by WSCF Laboratory personnel and samples identified above have been successfully analyzed on July 9, 2008. All QC Controls are within established laboratory limits.	Accept TOC sample results and document in the case narrative that the samples were not correctly preserved in the field.

GRP COMMENTS
Accept proposed resolution.

Heidi Hampt 7/28/08
Signature and Date

M4W41-SLF-08-775

ATTACHMENT 4

ANALYTICAL RESULTS

Consisting of 88 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

GPAP
Richland, WA 99352

Attention: Steve Trent E6-35

Analytical: Jillian F. Baird JW Baird 8/4/08

Client Services: P.D. Mix 8/1/2008

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

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

Report#: WSCF20081134
Report Date: 31-jul-2008
Report WGPP/ver. 5.2
GPAP

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20081134

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36565	2	36981	41333	BLANK		Anions by Ion Chromatography
36565	11	36981	41333	BLANK		Anions by Ion Chromatography
36565	3	36981	41333	LCS		Anions by Ion Chromatography
36565	5	36981	41333	DUP	W08P002690	Anions by Ion Chromatography
36565	6	36981	41333	MS	W08P002690	Anions by Ion Chromatography
36565	7	36981	41333	MSD	W08P002690	Anions by Ion Chromatography
36565	4	36981	41333	SAMPLE	W08P002690	Anions by Ion Chromatography
36565	7	36981	41333	SPK-RPD	W08P002690	Anions by Ion Chromatography
36565	9	36981	41333	SAMPLE	W08P002693	Anions by Ion Chromatography
36583	2	37004	41348	BLANK		Anions by Ion Chromatography
36583	13	37004	41348	BLANK		Anions by Ion Chromatography
36583	3	37004	41348	LCS		Anions by Ion Chromatography
36583	12	37004	41348	SAMPLE	W08P002692	Anions by Ion Chromatography
36583	8	37004	41348	SAMPLE	W08P002695	Anions by Ion Chromatography
36583	9	37004	41348	SAMPLE	W08P002697	Anions by Ion Chromatography
36583	10	37004	41348	SAMPLE	W08P002698	Anions by Ion Chromatography
36583	5	37004	41348	DUP	W08P002702	Anions by Ion Chromatography
36583	6	37004	41348	MS	W08P002702	Anions by Ion Chromatography
36583	7	37004	41348	MSD	W08P002702	Anions by Ion Chromatography
36583	7	37004	41348	SPK-RPD	W08P002702	Anions by Ion Chromatography
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	20	37006	41351	SAMPLE	W08P002690	Total Alkalinity as mg/L CaCO3
36589	21	37006	41351	SAMPLE	W08P002692	Total Alkalinity as mg/L CaCO3
36610	3	37027	41368	BLANK		Ammonia (N) by IC
36610	14	37027	41368	BLANK		Ammonia (N) by IC
36610	1	37027	41368	LCS		Ammonia (N) by IC
36610	5	37027	41368	DUP	W08P002695	Ammonia (N) by IC
36610	6	37027	41368	MS	W08P002695	Ammonia (N) by IC
36610	7	37027	41368	MSD	W08P002695	Ammonia (N) by IC
36610	4	37027	41368	SAMPLE	W08P002695	Ammonia (N) by IC
36610	7	37027	41368	SPK-RPD	W08P002695	Ammonia (N) by IC
36610	8	37027	41368	SAMPLE	W08P002697	Ammonia (N) by IC
36610	9	37027	41368	SAMPLE	W08P002698	Ammonia (N) by IC
36669	1	37082	41410	BLANK		Cyanide by Midi/Spectrophotom
36669	2	37082	41410	LCS		Cyanide by Midi/Spectrophotom
36669	4	37082	41410	MS	W08GR01437	Cyanide by Midi/Spectrophotom
36669	5	37082	41410	MSD	W08GR01437	Cyanide by Midi/Spectrophotom
36669	5	37082	41410	SPK-RPD	W08GR01437	Cyanide by Midi/Spectrophotom
36669	8	37082	41410	SAMPLE	W08P002690	Cyanide by Midi/Spectrophotom
36669	9	37082	41410	SAMPLE	W08P002695	Cyanide by Midi/Spectrophotom
36669	10	37082	41410	SAMPLE	W08P002697	Cyanide by Midi/Spectrophotom
36669	11	37082	41410	SAMPLE	W08P002698	Cyanide by Midi/Spectrophotom
36820	1	37242	41582	BLANK		ICP-200.8 MS All possible meta

36820	2	37242	41582	LCS		ICP-200.8 MS All possible meta
36820	13	37242	41582	SAMPLE	W08P002690	ICP-200.8 MS All possible meta
36820	14	37242	41582	SAMPLE	W08P002691	ICP-200.8 MS All possible meta
36820	15	37242	41582	SAMPLE	W08P002692	ICP-200.8 MS All possible meta
36820	16	37242	41582	SAMPLE	W08P002693	ICP-200.8 MS All possible meta
36820	17	37242	41582	SAMPLE	W08P002694	ICP-200.8 MS All possible meta
36820	4	37242	41582	MS	W08P002695	ICP-200.8 MS All possible meta
36820	5	37242	41582	MSD	W08P002695	ICP-200.8 MS All possible meta
36820	3	37242	41582	SAMPLE	W08P002695	ICP-200.8 MS All possible meta
36820	5	37242	41582	SPK-RPD	W08P002695	ICP-200.8 MS All possible meta
36820	18	37242	41582	SAMPLE	W08P002696	ICP-200.8 MS All possible meta
36820	7	37242	41582	MS	W08P002697	ICP-200.8 MS All possible meta
36820	8	37242	41582	MSD	W08P002697	ICP-200.8 MS All possible meta
36820	6	37242	41582	SAMPLE	W08P002697	ICP-200.8 MS All possible meta
36820	8	37242	41582	SPK-RPD	W08P002697	ICP-200.8 MS All possible meta
36820	19	37242	41582	SAMPLE	W08P002698	ICP-200.8 MS All possible meta
36820	20	37242	41582	SAMPLE	W08P002699	ICP-200.8 MS All possible meta
36891	1	37311	41657	BLANK		Total Organic Halides
36891	2	37311	41657	LCS		Total Organic Halides
36891	5	37311	41657	MS	W08P002697	Total Organic Halides
36891	6	37311	41657	MSD	W08P002697	Total Organic Halides
36891	4	37311	41657	SAMPLE	W08P002697	Total Organic Halides
36891	6	37311	41657	SPK-RPD	W08P002697	Total Organic Halides
37010	1	37433	41784	BLANK		Total Organic Carbon
37010	2	37433	41784	METHSPIKE		Total Organic Carbon
37010	3	37433	41784	SPK-RSD		Total Organic Carbon
37010	4	37433	41784	MS	W08P002695	Total Organic Carbon
37010	5	37433	41784	MSD	W08P002695	Total Organic Carbon
37010	7	37433	41784	SAMPLE	W08P002695	Total Organic Carbon
37010	5	37433	41784	SPK-RPD	W08P002695	Total Organic Carbon
37010	8	37433	41784	SAMPLE	W08P002697	Total Organic Carbon
37010	9	37433	41784	SAMPLE	W08P002698	Total Organic Carbon
37010	18	37433	41784	MS	W08P002879	Total Organic Carbon
37010	19	37433	41784	MSD	W08P002879	Total Organic Carbon
37010	19	37433	41784	SPK-RPD	W08P002879	Total Organic Carbon
36995	1	37415	41885	BLANK		ICP Metals Analysis, Grd H20 P
36995	2	37415	41885	LCS		ICP Metals Analysis, Grd H20 P
36995	4	37415	41885	MS	W08P002617	ICP Metals Analysis, Grd H20 P
36995	5	37415	41885	MSD	W08P002617	ICP Metals Analysis, Grd H20 P
36995	5	37415	41885	SPK-RPD	W08P002617	ICP Metals Analysis, Grd H20 P
36995	16	37415	41885	SAMPLE	W08P002687	ICP Metals Analysis, Grd H20 P
36995	17	37415	41885	SAMPLE	W08P002690	ICP Metals Analysis, Grd H20 P
36995	18	37415	41885	SAMPLE	W08P002691	ICP Metals Analysis, Grd H20 P
36995	19	37415	41885	SAMPLE	W08P002692	ICP Metals Analysis, Grd H20 P
36995	20	37415	41885	SAMPLE	W08P002694	ICP Metals Analysis, Grd H20 P
36995	21	37415	41885	SAMPLE	W08P002695	ICP Metals Analysis, Grd H20 P
36995	22	37415	41885	SAMPLE	W08P002696	ICP Metals Analysis, Grd H20 P
36995	23	37415	41885	SAMPLE	W08P002697	ICP Metals Analysis, Grd H20 P
36995	24	37415	41885	SAMPLE	W08P002698	ICP Metals Analysis, Grd H20 P
37125	1	37551	41895	BLANK		ICP Metals Analysis, Grd H20 P
37125	2	37551	41895	LCS		ICP Metals Analysis, Grd H20 P
37125	4	37551	41895	MS	W08P002699	ICP Metals Analysis, Grd H20 P
37125	5	37551	41895	MSD	W08P002699	ICP Metals Analysis, Grd H20 P
37125	3	37551	41895	SAMPLE	W08P002699	ICP Metals Analysis, Grd H20 P
37125	5	37551	41895	SPK-RPD	W08P002699	ICP Metals Analysis, Grd H20 P

w13qlog v4.2 31-jul-2008 15:37:58

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20081134

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			41400	BLANK		NWTPH-D TPH Diesel Range (Wa)
			41400	LCS		NWTPH-D TPH Diesel Range (Wa)
			41400	MS	W08P002695	NWTPH-D TPH Diesel Range (Wa)
			41400	MSD	W08P002695	NWTPH-D TPH Diesel Range (Wa)
			41400	SAMPLE	W08P002695	NWTPH-D TPH Diesel Range (Wa)
			41400	SPK-RPD	W08P002695	NWTPH-D TPH Diesel Range (Wa)
			41400	SURR	W08P002695	NWTPH-D TPH Diesel Range (Wa)
			41400	SAMPLE	W08P002697	NWTPH-D TPH Diesel Range (Wa)
			41400	SURR	W08P002697	NWTPH-D TPH Diesel Range (Wa)
			41400	SAMPLE	W08P002698	NWTPH-D TPH Diesel Range (Wa)
			41400	SURR	W08P002698	NWTPH-D TPH Diesel Range (Wa)
			41445	BLANK		SW-846 8270C Semi-Vols
			41445	LCS		SW-846 8270C Semi-Vols
			41445	SAMPLE	W08P002695	SW-846 8270C Semi-Vols
			41445	SURR	W08P002695	SW-846 8270C Semi-Vols
			41445	MS	W08P002697	SW-846 8270C Semi-Vols
			41445	MSD	W08P002697	SW-846 8270C Semi-Vols
			41445	SAMPLE	W08P002697	SW-846 8270C Semi-Vols
			41445	SPK-RPD	W08P002697	SW-846 8270C Semi-Vols
			41445	SURR	W08P002697	SW-846 8270C Semi-Vols
			41445	SAMPLE	W08P002698	SW-846 8270C Semi-Vols
			41445	SURR	W08P002698	SW-846 8270C Semi-Vols
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	6	37412	41747	SPK-RPD	W08P002592	NWTPH-GX TPH Gasoline Range
36990	8	37412	41747	SAMPLE	W08P002695	NWTPH-GX TPH Gasoline Range
36990	9	37412	41747	SAMPLE	W08P002697	NWTPH-GX TPH Gasoline Range
36990	10	37412	41747	SAMPLE	W08P002698	NWTPH-GX TPH Gasoline Range
			41824	BLANK		VOA Ground Water Protection
			41824	LCS		VOA Ground Water Protection
			41824	MS	W08P002686	VOA Ground Water Protection
			41824	MSD	W08P002686	VOA Ground Water Protection
			41824	SAMPLE	W08P002686	VOA Ground Water Protection
			41824	SPK-RPD	W08P002686	VOA Ground Water Protection
			41824	SURR	W08P002686	VOA Ground Water Protection
			41824	SAMPLE	W08P002693	VOA Ground Water Protection
			41824	SURR	W08P002693	VOA Ground Water Protection
			41824	SAMPLE	W08P002695	VOA Ground Water Protection
			41824	SURR	W08P002695	VOA Ground Water Protection
			41824	SAMPLE	W08P002697	VOA Ground Water Protection
			41824	SURR	W08P002697	VOA Ground Water Protection
			41824	SAMPLE	W08P002698	VOA Ground Water Protection
			41824	SURR	W08P002698	VOA Ground Water Protection
37099	1	37525	41877	BLANK		Alcohols, Glycols - 8015
37099	2	37525	41877	LCS		Alcohols, Glycols - 8015

