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RECEIVED JUNE 16, 2008

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FLUOR

Memorandum

M4W41-SLF-08-618

To:	H. Hampt	E6-35	Date:	June 12, 2008
From:	S. L. Fitzgerald, Manager WSCF Analytical Lab			
cc:	w/Attachments			
	T. F. Dale	S3-30	J. E. Trechter	S3-30
	A. J. Kopriva	S3-30	S. J. Trent	E6-35
	H. K. Meznarich	S3-30	File/LB	
	P. D. Mix	S3-30		

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20080841 – SAF NUMBER F08-052

Reference:
(1) Groundwater Protection Program-Letter of Instruction, FH-EIS-2003-MEM-001, October 31, 2002

(2) HNF-SD-CD-QAPP-017, Rev. 8, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following information for sample delivery group WSCF20080841:

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

SLF/grf

Attachments 5

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ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20080841
Data Deliverable Date: 12-jun-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F08-052	B1TVK4	W08GR01072	WATER

M4W41-SLF-08-618

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Introduction

One S&GRP sample was received at the WSCF Laboratory on April 28, 2008. Sample was analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A copy of Issue Resolution Form #08-060 documenting missed regulatory hold times for Anion and Hexavalent Chromium analyses is 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.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report,* pages 16 through 18, for a complete listing of approved analytical methods.

Inorganic Comments

Anions – 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 pages 22 