37099	4	37525	41877	DUP	W08P002695	Alcohols, Glycols - 8015
37099	3	37525	41877	SAMPLE	W08P002695	Alcohols, Glycols - 8015
37099	5	37525	41877	SAMPLE	W08P002697	Alcohols, Glycols - 8015
37099	6	37525	41877	SAMPLE	W08P002698	Alcohols, Glycols - 8015
37099	9	37525	41877	MS	W08P002743	Alcohols, Glycols - 8015
37099	10	37525	41877	MSD	W08P002743	Alcohols, Glycols - 8015
37099	10	37525	41877	SPK-RPD	W08P002743	Alcohols, Glycols - 8015

w13qlog v4.2 31-jul-2008 15:37:58

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20081134

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
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	8	37046	41392	SAMPLE	W08P002692	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	8	37016	41458	SAMPLE	W08P002692	Gross Alpha/Gross Beta (AB32)
36695	1	37112	41480	BLANK		Tritium by Liq Sct column prep
36695	2	37112	41480	LCS		Tritium by Liq Sct column prep
36695	4	37112	41480	DUP	W08P002658	Tritium by Liq Sct column prep
36695	3	37112	41480	MS	W08P002658	Tritium by Liq Sct column prep
36695	12	37112	41480	SAMPLE	W08P002692	Tritium by Liq Sct column prep
36695	13	37112	41480	SAMPLE	W08P002693	Tritium by Liq Sct column prep
36695	14	37112	41480	SAMPLE	W08P002695	Tritium by Liq Sct column prep
36695	15	37112	41480	SAMPLE	W08P002697	Tritium by Liq Sct column prep
36695	16	37112	41480	SAMPLE	W08P002698	Tritium by Liq Sct column prep
36701	1	37118	41566	BLANK		Strontium 89/90
36701	2	37118	41566	LCS		Strontium 89/90
36701	3	37118	41566	DUP	W08P002695	Strontium 89/90
36701	4	37118	41566	SAMPLE	W08P002695	Strontium 89/90
36701	5	37118	41566	SURR	W08P002695	Strontium 89/90
36701	6	37118	41566	SAMPLE	W08P002697	Strontium 89/90
36701	7	37118	41566	SURR	W08P002697	Strontium 89/90
36701	8	37118	41566	SAMPLE	W08P002698	Strontium 89/90
36701	9	37118	41566	SURR	W08P002698	Strontium 89/90
36601	1	37018	41598	BLANK		TC99 by Liquid Scin.
36601	4	37018	41598	LCS		TC99 by Liquid Scin.
36601	3	37018	41598	DUP	W08P002653	TC99 by Liquid Scin.
36601	2	37018	41598	MS	W08P002653	TC99 by Liquid Scin.
36601	13	37018	41598	SAMPLE	W08P002693	TC99 by Liquid Scin.
36601	14	37018	41598	SAMPLE	W08P002695	TC99 by Liquid Scin.
36601	15	37018	41598	SAMPLE	W08P002697	TC99 by Liquid Scin.
36601	16	37018	41598	SAMPLE	W08P002698	TC99 by Liquid Scin.
37147	1	37574	42033	BLANK		Neptunium by AEA
37147	2	37574	42033	LCS		Neptunium by AEA
37147	3	37574	42033	DUP	W08P002695	Neptunium by AEA
37147	5	37574	42033	MS	W08P002695	Neptunium by AEA
37147	6	37574	42033	MSD	W08P002695	Neptunium by AEA
37147	4	37574	42033	SAMPLE	W08P002695	Neptunium by AEA
37147	6	37574	42033	SPK-RPD	W08P002695	Neptunium by AEA
37330	1	37760	42122	BLANK		Neptunium by AEA
37330	2	37760	42122	LCS		Neptunium by AEA
37330	3	37760	42122	DUP	W08GR01833	Neptunium by AEA
37330	12	37760	42122	MS	W08GR01833	Neptunium by AEA
37330	6	37760	42122	MSD	W08GR01833	Neptunium by AEA

37330	12	37760	42122	SPK-RPD	W08GR01833	Neptunium by AEA
37330	8	37760	42122	MS	W08GR01840	Neptunium by AEA
37330	10	37760	42122	MS	W08GR01854	Neptunium by AEA
37330	5	37760	42122	MS	W08P002697	Neptunium by AEA
37330	4	37760	42122	SAMPLE	W08P002697	Neptunium by AEA

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-523-444	LA-523-444: TOTAL ORGANIC HALIDES BASED ON SW-846 METHOD 9020B	
	EPA SW-846 9020B	TOTAL ORGANIC HALIDES (TOX)
	HEIS 9020_TOX	Total Organic Halides based on SW846 Method 9020B
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	

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

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

WSCF
METHOD REFERENCES REPORT

Department: Organic

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

LA-523-443	LA-523-443: GAS CHROMATOGRAPH ANALYSIS OF GASOLINE RANGE TOTAL PETROLEUM HYDROCA	
	HEIS WTPH_GASOLINE	Total Petroleum Hydrocarbons, Gasoline
	WDOE TPH NWTPH-G	Volatile Petroleum Products Method for Soil and Water
LA-523-455	LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846	
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8260B	VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
	HEIS 8260_VOA_GCMS	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
LA-523-456	LA-523-456: SEMIVOLATILE SAMPLE ANALYSIS BY SW-846, METHOD 8270C	
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
	HEIS 8270_SVOA_GCMS	Semivolatile Orgamoc Compounds By Gas Chromatography/Mass Spectrometry (GC/MS)
LA-523-493	NWTPH-Diesel and/or Gasoline	
	HEIS WTPH_DIESEL (HEIS)	Total Petroleum Hydrocarbons in Diesel
	WDOE TPHD	Total Petroleum Hydrocarbons in Diesel
Organics	Organics - Alcohols, Glycols	
	EPA SW-846 8015B	Nonhalogenated Organics Using GC/FID

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

WSCF
METHOD REFERENCES REPORT

Department: Radiochemistry

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

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

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

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

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

LA-508-471 LA-508-471: ALPHA ENERGY ANALYZER DATA ACQUISITION AND SYSTEM CHECKOUT USING ALP

HEIS	**PUISO_IE_PRECIP_AEA**	Plutonium by Alpha Energy Analysis
HEIS	**RAISO_AEA**	Radium-226

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: S08-005
Sample # W08P002687
Client ID: B1V7H5 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**07/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/16/08
Magnesium	7439-95-4	LA-505-411		1.75e+04	ug/L			1.00	50		07/16/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Potassium	7440-09-7	LA-505-411		6.23e+03	ug/L			1.00	1.7e+02		07/16/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/16/08
Sodium	7440-23-5	LA-505-411		2.67e+04	ug/L			1.00	51		07/16/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/16/08
Barium	7440-39-3	LA-505-411		53.0	ug/L			1.00	4.0		07/16/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/16/08
Cobalt	7440 48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/16/08
Vanadium	7440-62-2	LA-505-411		12.6	ug/L			1.00	12		07/16/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/16/08
Calcium	7440-70-2	LA-505-411		6.04e+04	ug/L			1.00	73		07/16/08
Strontium	7440-24-6	LA-505-411		296	ug/L			1.00	4.0		07/16/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-005
Sample # W08P002690
Client ID: B1V7H6 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

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	0.381	mg/L			2.00	0.042		06/04/08
Chloride	16887-00-6	LA-533-410	D	15.4	mg/L			2.00	0.22		06/04/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		06/04/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	16.4	mg/L			10.00	0.36		06/04/08
Sulfate	14808-79-8	LA-533-410	D	73.3	mg/L			10.00	0.77		06/04/08
Cyanide											
Cyanide	57-12-5	LA-695-402		4.20	ug/L			1.00	4.0		06/09/08
ICP Metals Analysis, Grd H20 P Prep											**07/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		60.4	ug/L			1.00	25		07/16/08
Magnesium	7439-95-4	LA-505-411		1.77e+04	ug/L			1.00	50		07/16/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Potassium	7440-09-7	LA-505-411		6.26e+03	ug/L			1.00	1.7e+02		07/16/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/16/08
Sodium	7440-23-5	LA-505-411		2.69e+04	ug/L			1.00	51		07/16/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/16/08
Barium	7440-39-3	LA-505-411		53.6	ug/L			1.00	4.0		07/16/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/16/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/16/08
Vanadium	7440-62-2	LA-505-411		12.4	ug/L			1.00	12		07/16/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/16/08

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-005
Sample # W08P002690
Client ID: B1V7H6 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411		6.13e+04	ug/L			1.00	73		07/16/08
Strontium	7440-24-6	LA-505-411		299	ug/L			1.00	4.0		07/16/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		9.55	ug/L			1.00	0.0500		06/24/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		120	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)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-005
Sample # W08P002691
Client ID: B1V7H1 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**07/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/16/08
Magnesium	7439-95-4	LA-505-411		2.04e+04	ug/L			1.00	50		07/16/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Potassium	7440-09-7	LA-505-411		6.42e+03	ug/L			1.00	1.7e+02		07/16/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/16/08
Sodium	7440-23-5	LA-505-411		2.60e+04	ug/L			1.00	51		07/16/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/16/08
Barium	7440-39-3	LA-505-411		64.8	ug/L			1.00	4.0		07/16/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/16/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/16/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		07/16/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/16/08
Calcium	7440-70-2	LA-505-411		7.58e+04	ug/L			1.00	73		07/16/08
Strontium	7440-24-6	LA-505-411		362	ug/L			1.00	4.0		07/16/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Arsenic	7440-38-2	LA-505-412		2.24	ug/L			1.00	0.400		06/24/08

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-005
Sample # W08P002692
Client ID: B1V7H2 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

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	0.291	mg/L			2.00	0.042		06/05/08
Chloride	16887-00-6	LA-533-410	D	14.9	mg/L			2.00	0.22		06/05/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		06/05/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	28.4	mg/L			10.00	0.36		06/05/08
Sulfate	14808-79-8	LA-533-410	D	80.4	mg/L			2.00	0.15		06/05/08
ICP Metals Analysis, Grd H20 P Prep											**07/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411		104	ug/L			1.00	25		07/16/08
Magnesium	7439-95-4	LA-505-411		1.97e+04	ug/L			1.00	50		07/16/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Potassium	7440-09-7	LA-505-411		6.36e+03	ug/L			1.00	1.7e+02		07/16/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/16/08
Sodium	7440-23-5	LA-505-411		2.60e+04	ug/L			1.00	51		07/16/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/16/08
Barium	7440-39-3	LA-505-411		62.4	ug/L			1.00	4.0		07/16/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/16/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/16/08
Vanadium	7440 62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		07/16/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/16/08
Calcium	7440-70-2	LA-505-411		7.26e+04	ug/L			1.00	73		07/16/08
Strontium	7440-24-6	LA-505-411		350	ug/L			1.00	4.0		07/16/08

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-005
Sample # W08P002692
Client ID: B1V7H2 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

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		07/16/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		33.4	ug/L			1.00	0.0500		06/24/08
Arsenic	7440-38-2	LA-505-412		2.10	ug/L			1.00	0.400		06/24/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		120	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)
D - Analyte was identified at a secondary dilution factor(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

* - 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 # W08P002693
Client ID: B1V9T4 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

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	0.364	mg/L			2.00	0.042		06/04/08
Chloride	16887-00-6	LA-533-410	D	9.16	mg/L			2.00	0.22		06/04/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		06/04/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	18.9	mg/L			10.00	0.36		06/04/08
Sulfate	14808-79-8	LA-533-410	D	29.1	mg/L			2.00	0.15		06/04/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Uranium	7440-61-1	LA-505-412		129	ug/L			1.00	0.0500		06/24/08

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

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

* - 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 # W08P002694
Client ID: B1V653 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**07/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/16/08
Magnesium	7439-95-4	LA-505-411	U	< 50.0	ug/L			1.00	50		07/16/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Potassium	7440-09-7	LA-505-411	U	< 170	ug/L			1.00	1.7e+02		07/16/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/16/08
Sodium	7440-23-5	LA-505-411	U	< 51.0	ug/L			1.00	51		07/16/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/16/08
Barium	7440-39-3	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/16/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/16/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		07/16/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/16/08
Calcium	7440-70-2	LA-505-411	U	< 73.0	ug/L			1.00	73		07/16/08
Lithium	7439-93-2	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Strontium	7440-24-6	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/24/08
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/24/08

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

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

* - 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 # W08P002694
Client ID: B1V653 GPP-PNNL TRENT WSCF **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

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

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

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

* - 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 # W08P002695
Client ID: B1V654 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

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		06/05/08
Chloride	16887-00-6	LA-533-410	DU	< 0.220	mg/L			2.00	0.22		06/05/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		06/05/08
Nitrogen in Nitrate	NO3-N	LA-533-410	DU	< 0.0720	mg/L			2.00	0.072		06/05/08
Sulfate	14808-79-8	LA-533-410	DU	< 0.154	mg/L			2.00	0.15		06/05/08
Cyanide											
Cyanide	57-12-5	LA-695-402	U	< 4.00	ug/L			1.00	4.0		06/09/08
ICP Metals Analysis, Grd H20 P Prep											**07/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/16/08
Magnesium	7439-95-4	LA-505-411	U	< 50.0	ug/L			1.00	50		07/16/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Potassium	7440-09-7	LA-505-411	U	< 170	ug/L			1.00	1.7e+02		07/16/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/16/08
Sodium	7440-23-5	LA-505-411	U	< 51.0	ug/L			1.00	51		07/16/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/16/08
Barium	7440-39-3	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/16/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/16/08
Vanadium	7440-62-2	LA-505-411	U	< 12.0	ug/L			1.00	12		07/16/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/16/08

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

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

* - 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 # W08P002695
Client ID: B1V654 GPP-PNNL TRENT WSCF **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411	U	< 73.0	ug/L			1.00	73		07/16/08
Lithium	7439-93-2	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Strontium	7440-24-6	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/24/08
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/24/08
Uranium	7440-61-1	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/24/08
Arsenic	7440-38-2	LA-505-412	U	< 0.400	ug/L			1.00	0.400		06/24/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	U	< 9.32e-03	mg/L			1.00	9.3e-03		06/06/08
Total organic carbon											
Total organic carbon	TOC	LA-344-406	U	< 0.300	mg/L			1.00	0.30		07/09/08

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

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

* - 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 # W08P002696
Client ID: B1V661 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**07/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/16/08
Magnesium	7439-95-4	LA-505-411		1.24e+04	ug/L			1.00	50		07/16/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Potassium	7440-09-7	LA-505-411		4.18e+03	ug/L			1.00	1.7e+02		07/16/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/16/08
Sodium	7440-23-5	LA-505-411		1.60e+04	ug/L			1.00	51		07/16/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/16/08
Barium	7440-39-3	LA-505-411		37.1	ug/L			1.00	4.0		07/16/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/16/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/16/08
Vanadium	7440-62-2	LA-505-411		23.4	ug/L			1.00	12		07/16/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/16/08
Calcium	7440-70-2	LA-505-411		3.92e+04	ug/L			1.00	73		07/16/08
Lithium	7439-93-2	LA-505-411		4.50	ug/L			1.00	4.0		07/16/08
Strontium	7440-24-6	LA-505-411		187	ug/L			1.00	4.0		07/16/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/24/08
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/24/08

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

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

* - 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 # W08P002696
Client ID: B1V661 GPP-PNNL TRENT WSCF
Matrix: WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Arsenic	7440-38-2	LA-505-412		2.39	ug/L			1.00	0.400		06/24/08

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

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

* - 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 # W08P002697
Client ID: B1V662 GPP-PNNL TRENT WSCF **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

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	0.320	mg/L			2.00	0.042		06/05/08
Chloride	16887-00-6	LA-533-410	D	10.6	mg/L			2.00	0.22		06/05/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		06/05/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	4.90	mg/L			2.00	0.072		06/05/08
Sulfate	14808-79-8	LA-533-410	D	30.0	mg/L			2.00	0.15		06/05/08
Cyanide											
Cyanide	57-12-5	LA-695-402	U	< 4.00	ug/L			1.00	4.0		06/09/08
ICP Metals Analysis, Grd H20 P Prep											**07/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/16/08
Magnesium	7439-95-4	LA-505-411		1.25e+04	ug/L			1.00	50		07/16/08
Manganese	7439-96-5	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Potassium	7440-09-7	LA-505-411		4.22e+03	ug/L			1.00	1.7e+02		07/16/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/16/08
Sodium	7440-23-5	LA-505-411		1.62e+04	ug/L			1.00	51		07/16/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/16/08
Barium	7440-39-3	LA-505-411		37.8	ug/L			1.00	4.0		07/16/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/16/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/16/08
Vanadium	7440-62-2	LA-505-411		24.4	ug/L			1.00	12		07/16/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/16/08

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

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

* - 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 # W08P002697
Client ID: B1V662 GPP-PNNL TRENT WSCF **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411		3.94e+04	ug/L			1.00	73		07/16/08
Lithium	7439-93-2	LA-505-411		4.50	ug/L			1.00	4.0		07/16/08
Strontium	7440-24-6	LA-505-411		188	ug/L			1.00	4.0		07/16/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/24/08
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/24/08
Uranium	7440-61-1	LA-505-412		31.0	ug/L			1.00	0.0500		06/24/08
Arsenic	7440-38-2	LA-505-412		2.62	ug/L			1.00	0.400		06/24/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	U	< 9.32e-03	mg/L			1.00	9.3e-03		06/06/08
Total Organic Halides Prep											**06/10/08**
Total Organic Halides											
Total Organic Halides	59473-04-0	LA-523-444		88.5	ug/L			1.00	5.0		06/10/08
Total organic carbon											
Total organic carbon	TOC	LA-344-406		0.472	mg/L			1.00	0.30		07/09/08

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

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

* - 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 # W08P002698
Client ID: B1V9T0 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

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	0.356	mg/L			2.00	0.042		06/05/08
Chloride	16887-00-6	LA-533-410	D	8.14	mg/L			2.00	0.22		06/05/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.0198	mg/L			2.00	0.020		06/05/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	4.93	mg/L			2.00	0.072		06/05/08
Sulfate	14808-79-8	LA-533-410	D	22.3	mg/L			2.00	0.15		06/05/08
Cyanide											
Cyanide	57-12-5	LA-695-402	U	< 4.00	ug/L			1.00	4.0		06/09/08
ICP Metals Analysis, Grd H20 P Prep											**07/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/16/08
Magnesium	7439-95-4	LA-505-411		1.04e+04	ug/L			1.00	50		07/16/08
Manganese	7439-96-5	LA-505-411		9.80	ug/L			1.00	4.0		07/16/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Potassium	7440-09-7	LA-505-411		4.37e+03	ug/L			1.00	1.7e+02		07/16/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/16/08
Sodium	7440-23-5	LA-505-411		1.73e+04	ug/L			1.00	51		07/16/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/16/08
Barium	7440-39-3	LA-505-411		31.6	ug/L			1.00	4.0		07/16/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/16/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/16/08
Vanadium	7440-62-2	LA-505-411		25.4	ug/L			1.00	12		07/16/08
Zinc	7440-66-6	LA-505-411		12.3	ug/L			1.00	9.0		07/16/08

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

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

* - 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 # W08P002698
Client ID: B1V9T0 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Calcium	7440-70-2	LA-505-411		3.15e+04	ug/L			1.00	73		07/16/08
Lithium	7439-93-2	LA-505-411		4.70	ug/L			1.00	4.0		07/16/08
Strontium	7440-24-6	LA-505-411		160	ug/L			1.00	4.0		07/16/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/16/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/24/08
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/24/08
Uranium	7440-61-1	LA-505-412		2.13	ug/L			1.00	0.0500		06/24/08
Arsenic	7440-38-2	LA-505-412		2.93	ug/L			1.00	0.400		06/24/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	B	0.0182	mg/L			1.00	9.3e-03		06/06/08
Total organic carbon											
Total organic carbon	TOC	LA-344-406		0.845	mg/L			1.00	0.30		07/09/08

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

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

* - 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 # W08P002699
Client ID: B1V9R9 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP Metals Analysis, Grd H20 P Prep											**07/08/08**
ICP Metals Analysis, Grd H20 P											
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		07/17/08
Magnesium	7439-95-4	LA-505-411		1.08e+04	ug/L			1.00	50		07/17/08
Manganese	7439-96-5	LA-505-411		10.7	ug/L			1.00	4.0		07/17/08
Nickel	7440-02-0	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/17/08
Potassium	7440-09-7	LA-505-411		3.77e+03	ug/L			1.00	1.7e+02		07/17/08
Silver	7440-22-4	LA-505-411	U	< 5.00	ug/L			1.00	5.0		07/17/08
Sodium	7440-23-5	LA 505-411		1.59e+04	ug/L			1.00	51		07/17/08
Antimony	7440-36-0	LA-505-411	U	< 56.0	ug/L			1.00	56		07/17/08
Barium	7440-39-3	LA-505-411		33.4	ug/L			1.00	4.0		07/17/08
Cadmium	7440-43-9	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/17/08
Chromium	7440-47-3	LA-505-411	U	< 13.0	ug/L			1.00	13		07/17/08
Cobalt	7440-48-4	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/17/08
Copper	7440-50-8	LA-505-411	U	< 6.00	ug/L			1.00	6.0		07/17/08
Vanadium	7440-62-2	LA-505-411		24.1	ug/L			1.00	12		07/17/08
Zinc	7440-66-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		07/17/08
Calcium	7440-70-2	LA-505-411		3.62e+04	ug/L			1.00	73		07/17/08
Lithium	7439-93-2	LA-505-411		4.80	ug/L			1.00	4.0		07/17/08
Strontium	7440-24-6	LA-505-411		168	ug/L			1.00	4.0		07/17/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		07/17/08
ICP-200.8 MS All possible meta Prep											**06/24/08**
ICP-200.8 MS All possible meta											
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		06/24/08
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		06/24/08

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

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

* - 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 # W08P002699
Client ID: B1V9R9 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Inorganic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Arsenic	7440-38-2	LA-505-412		3.00	ug/L			1.00	0.400		06/24/08

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

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

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081134
Matrix: WATER
Test: Ammonia (N) by IC

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002695											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Ammonia (N) by IC	7664-41-7	<9.32e-3		RPD			n/a	20.000	U	06/06/08
MS	Ammonia (N) by IC	7664-41-7	0.4942	99.237	% Recov	80.000	120.000				06/06/08
MSD	Ammonia (N) by IC	7664-41-7	0.5263	105.683	% Recov	80.000	120.000				06/06/08
SPK-RPD	Ammonia (N) by IC	7664-41-7	105.683		RPD			6.291	20.000		06/06/08
BATCH QC											
BLANK	Ammonia (N) by IC	7664-41-7	<9.32e-3	n/a	mg/L	0.000	0.002			U	06/06/08
BLANK	Ammonia (N) by IC	7664-41-7	<9.32e-3	n/a	mg/L	0.000	0.002			U	06/06/08
LCS	Ammonia (N) by IC	7664-41-7	92.6644	92.664	% Recov	80.000	120.000				06/06/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
Matrix: WATER
Test: Anions by Ion Chromatography

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002690											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	15.3527		RPD			0.293	20.000		06/04/08
DUP	Fluoride	16984-48-8	0.368		RPD			3.393	20.000		06/04/08
DUP	Nitrogen in Nitrite	NO2-N	<1.98e-2		RPD			n/a	20.000	U	06/04/08
DUP	Nitrogen in Nitrate	NO3-N	16.3698		RPD			0.040	20.000		06/04/08
DUP	Sulfate	14808-79-8	73.7993		RPD			0.709	20.000		06/04/08
MS	Chloride	16887-00-6	0.92785	93.251	% Recov	80.000	120.000				06/04/08
MS	Fluoride	16984-48-8	0.50705	102.850	% Recov	80.000	120.000				06/04/08
MS	Nitrogen in Nitrite	NO2-N	0.51455	104.583	% Recov	80.000	120.000				06/04/08
MS	Nitrogen in Nitrate	NO3-N	0.45222	101.395	% Recov	80.000	120.000				06/04/08
MS	Sulfate	14808-79-8	1.99886	101.983	% Recov	80.000	120.000				06/04/08
MSD	Chloride	16887-00-6	0.8494	85.367	% Recov	80.000	120.000				06/04/08
MSD	Fluoride	16984-48-8	0.5003	101.481	% Recov	80.000	120.000				06/04/08
MSD	Nitrogen in Nitrite	NO2-N	0.49935	101.494	% Recov	80.000	120.000				06/04/08
MSD	Nitrogen in Nitrate	NO3-N	0.46195	103.576	% Recov	80.000	120.000				06/04/08
MSD	Sulfate	14808-79-8	2.0669	105.454	% Recov	80.000	120.000				06/04/08
SPK-RPD	Chloride	16887-00-6	85.367		RPD			8.828	20.000		06/04/08
SPK-RPD	Fluoride	16984-48-8	101.481		RPD			1.340	20.000		06/04/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	101.494		RPD			2.998	20.000		06/04/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	103.576		RPD			2.128	20.000		06/04/08
SPK-RPD	Sulfate	14808-79-8	105.454		RPD			3.347	20.000		06/04/08
BATCH QC											
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	06/04/08
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	06/04/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	06/04/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	06/04/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	06/04/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	06/04/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	06/04/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	06/04/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	06/04/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	06/04/08
LCS	Chloride	16887-00-6	203.5623	101.275	% Recov	80.000	120.000				06/04/08
LCS	Fluoride	16984-48-8	106.1926	106.619	% Recov	80.000	120.000				06/04/08
LCS	Nitrogen in Nitrite	NO2-N	103.1775	103.800	% Recov	80.000	120.000				06/04/08
LCS	Nitrogen in Nitrate	NO3-N	94.7648	105.177	% Recov	80.000	120.000				06/04/08
LCS	Sulfate	14808-79-8	391.1144	98.766	% Recov	80.000	120.000				06/04/08

Lab ID: W08P002702
BATCH QC ASSOCIATED WITH SAMPLE

DUP	Chloride	16887-00-6	3.103		RPD			1.144	20.000		06/05/08
DUP	Fluoride	16984-48-8	0.8587		RPD			3.927	20.000		06/05/08
DUP	Nitrogen in Nitrite	NO2-N	<1.98e-2		RPD			n/a	20.000	U	06/05/08
DUP	Nitrogen in Nitrate	NO3-N	0.1427		RPD			0.351	20.000		06/05/08
DUP	Sulfate	14808-79-8	1.1743		RPD			3.432	20.000		06/05/08
MS	Chloride	16887-00-6	0.93645	94.116	% Recov	80.000	120.000				06/05/08
MS	Fluoride	16984-48-8	0.50235	101.897	% Recov	80.000	120.000				06/05/08
MS	Nitrogen in Nitrite	NO2-N	0.51365	104.400	% Recov	80.000	120.000				06/05/08
MS	Nitrogen in Nitrate	NO3-N	0.4553	102.085	% Recov	80.000	120.000				06/05/08
MS	Sulfate	14808-79-8	1.95285	99.635	% Recov	80.000	120.000				06/05/08
MSD	Chloride	16887-00-6	0.88155	88.598	% Recov	80.000	120.000				06/05/08
MSD	Fluoride	16984-48-8	0.4964	100.690	% Recov	80.000	120.000				06/05/08
MSD	Nitrogen in Nitrite	NO2-N	0.47315	96.169	% Recov	80.000	120.000				06/05/08
MSD	Nitrogen in Nitrate	NO3-N	0.44895	100.661	% Recov	80.000	120.000				06/05/08
MSD	Sulfate	14808-79-8	1.9254	98.235	% Recov	80.000	120.000				06/05/08
SPK-RPD	Chloride	16887-00-6	88.598		RPD			6.040	20.000		06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
Matrix: WATER
Test: Anions by Ion Chromatography

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Fluoride	16984-48-8	100.690		RPD			1.192	20.000		06/05/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	96.169		RPD			8.208	20.000		06/05/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	100.661		RPD			1.405	20.000		06/05/08
SPK-RPD	Sulfate	14808-79-8	98.235		RPD			1.415	20.000		06/05/08

BATCH QC

BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	06/05/08
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	06/05/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	06/05/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	06/05/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	06/05/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	06/05/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	06/05/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	06/05/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	06/05/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	06/05/08
LCS	Chloride	16887-00-6	200.1605	99.582	% Recov	80.000	120.000				06/05/08
LCS	Fluoride	16984-48-8	102.5081	102.920	% Recov	80.000	120.000				06/05/08
LCS	Nitrogen in Nitrite	NO2-N	101.8117	102.426	% Recov	80.000	120.000				06/05/08
LCS	Nitrogen in Nitrate	NO3-N	94.1074	104.448	% Recov	80.000	120.000				06/05/08
LCS	Sulfate	14808-79-8	402.1822	101.561	% Recov	80.000	120.000				06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
Matrix: WATER
Test: Cyanide by Midi/Spectrophotom

Sample Date: 06/03/08
Receive Date:06/03/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01437											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cyanide by Midi/Spectrophotom	57-12-5	37.5	93.750	% Recov	75.000	125.000				06/09/08
MSD	Cyanide by Midi/Spectrophotom	57-12-5	35.2	88.000	% Recov	75.000	125.000				06/09/08
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	88.000		RPD			6.327	20.000		06/09/08
BATCH QC											
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	< 4	n/a	ug/L	-4.000	4.000			U	06/09/08
LCS	Cyanide by Midi/Spectrophotom	57-12-5	44.4	88.800	% Recov	85.000	115.000				06/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

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

Lab ID: W08P002617
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	1009	100.900	% Recov	75.000	125.000				07/16/08
MS	Barium	7440-39-3	513.7	102.740	% Recov	75.000	125.000				07/16/08
MS	Beryllium	7440-41-7	537.8	107.560	% Recov	75.000	125.000				07/16/08
MS	Calcium	7440-70-2	-700	-70.000	% Recov	75.000	125.000			•	07/16/08
MS	Cadmium	7440-43-9	1001	100.100	% Recov	75.000	125.000				07/16/08
MS	Cobalt	7440-48-4	942	94.200	% Recov	75.000	125.000				07/16/08
MS	Chromium	7440-47-3	992	99.200	% Recov	75.000	125.000				07/16/08
MS	Copper	7440-50-8	1040	104.000	% Recov	75.000	125.000				07/16/08
MS	Iron	7439-89-6	975	97.500	% Recov	75.000	125.000				07/16/08
MS	Potassium	7440-09-7	9449	94.490	% Recov	75.000	125.000				07/16/08
MS	Magnesium	7439-95-4	490	49.000	% Recov	75.000	125.000			•	07/16/08
MS	Manganese	7439-96-5	892	89.200	% Recov	75.000	125.000				07/16/08
MS	Sodium	7440-23-5	750	75.000	% Recov	75.000	125.000				07/16/08
MS	Nickel	7440-02-0	964.4	96.440	% Recov	75.000	125.000				07/16/08
MS	Antimony	7440-36-0	1013	101.300	% Recov	75.000	125.000				07/16/08
MS	Strontium	7440-24-6	503.1	100.620	% Recov	75.000	125.000				07/16/08
MS	Vanadium	7440-62-2	991.4	99.140	% Recov	75.000	125.000				07/16/08
MS	Zinc	7440-66-6	1058	105.800	% Recov	75.000	125.000				07/16/08
MSD	Silver	7440-22-4	1021	102.100	% Recov	75.000	125.000				07/16/08
MSD	Barium	7440-39-3	520.6	104.120	% Recov	75.000	125.000				07/16/08
MSD	Beryllium	7440-41-7	544.7	108.940	% Recov	75.000	125.000				07/16/08
MSD	Calcium	7440-70-2	2300	230.000	% Recov	75.000	125.000			•	07/16/08
MSD	Cadmium	7440-43-9	1007	100.700	% Recov	75.000	125.000				07/16/08
MSD	Cobalt	7440-48-4	946.7	94.670	% Recov	75.000	125.000				07/16/08
MSD	Chromium	7440-47-3	1003	100.300	% Recov	75.000	125.000				07/16/08
MSD	Copper	7440-50-8	1045	104.500	% Recov	75.000	125.000				07/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081134
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

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
MSD	Iron	7439-89-6	1010	101.000	% Recov	75.000	125.000				07/16/08
MSD	Potassium	7440-09-7	9259	92.590	% Recov	75.000	125.000				07/16/08
MSD	Magnesium	7439-95-4	840	84.000	% Recov	75.000	125.000				07/16/08
MSD	Manganese	7439-96-5	1043	104.300	% Recov	75.000	125.000				07/16/08
MSD	Sodium	7440-23-5	660	66.000	% Recov	75.000	125.000			•	07/16/08
MSD	Nickel	7440-02-0	978.3	97.830	% Recov	75.000	125.000				07/16/08
MSD	Antimony	7440-36-0	1022	102.200	% Recov	75.000	125.000				07/16/08
MSD	Strontium	7440-24-6	518.1	103.620	% Recov	75.000	125.000				07/16/08
MSD	Vanadium	7440-62-2	1001	100.100	% Recov	75.000	125.000				07/16/08
MSD	Zinc	7440-66-6	1066	106.600	% Recov	75.000	125.000				07/16/08
SPK-RPD	Silver	7440-22-4	102.100		RPD			1.182	20.000		07/16/08
SPK-RPD	Barium	7440-39-3	104.120		RPD			1.334	20.000		07/16/08
SPK-RPD	Beryllium	7440-41-7	108.940		RPD			1.275	20.000		07/16/08
SPK-RPD	Calcium	7440-70-2	230.000		RPD			375.000	20.000	•	07/16/08
SPK-RPD	Cadmium	7440-43-9	100.700		RPD			0.598	20.000		07/16/08
SPK-RPD	Cobalt	7440-48-4	94.670		RPD			0.498	20.000		07/16/08
SPK-RPD	Chromium	7440-47-3	100.300		RPD			1.103	20.000		07/16/08
SPK-RPD	Copper	7440-50-8	104.500		RPD			0.480	20.000		07/16/08
SPK-RPD	Iron	7439-89-6	101.000		RPD			3.526	20.000		07/16/08
SPK-RPD	Potassium	7440-09-7	92.590		RPD			2.031	20.000		07/16/08
SPK-RPD	Magnesium	7439-95-4	84.000		RPD			52.632	20.000	•	07/16/08
SPK-RPD	Manganese	7439-96-5	104.300		RPD			15.607	20.000		07/16/08
SPK-RPD	Sodium	7440-23-5	66.000		RPD			12.766	20.000		07/16/08
SPK-RPD	Nickel	7440-02-0	97.830		RPD			1.431	20.000		07/16/08
SPK-RPD	Antimony	7440-36-0	102.200		RPD			0.885	20.000		07/16/08
SPK-RPD	Strontium	7440-24-6	103.620		RPD			2.938	20.000		07/16/08
SPK-RPD	Vanadium	7440-62-2	100.100		RPD			0.964	20.000		07/16/08
SPK-RPD	Zinc	7440-66-6	106.600		RPD			0.753	20.000		07/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
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	07/16/08
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	07/16/08
BLANK	Beryllium	7440-41-7	<4	n/a	ug/L					U	07/16/08
BLANK	Calcium	7440-70-2	<73	n/a	ug/L					U	07/16/08
BLANK	Cadmium	7440-43-9	<4	n/a	ug/L					U	07/16/08
BLANK	Cobalt	7440-48-4	<4	n/a	ug/L					U	07/16/08
BLANK	Chromium	7440-47-3	<13	n/a	ug/L					U	07/16/08
BLANK	Copper	7440-50-8	<6	n/a	ug/L					U	07/16/08
BLANK	Iron	7439-89-6	<25	n/a	ug/L					U	07/16/08
BLANK	Potassium	7440-09-7	<170	n/a	ug/L					U	07/16/08
BLANK	Lithium	7439-93-2	<4	n/a	ug/L					U	07/16/08
BLANK	Magnesium	7439-95-4	<50	n/a	ug/L					U	07/16/08
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	07/16/08
BLANK	Sodium	7440-23-5	<51	n/a	ug/L					U	07/16/08
BLANK	Nickel	7440-02-0	<4	n/a	ug/L					U	07/16/08
BLANK	Antimony	7440-36-0	<56	n/a	ug/L					U	07/16/08
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	07/16/08
BLANK	Vanadium	7440-62-2	<12	n/a	ug/L					U	07/16/08
BLANK	Zinc	7440-66-6	<9	n/a	ug/L					U	07/16/08
LCS	Silver	7440-22-4	1025	102.500	% Recov	80.000	120.000				07/16/08
LCS	Barium	7440-39-3	534.9	106.980	% Recov	80.000	120.000				07/16/08
LCS	Beryllium	7440-41-7	575.6	115.120	% Recov	80.000	120.000				07/16/08
LCS	Calcium	7440-70-2	1017	101.700	% Recov	80.000	120.000				07/16/08
LCS	Cadmium	7440-43-9	1036	103.600	% Recov	80.000	120.000				07/16/08
LCS	Cobalt	7440-48-4	1004	100.400	% Recov	80.000	120.000				07/16/08
LCS	Chromium	7440-47-3	1034	103.400	% Recov	80.000	120.000				07/16/08
LCS	Copper	7440-50-8	1068	106.800	% Recov	80.000	120.000				07/16/08
LCS	Iron	7439-89-6	1021	102.100	% Recov	80.000	120.000				07/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
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	10750	107.500	% Recov	80.000	120.000				07/16/08
LCS	Lithium	7439-93-2	598.2	119.640	% Recov	80.000	120.000				07/16/08
LCS	Magnesium	7439-95-4	1074	107.400	% Recov	80.000	120.000				07/16/08
LCS	Manganese	7439-96-5	1046	104.600	% Recov	80.000	120.000				07/16/08
LCS	Sodium	7440-23-5	1188	118.800	% Recov	80.000	120.000				07/16/08
LCS	Nickel	7440-02-0	1026	102.600	% Recov	80.000	120.000				07/16/08
LCS	Antimony	7440-36-0	1065	106.500	% Recov	80.000	120.000				07/16/08
LCS	Strontium	7440-24-6	551.8	110.360	% Recov	80.000	120.000				07/16/08
LCS	Vanadium	7440-62-2	1038	103.800	% Recov	80.000	120.000				07/16/08
LCS	Zinc	7440-66-6	1103	110.300	% Recov	80.000	120.000				07/16/08

Lab ID: W08P002699
BATCH QC ASSOCIATED WITH SAMPLE

MS	Silver	7440-22-4	1044	104.400	% Recov	75.000	125.000				07/17/08
MS	Barium	7440-39-3	525.2	105.040	% Recov	75.000	125.000				07/17/08
MS	Beryllium	7440-41-7	546.6	109.320	% Recov	75.000	125.000				07/17/08
MS	Calcium	7440-70-2	1430	143.000	% Recov	75.000	125.000				07/17/08
MS	Cadmium	7440-43-9	1080	108.000	% Recov	75.000	125.000				07/17/08
MS	Cobalt	7440-48-4	1049	104.900	% Recov	75.000	125.000				07/17/08
MS	Chromium	7440-47-3	1077	107.700	% Recov	75.000	125.000				07/17/08
MS	Copper	7440-50-8	1018	101.800	% Recov	75.000	125.000				07/17/08
MS	Iron	7439-89-6	1059	105.900	% Recov	75.000	125.000				07/17/08
MS	Potassium	7440-09-7	8938	89.380	% Recov	75.000	125.000				07/17/08
MS	Lithium	7439-93-2	516	103.200	% Recov	70.000	130.000				07/17/08
MS	Magnesium	7439-95-4	1180	118.000	% Recov	75.000	125.000				07/17/08
MS	Manganese	7439-96-5	1089.3	108.930	% Recov	75.000	125.000				07/17/08
MS	Sodium	7440-23-5	1120	112.000	% Recov	75.000	125.000				07/17/08
MS	Nickel	7440-02-0	1071	107.100	% Recov	75.000	125.000				07/17/08
MS	Antimony	7440-36-0	1051	105.100	% Recov	75.000	125.000				07/17/08
MS	Strontium	7440-24-6	546.6	109.320	% Recov	75.000	125.000				07/17/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Vanadium	7440-62 2	1054.9	105.490	% Recov	75.000	125.000				07/17/08
MS	Zinc	7440-66-6	1142	114.200	% Recov	75.000	125.000				07/17/08
MSD	Silver	7440-22-4	1044	104.400	% Recov	75.000	125.000				07/17/08
MSD	Barium	7440-39-3	523	104.600	% Recov	75.000	125.000				07/17/08
MSD	Beryllium	7440-41-7	547.5	109.500	% Recov	75.000	125.000				07/17/08
MSD	Calcium	7440 70-2	1930	193.000	% Recov	75.000	125.000			•	07/17/08
MSD	Cadmium	7440-43-9	1086	108.600	% Recov	75.000	125.000				07/17/08
MSD	Cobalt	7440-48-4	1056	105.600	% Recov	75.000	125.000				07/17/08
MSD	Chromium	7440-47-3	1085	108.500	% Recov	75.000	125.000				07/17/08
MSD	Copper	7440 50-8	1009	100.900	% Recov	75.000	125.000				07/17/08
MSD	Iron	7439-89-6	1061	106.100	% Recov	75.000	125.000				07/17/08
MSD	Potassium	7440-09-7	8708	87.080	% Recov	75.000	125.000				07/17/08
MSD	Lithium	7439-93-2	504.3	100.860	% Recov	75.000	125.000				07/17/08
MSD	Magnesium	7439-95-4	1170	117.000	% Recov	75.000	125.000				07/17/08
MSD	Manganese	7439-96-5	1095.3	109.530	% Recov	75.000	125.000				07/17/08
MSD	Sodium	7440-23-5	970	97.000	% Recov	75.000	125.000				07/17/08
MSD	Nickel	7440-02-0	1077	107.700	% Recov	75.000	125.000				07/17/08
MSD	Antimony	7440-36-0	1061	106.100	% Recov	75.000	125.000				07/17/08
MSD	Strontium	7440-24-6	544.5	108.900	% Recov	75.000	125.000				07/17/08
MSD	Vanadium	7440-62-2	1055.9	105.590	% Recov	75.000	125.000				07/17/08
MSD	Zinc	7440-66-6	1149	114.900	% Recov	75.000	125.000				07/17/08
SPK-RPD	Silver	7440-22-4	104.400		RPD			0.000	20.000		07/17/08
SPK-RPD	Barium	7440-39 3	104.600		RPD			0.420	20.000		07/17/08
SPK-RPD	Beryllium	7440-41-7	109.500		RPD			0.165	20.000		07/17/08
SPK-RPD	Calcium	7440-70-2	193.000		RPD			29.762	20.000	•	07/17/08
SPK-RPD	Cadmium	7440-43-9	108.600		RPD			0.554	20.000		07/17/08
SPK-RPD	Cobalt	7440-48 4	105.600		RPD			0.665	20.000		07/17/08
SPK-RPD	Chromium	7440-47-3	108.500		RPD			0.740	20.000		07/17/08
SPK RPD	Copper	7440-50-8	100.900		RPD			0.888	20.000		07/17/08
SPK-RPD	Iron	7439-89-6	106.100		RPD			0.189	20.000		07/17/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081134
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Potassium	7440-09-7	87.080		RPD			2.607	20.000		07/17/08
SPK-RPD	Lithium	7439-93-2	100.860		RPD			2.293	20.000		07/17/08
SPK-RPD	Magnesium	7439-95-4	117.000		RPD			0.851	20.000		07/17/08
SPK-RPD	Manganese	7439-96-5	109.530		RPD			0.549	20.000		07/17/08
SPK-RPD	Sodium	7440-23-5	97.000		RPD			14.354	20.000		07/17/08
SPK-RPD	Nickel	7440-02-0	107.700		RPD			0.559	20.000		07/17/08
SPK-RPD	Antimony	7440-36-0	106.100		RPD			0.947	20.000		07/17/08
SPK-RPD	Strontium	7440-24-6	108.900		RPD			0.385	20.000		07/17/08
SPK-RPD	Vanadium	7440-62-2	105.590		RPD			0.095	20.000		07/17/08
SPK-RPD	Zinc	7440-66-6	114.900		RPD			0.611	20.000		07/17/08

BATCH QC

BLANK	Silver	7440-22-4	<5	n/a	ug/L					U	07/17/08
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	07/17/08
BLANK	Beryllium	7440-41-7	<4	n/a	ug/L					U	07/17/08
BLANK	Calcium	7440-70-2	<73	n/a	ug/L					U	07/17/08
BLANK	Cadmium	7440-43-9	<4	n/a	ug/L					U	07/17/08
BLANK	Cobalt	7440-48-4	<4	n/a	ug/L					U	07/17/08
BLANK	Chromium	7440-47-3	<13	n/a	ug/L					U	07/17/08
BLANK	Copper	7440-50-8	<6	n/a	ug/L					U	07/17/08
BLANK	Iron	7439-89-6	<25	n/a	ug/L					U	07/17/08
BLANK	Potassium	7440-09-7	<170	n/a	ug/L					U	07/17/08
BLANK	Lithium	7439-93-2	<4	n/a	ug/L					U	07/17/08
BLANK	Magnesium	7439-95-4	<50	n/a	ug/L					U	07/17/08
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	07/17/08
BLANK	Sodium	7440-23-5	<51	n/a	ug/L					U	07/17/08
BLANK	Nickel	7440-02-0	<4	n/a	ug/L					U	07/17/08
BLANK	Antimony	7440-36-0	<56	n/a	ug/L					U	07/17/08
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	07/17/08
BLANK	Vanadium	7440-62-2	<12	n/a	ug/L					U	07/17/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
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	07/17/08
LCS	Silver	7440-22-4	1034	103.400	% Recov	80.000	120.000				07/17/08
LCS	Barium	7440-39-3	523.3	104.660	% Recov	80.000	120.000				07/17/08
LCS	Beryllium	7440-41-7	554.4	110.880	% Recov	80.000	120.000				07/17/08
LCS	Calcium	7440-70-2	1095	109.500	% Recov	80.000	120.000				07/17/08
LCS	Cadmium	7440-43-9	1075	107.500	% Recov	80.000	120.000				07/17/08
LCS	Cobalt	7440-48-4	1055	105.500	% Recov	80.000	120.000				07/17/08
LCS	Chromium	7440-47-3	1070	107.000	% Recov	80.000	120.000				07/17/08
LCS	Copper	7440-50-8	1018	101.800	% Recov	80.000	120.000				07/17/08
LCS	Iron	7439-89-6	1052	105.200	% Recov	80.000	120.000				07/17/08
LCS	Potassium	7440-09-7	9398	93.980	% Recov	80.000	120.000				07/17/08
LCS	Lithium	7439-93-2	534.4	106.880	% Recov	80.000	120.000				07/17/08
LCS	Magnesium	7439-95-4	1049	104.900	% Recov	80.000	120.000				07/17/08
LCS	Manganese	7439-96-5	1079	107.900	% Recov	80.000	120.000				07/17/08
LCS	Sodium	7440-23-5	1072	107.200	% Recov	80.000	120.000				07/17/08
LCS	Nickel	7440-02-0	1083	108.300	% Recov	80.000	120.000				07/17/08
LCS	Antimony	7440-36-0	1061	106.100	% Recov	80.000	120.000				07/17/08
LCS	Strontium	7440-24-6	544.4	108.880	% Recov	80.000	120.000				07/17/08
LCS	Vanadium	7440-62-2	1052	105.200	% Recov	80.000	120.000				07/17/08
LCS	Zinc	7440-66-6	1143	114.300	% Recov	80.000	120.000				07/17/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
Matrix: WATER
Test: ICP-200.8 MS All possible meta

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

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081134
Matrix: WATER
Test: ICP-200.8 MS All possible meta

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Uranium	7440-61-1	101.350		RPD			10.139	20.000		06/25/08
BATCH QC											
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	06/24/08
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	06/24/08
BLANK	Lead	7439-92-1	<0.1	n/a	ug/L					U	06/24/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	06/24/08
LCS	Arsenic	7440-38-2	34.39	85.975	% Recov	85.000	115.000				06/24/08
LCS	Mercury	7439-97-6	2.05	102.500	% Recov	85.000	115.000				06/24/08
LCS	Lead	7439-92-1	38.26	95.650	% Recov	85.000	115.000				06/24/08
LCS	Uranium	7440-61-1	39.18	97.950	% Recov	85.000	115.000				06/24/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
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: WSCF20081134
Matrix: WATER
Test: Total Organic Carbon

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002695											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Total Organic Carbon	TOC	3.992	99.800	% Recov	75.000	125.000				07/09/08
MSD	Total Organic Carbon	TOC	3.875	96.875	% Recov	75.000	125.000				07/09/08
SPK-RPD	Total Organic Carbon	TOC	96.875		RPD			2.974	20.000		07/09/08
Lab ID: W08P002879											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Total Organic Carbon	TOC	4.089	102.225	% Recov	75.000	125.000				07/09/08
MSD	Total Organic Carbon	TOC	3.981	99.525	% Recov	75.000	125.000				07/09/08
SPK-RPD	Total Organic Carbon	TOC	99.525		RPD			2.677	20.000		07/09/08
BATCH QC											
BLANK	Total Organic Carbon	TOC	< 0.045	n/a	mg/L	0.000	300.000			U	07/09/08
METHSPIKE	Total Organic Carbon	TOC	1.973	98.650	% Recov	80.000	120.000				07/09/08
SPK-RSD	Total Organic Carbon	TOC	1.335	1.335	% RSD	0.000	20.000				07/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081134
Matrix: WATER
Test: Total Organic Halides

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002697											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Total Organic Halides	TOX	41.0	102.500	% Recov	50.000	150.000				05/10/08
MSD	Total Organic Halides	TOX	45.5	113.750	% Recov	50.000	150.000				05/10/08
SPK-RPD	Total Organic Halides	TOX	113.750		RPD			10.405	20.000		05/10/08
BATCH QC											
BLANK	Total Organic Halides	TOX	<5	n/a	ug/L	0.000	300.000			U	05/10/08
LCS	Total Organic Halides	TOX	393	98.250	%rec	80.000	120.000				05/10/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081134
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Gross beta blank prep is flagged for having a high result. Since all the other QC checks came out fine, this batch has been approved. lmh ICP-AES: [Samples W08P2687; 2690-2698] No zirconium present in the LCS. Manganese, 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, sodium, and magnesium linearity because sample results are greater than the calibration standard. ICP-AES: [Sample W08P2699] 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, sodium, and magnesium linearity because sample results are greater than the calibration standard.

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

This report may not be reproduced, except in its entirety without the written approval of the WSCF Laboratory.

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-004
Sample # W08P002686
Client ID: B1V385 GPP-PNNL WSCF TRENT
Matrix: WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

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

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: W08-004
Sample # W08P002686
Client ID: B1V385 GPP-PNNL TRENT WSCF
Matrix: WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

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	2.6		06/12/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08

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

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

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

* - 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 # W08P002693
Client ID: B1V9T4 GPP-PNNL WSCF TRENT

Matrix: WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

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		06/12/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Carbon tetrachloride	56-23-5	LA-523-455		150	ug/L			1.00	1.0		06/12/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Chloroform	67-66-3	LA-523-455	J	2.80	ug/L			1.00	1.0		06/12/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
1,1,2-Trichloroethane	79 00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		06/12/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/12/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08

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

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

* - 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 # W08P002693
Client ID: B1V9T4 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

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		06/12/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08

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

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

* - 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 # W08P002695
Client ID: B1V654 GPP-PNNL TRENT WSCF
Matrix: WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Alcohols, Glycols - 8015 Prep											**06/18/08**
Alcohols, Glycols - 8015											
Ethyl acetate	141-78-6	Organics	U	< 5.00e+03	ug/L			1.00	5.0e+03		06/19/08
NWTPH-D TPH Diesel Range (Wa) Prep											**06/06/08**
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											**06/10/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 1.00	ug/L			1.00	1.0		06/13/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.40	ug/L			1.00	1.4		06/13/08
Phenol	108-95-2	LA-523-456	U	< 0.500	ug/L			1.00	0.50		06/13/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.20	ug/L			1.00	2.2		06/13/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.500	ug/L			1.00	0.50		06/13/08
Pyrene	129-00-0	LA-523-456	U	< 0.500	ug/L			1.00	0.50		06/13/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.500	ug/L			1.00	0.50		06/13/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.600	ug/L			1.00	0.60		06/13/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.60	ug/L			1.00	2.6		06/13/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.50	ug/L			1.00	1.5		06/13/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.500	ug/L			1.00	0.50		06/13/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	< 0.800	ug/L			1.00	0.80		06/13/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.500	ug/L			1.00	0.50		06/13/08

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

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

* - 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 # W08P002695
Client ID: B1V654 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
2-Nitrophenol	88-75-5	LA-523-456	U	< 0.500	ug/L			1.00	0.50		06/13/08
Naphthalene	91-20-3	LA-523-456	U	< 2.10	ug/L			1.00	2.1		06/13/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.500	ug/L			1.00	0.50		06/13/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.500	ug/L			1.00	0.50		06/13/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 0.500	ug/L			1.00	0.50		06/13/08
Benzothiazole	95-16-9	LA-523-456	U	< 0.600	ug/L			1.00	0.60		06/13/08
2-Picoline	109-06-8	LA-523-456	U	< 5.00	ug/L			1.00	5.0		06/13/08
Total cresols	1319-77-3	LA-523-456	U	< 1.00	ug/L			1.00	1.0		06/13/08
Tris-2-chloroethyl phosphate	115-96-8	LA-523-456	U	< 0.650	ug/L			1.00	0.65		06/13/08
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08

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

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

* - 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 # W08P002695
Client ID: B1V654 GPP-PNNL TRENT WSCF

Matrix: WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

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

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

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

* - 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 # W08P002697
Client ID: B1V662 GPP-PNNL TRENT WSCF
Matrix: WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Alcohols, Glycols - 8015 Prep											**06/18/08**
Alcohols, Glycols - 8015											
Ethyl acetate	141-78-6	Organics	U	< 5.00e+03	ug/L			1.00	5.0e+03		06/19/08
NWTPH-D TPH Diesel Range (Wa) Prep											**06/06/08**
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											**06/10/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 0.960	ug/L			1.00	0.96		06/11/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.30	ug/L			1.00	1.3		06/11/08
Phenol	108-95-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/11/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.10	ug/L			1.00	2.1		06/11/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/11/08
Pyrene	129-00-0	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/11/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/11/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.580	ug/L			1.00	0.58		06/11/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.50	ug/L			1.00	2.5		06/11/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.40	ug/L			1.00	1.4		06/11/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/11/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	< 0.770	ug/L			1.00	0.77		06/11/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/11/08

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

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

* - 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 # W08P002697
Client ID: B1V662 GPP-PNNL TRENT WSCF
Matrix: WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

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		06/11/08
Naphthalene	91-20-3	LA-523-456	U	< 2.00	ug/L			1.00	2.0		06/11/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/11/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/11/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		06/11/08
Benzothiazole	95-16-9	LA-523-456	U	< 0.580	ug/L			1.00	0.58		06/11/08
2-Picoline	109-06-8	LA-523-456	U	< 4.80	ug/L			1.00	4.8		06/11/08
Total cresols	1319-77-3	LA-523-456	U	< 0.960	ug/L			1.00	0.96		06/11/08
Tris-2-chloroethyl phosphate	115-96-8	LA-523-456	U	< 0.620	ug/L			1.00	0.62		06/11/08
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Carbon tetrachloride	56-23-5	LA-523-455		170	ug/L			1.00	1.0		06/12/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08
Chloroform	67-66-3	LA-523-455	J	2.60	ug/L			1.00	1.0		06/12/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/12/08

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

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

* - 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 # W08P002697
Client ID: B1V662 GPP-PNNL TRENT WSCF
Matrix: WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

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

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

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

* - 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 # W08P002698
Client ID: B1V9T0 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Alcohols, Glycols - 8015 Prep											**06/18/08**
Alcohols, Glycols - 8015											
Ethyl acetate	141-78-6	Organics	U	< 5.00e+03	ug/L			1.00	5.0e+03		06/19/08
NWTPH-D TPH Diesel Range (Wa) Prep											**06/06/08**
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											**06/10/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 0.980	ug/L			1.00	0.98		06/11/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.40	ug/L			1.00	1.4		06/11/08
Phenol	108-95-2	LA-523-456	U	< 0.490	ug/L			1.00	0.49		06/11/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.20	ug/L			1.00	2.2		06/11/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.490	ug/L			1.00	0.49		06/11/08
Pyrene	129-00-0	LA-523-456	U	< 0.490	ug/L			1.00	0.49		06/11/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.490	ug/L			1.00	0.49		06/11/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.590	ug/L			1.00	0.59		06/11/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.50	ug/L			1.00	2.5		06/11/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.50	ug/L			1.00	1.5		06/11/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.490	ug/L			1.00	0.49		06/11/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	< 0.780	ug/L			1.00	0.78		06/11/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.490	ug/L			1.00	0.49		06/11/08

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

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

* - 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 # W08P002698
Client ID: B1V9T0 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
2-Nitrophenol	88-75-5	LA-523-456	U	< 0.490	ug/L			1.00	0.49		06/11/08
Naphthalene	91-20-3	LA-523-456	U	< 2.10	ug/L			1.00	2.1		06/11/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.490	ug/L			1.00	0.49		06/11/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.490	ug/L			1.00	0.49		06/11/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 0.490	ug/L			1.00	0.49		06/11/08
Benzothiazole	95-16-9	LA-523-456	U	< 0.590	ug/L			1.00	0.59		06/11/08
2-Picoline	109-06-8	LA-523-456	U	< 4.90	ug/L			1.00	4.9		06/11/08
Total cresols	1319-77-3	LA-523-456	U	< 0.980	ug/L			1.00	0.98		06/11/08
Tris-2-chloroethyl phosphate	115-96-8	LA-523-456	U	< 0.640	ug/L			1.00	0.64		06/11/08
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
Carbon tetrachloride	56-23-5	LA-523-455		7.40	ug/L			1.00	1.0		06/13/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08

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

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

* - 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 # W08P002698
Client ID: B1V9T0 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Organic
Sampled: 06/04/08
Received: 06/04/08

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		06/13/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		06/13/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/13/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08
Ethyl cyanide	107-12-0	LA-523-455	U	< 2.00	ug/L			1.00	2.0		06/13/08
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		06/13/08

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

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

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

WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081134
Department: Organic

Sample #	Client ID			Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08P002695	B1V654	GPP-PNNL	TRENT	SW-846 8270C Semi-Vols	SMP 13.415 Di-n-butylphthalate	84-74-2	13.41598		12	ug/L
W08P002697	B1V662	GPP-PNNL	TRENT	SW-846 8270C Semi-Vols	SMP 5.009 Propylene Glycol	57-55-6	5.009133	J	5.1	ug/L
W08P002698	B1V9T0	GPP-PNNL	TRENT	SW-846 8270C Semi-Vols	SMP 4.998 Propylene Glycol	57-55-6	4.998483	J	28	ug/L

RQ=Result Qualifier J - Analyte < lowest calibration but > = MDL.(org)

This report may not be reproduced, except in its entirety without the written approval of the WSCF Laboratory.

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081134
Matrix: WATER
Test: Alcohols, Glycols - 8015

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

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081134
Matrix: WATER
Test: SW-846 8270C Semi-Vols

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002695											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	2-Fluorophenol(Surr)	367-12-4	11.906	59.500	% Recov	50.000	110.000				06/13/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	18.127	90.600	% Recov	58.000	109.000				06/13/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	17.007	85.000	% Recov	60.000	118.000				06/13/08
SURR	Phenol-d5(Surr)	4165-62-2	15.337	76.700	% Recov	59.000	116.000				06/13/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	17.494	87.500	% Recov	60.000	120.000				06/13/08
SURR	Terphenyl-d14(Surr)	98904-43-9	18.651	93.300	% Recov	60.000	120.000				06/13/08
Lab ID: W08P002697											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,2,4-Trichlorobenzene	120-82-1	16.462	86.400	% Recov	50.000	120.000				06/11/08
MS	1,4-Dichlorobenzene	106-46-7	15.983	83.900	% Recov	41.000	113.000				06/11/08
MS	2,4-Dinitrotoluene	121-14-2	17.574	92.300	% Recov	65.000	109.000				06/11/08
MS	2-Fluorophenol(Surr)	367-12-4	13.114	68.800	% Recov	50.000	110.000				06/11/08
MS	Acenaphthene	83-32-9	17.422	91.500	% Recov	62.000	112.000				06/11/08
MS	4-Chloro-3-methylphenol	59-50-7	26.236	91.800	% Recov	59.000	115.000				06/11/08
MS	2-Chlorophenol	95-57-8	24.312	85.100	% Recov	69.000	111.000				06/11/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	16.999	89.200	% Recov	69.000	115.000				06/11/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	18.032	94.700	% Recov	58.000	109.000				06/11/08
MS	Phenol	108-95-2	24.358	85.300	% Recov	59.000	115.000				06/11/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	18.408	96.600	% Recov	60.000	118.000				06/11/08
MS	4-Nitrophenol	100-02-7	25.576	89.500	% Recov	32.000	130.000				06/11/08
MS	Pentachlorophenol	87-86-5	26.196	91.700	% Recov	51.000	121.000				06/11/08
MS	Phenol-d5(Surr)	4165-62-2	16.768	88.000	% Recov	59.000	116.000				06/11/08
MS	Pyrene	129-00-0	16.855	88.500	% Recov	58.000	116.000				06/11/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	18.002	94.500	% Recov	60.000	120.000				06/11/08
MS	Terphenyl-d14(Surr)	98904-43-9	19.314	101.000	% Recov	60.000	120.000				06/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081134
Matrix: WATER
Test: SW-846 8270C Semi-Vols

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	1,2,4-Trichlorobenzene	120-82-1	17.486	91.800	% Recov	50.000	120.000				06/11/08
MSD	1,4-Dichlorobenzene	106-46-7	17.328	91.000	% Recov	41.000	113.000				06/11/08
MSD	2,4-Dinitrotoluene	121-14-2	17.585	92.300	% Recov	65.000	109.000				06/11/08
MSD	2-Fluorophenol(Surr)	367-12-4	13.313	69.900	% Recov	50.000	110.000				06/11/08
MSD	Acenaphthene	83-32-9	18.181	95.500	% Recov	62.000	112.000				06/11/08
MSD	4-Chloro-3-methylphenol	59-50-7	26.667	93.300	% Recov	59.000	115.000				06/11/08
MSD	2-Chlorophenol	95-57-8	24.487	85.700	% Recov	69.000	111.000				06/11/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	17.654	92.700	% Recov	69.000	115.000				06/11/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	18.070	94.900	% Recov	58.000	109.000				06/11/08
MSD	Phenol	108-95-2	25.250	88.400	% Recov	59.000	115.000				06/11/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	18.050	94.800	% Recov	60.000	118.000				06/11/08
MSD	4-Nitrophenol	100-02-7	27.508	96.300	% Recov	32.000	130.000				06/11/08
MSD	Pentachlorophenol	87-86-5	23.230	81.300	% Recov	51.000	121.000				06/11/08
MSD	Phenol-d5(Surr)	4165-62-2	17.395	91.300	% Recov	59.000	116.000				06/11/08
MSD	Pyrene	129-00-0	16.745	87.900	% Recov	58.000	116.000				06/11/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	18.104	95.000	% Recov	60.000	120.000				06/11/08
MSD	Terphenyl-d14(Surr)	98904-43-9	18.950	99.500	% Recov	60.000	120.000				06/11/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	91.800		RPD			6.061	25.000		06/11/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	91.000		RPD			8.119	25.000		06/11/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	92.300		RPD			0.000	25.000		06/11/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	69.900		RPD			1.586	25.000		06/11/08
SPK-RPD	Acenaphthene	83-32-9	95.500		RPD			4.278	25.000		06/11/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	93.300		RPD			1.621	25.000		06/11/08
SPK-RPD	2-Chlorophenol	95-57-8	85.700		RPD			0.703	25.000		06/11/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	92.700		RPD			3.848	25.000		06/11/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	94.900		RPD			0.211	25.000		06/11/08
SPK-RPD	Phenol	108-95-2	88.400		RPD			3.569	16.000		06/11/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	94.800		RPD			1.881	25.000		06/11/08
SPK-RPD	4-Nitrophenol	100-02-7	96.300		RPD			7.320	25.000		06/11/08
SPK-RPD	Pentachlorophenol	87-86-5	81.300		RPD			12.023	25.000		06/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081134
Matrix: WATER
Test: SW-846 8270C Semi-Vols

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Phenol-d5(Surr)	4165-62-2	91.300		RPD			3.681	25.000		06/11/08
SPK-RPD	Pyrene	129-00-0	87.900		RPD			0.680	25.000		06/11/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	95.000		RPD			0.528	25.000		06/11/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	99.500		RPD			1.496	25.000		06/11/08
SURR	2-Fluorophenol(Surr)	367-12-4	12.301	64.000	% Recov	50.000	110.000				06/11/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	18.909	98.300	% Recov	58.000	109.000				06/11/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	18.394	95.600	% Recov	60.000	118.000				06/11/08
SURR	Phenol-d5(Surr)	4165-62-2	16.369	85.100	% Recov	59.000	116.000				06/11/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	17.222	89.600	% Recov	60.000	120.000				06/11/08
SURR	Terphenyl-d14(Surr)	98904-43-9	18.850	98.000	% Recov	60.000	120.000				06/11/08

Lab ID: W08P002698
BATCH QC ASSOCIATED WITH SAMPLE

SURR	2-Fluorophenol(Surr)	367-12-4	10.298	52.500	% Recov	50.000	110.000				06/11/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	17.952	91.600	% Recov	58.000	109.000				06/11/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	18.035	92.000	% Recov	60.000	118.000				06/11/08
SURR	Phenol-d5(Surr)	4165-62-2	15.295	78.000	% Recov	59.000	116.000				06/11/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	16.394	83.600	% Recov	60.000	120.000				06/11/08
SURR	Terphenyl-d14(Surr)	98904-43-9	21.286	109.000	% Recov	60.000	120.000				06/11/08

BATCH QC

BLANK	1,2,4-Trichlorobenzene	120-82-1	< 2.2	n/a	ug/L					U	06/11/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.4	n/a	ug/L					U	06/11/08
BLANK	2,4-Dichlorophenol	120-83-2	< 0.50	n/a	ug/L					U	06/11/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 0.50	n/a	ug/L					U	06/11/08
BLANK	2-Fluorophenol(Surr)	367-12-4	12.091	60.500	% Recov	50.000	110.000				06/11/08
BLANK	2-Methylphenol (cresol, o-)	95-48-7	< 0.50	n/a	ug/L					U	06/11/08
BLANK	2-Nitrophenol	88-75-5	< 0.50	n/a	ug/L					U	06/11/08
BLANK	2-Picoline	109-06-8	< 5.0	n/a	ug/L					U	06/11/08
BLANK	3 & 4 Methylphenol Total	65794-96-9	< 0.50	n/a	ug/L	0.000	5.000			U	06/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081134
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	Acenaphthene	83-32-9	< 2.6	n/a	ug/L					U	06/11/08
BLANK	Bis(2-ethylhexyl) phthalate	117-81-7	< 0.80	n/a	ug/L					U	06/11/08
BLANK	Benzothiazole	95-16-9	< 0.60	n/a	ug/L	0.000	300.000			U	06/11/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 0.50	n/a	ug/L					U	06/11/08
BLANK	2-Chlorophenol	95-57-8	< 0.50	n/a	ug/L					U	06/11/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 0.60	n/a	ug/L					U	06/11/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	17.694	88.500	% Recov	58.000	109.000				06/11/08
BLANK	Phenol	108-95-2	< 0.50	n/a	ug/L					U	06/11/08
BLANK	Naphthalene	91-20-3	< 2.1	n/a	ug/L					U	06/11/08
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	17.227	86.100	% Recov	60.000	118.000				06/11/08
BLANK	4-Nitrophenol	100-02-7	< 1.0	n/a	ug/L					U	06/11/08
BLANK	Pentachlorophenol	87-86-5	< 1.5	n/a	ug/L					U	06/11/08
BLANK	Phenol-d5(Surr)	4165-62-2	16.283	81.400	% Recov	59.000	116.000				06/11/08
BLANK	Pyrene	129-00-0	< 0.50	n/a	ug/L					U	06/11/08
BLANK	Tris-2-chloroethyl phosphate	115-96-8	< 0.65	n/a	ug/L	0.000	300.000			U	06/11/08
BLANK	Tributyl phosphate	126-73-8	< 0.50	n/a	ug/L					U	06/11/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	16.311	81.600	% Recov	60.000	120.000				06/11/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	19.844	99.200	% Recov	60.000	120.000				06/11/08
LCS	1,2,4-Trichlorobenzene	120-82-1	16.582	82.900	% Recov	46.000	107.000				06/11/08
LCS	1,4-Dichlorobenzene	106-46-7	16.813	84.100	% Recov	42.000	111.000				06/11/08
LCS	2,4-Dinitrotoluene	121-14-2	17.310	86.600	% Recov	59.000	106.000				06/11/08
LCS	2-Fluorophenol(Surr)	367-12-4	13.169	65.800	% Recov	50.000	110.000				06/11/08
LCS	Acenaphthene	83-32-9	17.401	87.000	% Recov	61.000	116.000				06/11/08
LCS	4-Chloro-3-methylphenol	59-50-7	24.808	82.700	% Recov	61.000	106.000				06/11/08
LCS	2-Chlorophenol	95-57-8	25.354	84.500	% Recov	66.000	106.000				06/11/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	18.164	90.800	% Recov	71.000	114.000				06/11/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	18.629	93.100	% Recov	58.000	109.000				06/11/08
LCS	Phenol	108-95-2	24.996	83.300	% Recov	67.000	105.000				06/11/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	18.564	92.800	% Recov	60.000	118.000				06/11/08
LCS	4-Nitrophenol	100-02-7	27.820	92.700	% Recov	32.000	118.000				06/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081134
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
LCS	Pentachlorophenol	87-86-5	24.640	82.100	% Recov	62.000	114.000				06/11/08
LCS	Phenol-d5(Surr)	4165-62-2	16.810	84.000	% Recov	59.000	116.000				06/11/08
LCS	Pyrene	129-00-0	17.406	87.000	% Recov	66.000	118.000				06/11/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	14.177	70.900	% Recov	60.000	120.000				06/11/08
LCS	Terphenyl-d14(Surr)	98904-43-9	20.263	101.000	% Recov	60.000	120.000				06/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081134
Matrix: WATER
Test: NWTPH-D TPH Diesel Range (Wa)

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002695											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	ortho-Terphenyl Surr	84-15-1	467.65	98.200	% Recov	70.000	130.000				06/09/08
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2356.8	99.000	% Recov	75.000	125.000				06/09/08
MSD	ortho-Terphenyl Surr	84-15-1	480.66	101.000	% Recov	70.000	130.000				06/09/08
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2443.5	103.000	% Recov	75.000	125.000				06/09/08
SPK-RPD	ortho-Terphenyl Surr	84-15-1	101.000		RPD			2.811	20.000		06/09/08
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	103.000		RPD			3.960	20.000		06/09/08
SURR	ortho-Terphenyl Surr	84-15-1	500.98	105.000	% Recov	70.000	130.000				06/09/08
Lab ID: W08P002697											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	ortho-Terphenyl Surr	84-15-1	490.00	103.000	% Recov	70.000	130.000				06/09/08
Lab ID: W08P002698											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	ortho-Terphenyl Surr	84-15-1	389.92	81.900	% 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	519.33	104.000	% 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	492.40	98.500	% Recov	70.000	130.000				06/09/08
LCS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2520.4	101.000	% Recov	80.000	120.000				06/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20081134
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: WSCF20081134
Matrix: WATER
Test: VOA Ground Water Protection

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

Lab ID: W08P002686
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	20.840	83.400	% Recov	63.000	117.000				06/12/08
MS	Benzene	71-43-2	21.720	86.900	% Recov	75.000	129.000				06/12/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	56.130	112.000	% Recov	75.000	125.000				06/12/08
MS	Chlorobenzene	108-90-7	24.120	96.500	% Recov	79.000	119.000				06/12/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.950	118.000	% Recov	75.000	125.000				06/12/08
MS	Toluene-d8(Surr)	2037-26-5	52.180	104.000	% Recov	75.000	125.000				06/12/08
MS	Toluene	108-88-3	22.850	91.400	% Recov	76.000	120.000				06/12/08
MS	Trichloroethene	79-01-6	19.680	78.700	% Recov	73.000	123.000				06/12/08
MSD	1,1-Dichloroethene	75-35-4	21.470	85.900	% Recov	63.000	117.000				06/12/08
MSD	Benzene	71-43-2	23.090	92.400	% Recov	75.000	129.000				06/12/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	55.690	111.000	% Recov	75.000	125.000				06/12/08
MSD	Chlorobenzene	108-90-7	26.090	104.000	% Recov	79.000	119.000				06/12/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.440	115.000	% Recov	75.000	125.000				06/12/08
MSD	Toluene-d8(Surr)	2037-26-5	52.140	104.000	% Recov	75.000	125.000				06/12/08
MSD	Toluene	108-88-3	24.720	98.900	% Recov	76.000	120.000				06/12/08
MSD	Trichloroethene	79-01-6	20.340	81.400	% Recov	73.000	123.000				06/12/08
SPK-RPD	1,1-Dichloroethene	75-35-4	85.900		RPD			2.953	20.000		06/12/08
SPK-RPD	Benzene	71-43-2	92.400		RPD			6.135	20.000		06/12/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	111.000		RPD			0.897	20.000		06/12/08
SPK-RPD	Chlorobenzene	108-90-7	104.000		RPD			7.481	20.000		06/12/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	115.000		RPD			2.575	20.000		06/12/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	104.000		RPD			0.000	20.000		06/12/08
SPK-RPD	Toluene	108-88-3	98.900		RPD			7.882	20.000		06/12/08
SPK-RPD	Trichloroethene	79-01-6	81.400		RPD			3.373	20.000		06/12/08
SURR	4-Bromofluorobenzene(Surr)	460-00-4	55.510	111.000	% Recov	75.000	125.000				06/12/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.680	117.000	% Recov	75.000	125.000				06/12/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081134
Matrix: WATER
Test: VOA Ground Water Protection

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Toluene-d8(Surr)	2037-26-5	52.850	106.000	% Recov	75.000	125.000				06/12/08
Lab ID: W08P002693											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	55.760	112.000	% Recov	75.000	125.000				06/12/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.410	117.000	% Recov	75.000	125.000				06/12/08
SURR	Toluene-d8(Surr)	2037-26-5	52.380	105.000	% Recov	75.000	125.000				06/12/08
Lab ID: W08P002695											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	54.990	110.000	% Recov	75.000	125.000				06/12/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.640	115.000	% Recov	75.000	125.000				06/12/08
SURR	Toluene-d8(Surr)	2037-26-5	52.900	106.000	% Recov	75.000	125.000				06/12/08
Lab ID: W08P002697											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	55.900	112.000	% Recov	75.000	125.000				06/12/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	59.080	118.000	% Recov	75.000	125.000				06/12/08
SURR	Toluene-d8(Surr)	2037-26-5	52.600	105.000	% Recov	75.000	125.000				06/12/08
Lab ID: W08P002698											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	54.850	110.000	% Recov	75.000	125.000				06/13/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.270	115.000	% Recov	75.000	125.000				06/13/08
SURR	Toluene-d8(Surr)	2037-26-5	52.920	106.000	% Recov	75.000	125.000				06/13/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	06/12/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L					U	06/12/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L					U	06/12/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081134
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	06/12/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L					U	06/12/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.0	n/a	ug/L					U	06/12/08
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	06/12/08
BLANK	4-Methyl-2-Pentanone	108-10 1	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	06/12/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	56.570	113.000	% Recov	75.000	125.000				06/12/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	06/12/08
BLANK	cis 1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/L					U	06/12/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.960	116.000	% Recov	75.000	125.000				06/12/08
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Ethyl cyanide	107-12-0	< 2.0	n/a	ug/L					U	06/12/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	0.000	5.000			U	06/12/08
BLANK	Tetrahydrofuran	109-99-9	< 2.0	n/a	ug/L					U	06/12/08
BLANK	Toluene-d8(Surr)	2037-26-5	51.870	104.000	% Recov	75.000	125.000				06/12/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	06/12/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	06/12/08
LCS	1,1-Dichloroethene	75-35-4	23.220	92.900	% Recov	75.000	125.000				06/13/08
LCS	Benzene	71-43 2	23.980	95.900	% Recov	75.000	125.000				06/13/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	55.350	111.000	% Recov	75.000	125.000				06/13/08
LCS	Chlorobenzene	108-90-7	26.140	105.000	% Recov	75.000	125.000				06/13/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20081134
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	58.120	116.000	% Recov	75.000	125.000				06/13/08
LCS	Toluene-d8(Surr)	2037-26-5	52.220	104.000	% Recov	75.000	125.000				06/13/08
LCS	Toluene	108-88-3	25.080	100.000	% Recov	75.000	125.000				06/13/08
LCS	Trichloroethene	79-01-6	20.430	81.700	% Recov	75.000	125.000				06/13/08

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent E6-35
SAF Number: S08-005
Sample # W08P002692
Client ID: B1V7H2 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Radiochemistry
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gross Alpha on Alpha Plateau											
Gross alpha on alpha plateau	12587-46-1	LA-508-415		18.0	pCi/L	+-4.32	pCi/L	1.00	3.0		06/09/08
Gross Alpha/Gross Beta (AB32)											
Gross beta	12587-47-2	LA-508-415		79.0	pCi/L	+-10.3	pCi/L	1.00	5.4		06/06/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		3.70e+03	pCi/L	+-777	pCi/L	1.00	2.1e+02		06/14/08

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

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

* - 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 # W08P002693
Client ID: B1V9T4 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Radiochemistry
Sampled: 06/04/08
Received: 06/04/08

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		390	pCi/L	+-78.0	pCi/L	1.00	6.1		06/05/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421		420	pCi/L	+-160	pCi/L	1.00	2.1e+02		06/14/08

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

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

* - 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 # W08P002695
Client ID: B1V654 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Radiochemistry
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Neptunium by AEA											
Neptunium-237	13994-20-2	LA-508-471		0.140	pCi/L	+-0.140	pCi/L	1.00	0.12		07/18/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	0.760	pCi/L	+-1.60	pCi/L	1.00	1.2		06/16/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		78.4	Percent			1.00	0.0		06/16/08
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421	U	-2.40	pCi/L	+-3.62	pCi/L	1.00	6.1		06/05/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	130	pCi/L	+-143	pCi/L	1.00	2.1e+02		06/14/08

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

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

* - 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 # W08P002697
Client ID: B1V662 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Radiochemistry
Sampled: 06/04/08
Received: 06/04/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Neptunium by AEA											
Neptunium-237	13994-20-2	LA-508-471	U	0.120	pCi/L	+-0.212	pCi/L	1.00	0.39		07/30/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.0420	pCi/L	+-0.420	pCi/L	1.00	1.1		06/16/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		79.6	Percent			1.00	0.0		06/16/08
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		180	pCi/L	+-36.0	pCi/L	1.00	6.1		06/05/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	18.0	pCi/L	+-360	pCi/L	1.00	2.1e+02		06/14/08

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

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

* - 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 # W08P002698
Client ID: B1V9T0 GPP-PNNL WSCF TRENT **Matrix:** WATER

Group #: WSCF20081134
Department: Radiochemistry
Sampled: 06/04/08
Received: 06/04/08

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	0.930	pCi/L	+-1.53	pCi/L	1.00	1.1		06/16/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		81.8	Percent			1.00	0.0		06/16/08
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		21.0	pCi/L	+-5.88	pCi/L	1.00	6.1		06/05/08
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	2.1e+02		06/14/08

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

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

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081134
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: WSCF20081134
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: 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: WSCF20081134
Matrix: WATER
Test: Neptunium by AEA

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002695											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Neptunium-237	13994-20-2	U3.7e-2		RPD			n/a	20.000		07/18/08
MS	Neptunium-237	13994-20-2	75.7	75.700	% Recov	75.000	125.000				07/18/08
MSD	Neptunium-237	13994-20-2	90.6	90.600	% Recov	75.000	125.000				07/18/08
SPK-RPD	Neptunium-237	13994-20-2	90.600		% RPD			17.919	20.000		07/18/08
BATCH QC											
BLANK	Neptunium-237	13994-20-2	U-3.5e-2	n/a	pCi/L	-10.000	1000.000				07/18/08
LCS	Neptunium-237	13994-20-2	10.31	80.894	% Recov	80.000	120.000				07/18/08
Lab ID: W08GR01833											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Neptunium-237	13994-20-2	U6e-2		RPD			n/a	20.000		07/30/08
MS	Neptunium-237	13994-20-2	72.4	72.400	% Recov	75.000	125.000			*	07/30/08
MSD	Neptunium-237	13994-20-2	71	71.000	% Recov	75.000	125.000			*	07/30/08
SPK-RPD	Neptunium-237	13994-20-2	71.000		% RPD			1.953	20.000		07/30/08
Lab ID: W08GR01840											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	75.3	75.300	% Recov	75.000	125.000				07/30/08
Lab ID: W08GR01854											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	85.2	85.200	% Recov	75.000	125.000				07/30/08
Lab ID: W08P002697											
BATCH QC ASSOCIATED WITH SAMPLE											

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081134
Matrix: WATER
Test: Neptunium by AEA

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Neptunium-237	13994-20-2	101.6	101.600	% Recov	75.000	125.000				07/30/08
BATCH QC											
BLANK	Neptunium-237	13994-20-2	0.12	0.120	pCi/L	-10.000	1000.000				07/30/08
LCS	Neptunium-237	13994-20-2	13.198	103.554	% Recov	80.000	120.000				07/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081134
Matrix: WATER
Test: Strontium 89/90

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002695											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	84.2	84.200	% Recov	30.000	105.000				06/16/08
DUP	Strontium-89/90	SR-RAD	U-2.6		RPD			n/a	20.000		06/16/08
SURR	Sr-85 Tracer by Beta Counting	SR85	78.4	78.400	% Recov	30.000	105.000				06/16/08
Lab ID: W08P002697											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	79.6	79.600	% Recov	30.000	105.000				06/16/08
Lab ID: W08P002698											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr 85 Tracer by Beta Counting	SR85	81.8	81.800	% Recov	30.000	105.000				06/16/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	90.9	90.900	% Recov	30.000	105.000				06/16/08
BLANK	Strontium-89/90	10098-97-2	U-1.3	n/a	pCi/L	-10.000	100.000				06/16/08
LCS	Sr-85 Tracer by Beta Counting	SR85	91.6	91.600	% Recov	30.000	105.000				06/16/08
LCS	Strontium-89/90	10098-97-2	128	92.199	% Recov	80.000	120.000				06/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081134
Matrix: WATER
Test: TC99 by Liquid Scin.

Sample Date: 06/02/08
Receive Date:06/02/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002653											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tc-99 by Liquid Scin.	14133-76-7	U-6.9		RPD			n/a	20.000		06/05/08
MS	Tc-99 by Liquid Scin.	14133-76-7	794.0	105.452	% Recov	75.000	125.000				06/05/08
BATCH QC											
BLANK	Tc-99 by Liquid Scin.	14133-76-7	U-5.1	n/a	pCi/L	-10.000	10.000				06/05/08
LCS	Tc-99 by Liquid Scin.	14133-76-7	202.3	107.549	% Recov	80.000	120.000				06/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081134
Matrix: WATER
Test: Tritium by Liq Sct column prep

Sample Date: 06/02/08
Receive Date:06/02/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08P002658											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tritium	10028-17-8	2.0E+02		RPD			16.216	20.000		06/14/08
MS	Tritium	10028-17-8	23632	91.162	% Recov	75.000	125.000				06/14/08
BATCH QC											
BLANK	Tritium	10028-17-8	U-2.2E+01	n/a	pCi/L	-10.000	1000.000				06/14/08
LCS	Tritium	10028-17-8	3180.0	92.547	% Recov	80.000	120.000				06/14/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent E6-35

Group #: WSCF20081134
Department: Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Gross beta blank prep is flagged for having a high result. Since all the other QC checks came out fine, this batch has been approved. lmh ICP-AES: [Samples W08P2687; 2690-2698] No zirconium present in the LCS. Manganese, 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, sodium, and magnesium linearity because sample results are greater than the calibration standard. ICP-AES: [Sample W08P2699] 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, sodium, and magnesium linearity because sample results are greater than the calibration standard.

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

This report may not be reproduced, except in its entirety without the written approval of the WSCF Laboratory.

M4W41-SLF-08-775

ATTACHMENT 5

SAMPLE RECEIPT INFORMATION

Consisting of 13 pages
Including cover page

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

File VB 7/17/08

ACKNOWLEDGMENT OF SAMPLES RECEIVED

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081134

The following samples were received from you on 06/04/08. 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
W08P002686	B1V385	GPP-PNNL @VOA-GPP	TRENT Water	06/04/08
W08P002687	B1V7H5	GPP-PNNL @GPP6010	TRENT Water	06/04/08
W08P002690	B1V7H6	GPP-PNNL @2008	TRENT Water @GPP6010 @IC-30 ALKALI CN-02	06/04/08
W08P002691	B1V7H1	GPP-PNNL @2008	TRENT Water @GPP6010	06/04/08
W08P002692	B1V7H2	GPP-PNNL @2008 @IC-30	TRENT Water @AB-32 @ALPHA @GPP6010 @H3-33 ALKALI	06/04/08
W08P002693	B1V9T4	GPP-PNNL @2008	TRENT Water @H3-33 @IC-30 @TC99-30 @VOA-GPP	06/04/08
W08P002694	B1V653	GPP-PNNL @2008	TRENT Water @GPP6010	06/04/08
W08P002695	B1V654	GPP-PNNL @2008 @IC-30 @VOA-GPP	TRENT Water @8015GPP @AEA-33 @GPP6010 @H3-33 @SR89_90 @SVOCGPP @TC99-30 @TPHD-WA @TPH(CN-02 NH4-IC TOC-30	06/04/08
W08P002696	B1V661	GPP-PNNL @2008	TRENT Water @GPP6010	06/04/08
W08P002697	B1V662	GPP-PNNL @2008 @IC-30 @VOA-GPP	TRENT Water @8015GPP @AEA-33 @GPP6010 @H3-33 @SR89_90 @SVOCGPP @TC99-30 @TPHD-WA @TPH(CN-02 NH4-IC TOC-30 TOX	06/04/08
W08P002698	B1V9T0	GPP-PNNL @2008 @SR89_90 CN-02	TRENT Water @8015GPP @GPP6010 @H3-33 @IC-30 @SVOCGPP @TC99-30 @TPHD-WA @TPHG-WA @VOA- NH4-IC TOC-30	06/04/08
W08P002699	B1V9R9	GPP-PNNL @2008	TRENT Water @GPP6010	06/04/08

Test Acronym Description

Test Acronym	Description

GPAP

Richland, WA 99352
Attn: Steve Trent E6-35

Customer Code: PNNL-GPP
PO#: 122543
Group#: 20081134

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)
@AEA-33	Neptunium by AEA
@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
TOX	Total Organic Halides

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Chain of Custody # **W08-004-194**

Collector R. Ellingsworth	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-N-506-U	Ice Chest No. ORP-4 Temp.
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Govt. Vehicle	Bill of Lading/Air Bill No.
Protocol RCRA 20081134	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
B1V385	WO8P002686	W	6-4-08	1107	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1V385		W	↓	↓	1x20-mL P	Activity Scan	None

ICET

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R. Ellingsworth			JUN 04 2008 1325				JUN 04 2008 1325
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

S08-005-30

Collector Scott E. Hamaker	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. S08-005	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV, MAY 2008	HNF-N-506-15	**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 ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V7H5 (F)	W04P002287	W	6-4-08	1136	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1V7H6	2690	W	↓	↓	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V7H6		W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1V7H6		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1V7H6		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V7H6		W			1x250-mL G/P	335.2_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool~4C

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Scott E. Hamaker	Scott Hamaker		JUN 04 2008 1325	UA Hudson			JUN 04 2008 1325
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

S08-005-26

Collector Scott E. Hamaker	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. S08-005	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title SURV, MAY 2008	HNF-N-506-15	**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 ☐
Site-Wide Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V7H1 (F)	WCHP062691	W	6-4-08	1033	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1V7H1 (F)		W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	HNO3 to pH <2
B1V7H2	2692	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V7H2		W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	HNO3 to pH <2
B1V7H2		W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	Cool~4C
B1V7H2		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V7H2		W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	HNO3 to pH <2
B1V7H2		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None
B1V7H2		W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	HNO3 to pH <2

ICED

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
Scott E. Hamaker / Scott Hamaker	JUN 04 2008 1325	CA Hudson / CA Hudson	JUN 04 2008 1325
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-037-76

Collector R. Ellingsworth	**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-501-16	**Ice Chest No.** CARP-16 **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
B1V9T4	W08P002693	W	6-4-08	1249	4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1V9T4		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V9T4		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V9T4		W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
B1V9T4		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None

ICET

Relinquished By R. Ellingsworth Print Sign	Date/Time JUN 04 2008 1325	Received By CA Hudson Print Sign	Date/Time JUN 04 2008 1325
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

I08-037-9

Collector R. Ellingsworth	**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-506-16	**Ice Chest No.** GRP-4 **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
B1V653 (F)	W0SP002674	W	6-4-08	0825	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1V653 (F)		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1V653 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-3 + Lithium (19)	HNO3 to pH <2
B1V654	2695	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1V654		W			3x40-mL aGs*	Alcohols, Glycols, & Ketones - 8015	Cool~4C
B1V654		W			4x1000-mL aG	8270_SVOA_GCMS: List-1 + Cresol (14)	Cool~4C
B1V654		W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1V654		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1V654		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V654		W			1x500-mL G/P	6010_METALS_ICP: List-3 + Lithium (19)	HNO3 to pH <2
B1V654		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V654		W			1x100-mL G/P	300.7_CATIONS_IC: Ammonia (1)	H2SO4 to pH <2
B1V654		W			1x250-mL G/P	335.2_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool~4C
B1V654		W			1x1000-mL G/P	NP237_IE_PRECIP_AEA: Np-237 (1)	HNO3 to pH <2
B1V654		W			1x1-L G/P	Strontium-90	HNO3 to pH <2
B1V654		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. Ellingsworth		JUN 04 2008 1325	CA Hudson		JUN 04 2008 1325
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 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

107 of 112

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-037-9

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
B1V654		W	6-4-08	0825	1x250-mL G	TRITIUM_EIE_LSC: Tritium (1) X	None
B1V654		W			1x250-mL aGs*	9060_TOC: TOC (1) X	HCl or H2SO4 to pH <2 Cool~4C
B1V654		W			3x1000-mL aG	TPH-DieselKerosene Range - WTPH-D X	HCl to pH <2 Cool~4C
B1V654		W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G X	HCl to pH <2 Cool~4C

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
R. Ellingsworth			JUN 04 2008 1325				JUN 04 2008 1325
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

108 of 412

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-037-10

Collector R. Ellingsworth	**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-506-16	**Ice Chest No.** ARP-4 **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
B1V661 (F)	W0802696	W	6-4-08	1107	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1V661 (F)		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1V661 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-3 + Lithium (19)	HNO3 to pH <2
B1V662	2697	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1V662		W			3x40-mL aGs*	Alcohols, Glycols, & Ketones - 8015	Cool~4C
B1V662		W			4x1000-mL aG	8270_SVOA_GCMS: List-1 + Cresol (14)	Cool~4C
B1V662		W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1V662		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1V662		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V662		W			1x500-mL G/P	6010_METALS_ICP: List-3 + Lithium (19)	HNO3 to pH <2
B1V662		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V662		W			1x250-mL G/P	300.7_CATIONS_IC: Ammonia (1)	H2SO4 to pH <2
B1V662		W			1x250-mL G/P	335.2_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool~4C
B1V662		W			1x1000-mL G/P	NP237_IE_PRECIP_AEA: Np-237 (1)	HNO3 to pH <2
B1V662		W			1x1-L G/P	Strontium-90	HNO3 to pH <2
B1V662		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. Ellingsworth		JUN 04 2008 1325			JUN 04 2008 1325
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time
Relinquished By		Date/Time	Received By		Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-037-10

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
B1V662		W	6408	1167	1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None
B1V662		W			1x1000-mL aGs*	9020_TOX: TOX (1)	H2SO4 to pH <2 Cool~4C
B1V662		W			1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool~4C
B1V662		W			3x1000-mL aG	TPH-DieselKerosene Range - WTPH-D	HCl to pH <2 Cool~4C
B1V662		W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	HCl to pH <2 Cool~4C

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
	R. Ellingsworth		JUN 04 2008 1325		CA Hudson		JUN 04 2008 1325
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

I08-037-73

Collector Scott E. Hamaker	**Contact/Requester** Steve Trent	**Telephone No.** 509-373-5869 **MSIN** **FAX**
SAF No. 108-037	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**
Project Title 2UP1 MAY 2008	HNF-N-506-15	**Ice Chest No.** 6W-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** Total Activity Exemption: Yes ☑ No ☐
200 Area Generator Knowledge Information Form applies.

Sample No.	Lab ID	*	Date	Time	No/Type Container	Sample Analysis	Preservative
B1V9R9 (F)	W08P002609	W	6-4-08	0900	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1V9R9 (F)		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1V9R9 (F)		W			1x500-mL G/P	6010_METALS_ICP: List-3 + Lithium (19)	HNO3 to pH <2
B1V9T0	2698	W			4x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	HCl or H2SO4 to pH <2 Cool~4C
B1V9T0		W			3x40-mL aGs*	Alcohols, Glycols, & Ketones - 8015	Cool~4C
B1V9T0		W			4x1000-mL aG	8270_SVOA_GCMS: List-1 + Cresol (14)	Cool~4C
B1V9T0		W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1); 200.8_METALS_ICPMS: Lead (1)	HNO3 to pH <2
B1V9T0		W			1x500-mL G/P	200.8_METALS_ICPMS: Mercury (1)	HNO3 to pH <2
B1V9T0		W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	HNO3 to pH <2
B1V9T0		W			1x500-mL G/P	6010_METALS_ICP: List-3 + Lithium (19)	HNO3 to pH <2
B1V9T0		W			1x500-mL P	300.0_ANIONS_IC: List-1 (5)	Cool~4C
B1V9T0		W			1x250-mL G/P	300.7_CATIONS_IC: Ammonia (1)	H2SO4 to pH <2
B1V9T0		W			1x250-mL G/P	335.2_CYANIDE: Cyanide (1)	NaOH to pH >= 12 Cool~4C
B1V9T0		W			1x1-L G/P	Strontium-90	HNO3 to pH <2
B1V9T0		W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	HCl to pH <2
B1V9T0		W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	None

ICED

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Scott E. Hamaker			JUN 04 2008 1325	CA Hudson			JUN 04 2008 1325
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

FLUOR HANFORD

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

I08-037-73

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
B1V9T0		W	6-4-08	0900	1x250-mL aGs*	9060_TOC: TOC (1)	HCl or H2SO4 to pH <2 Cool~4C
B1V9T0		W	↓	↓	3x1000-mL aG	TPH-DieselKerosene Range - WTPH-D	HCl to pH <2 Cool~4C
B1V9T0		W	↓	↓	4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	HCl to pH <2 Cool~4C

ICED

Relinquished By	Received By
Print: Scott E. Hamaker; Sign: Scott Hamaker; Date/Time: JUN 04 2008 1325	Print: CA Hudson; Sign: CA Hudson; Date/Time: JUN 04 2008 1325
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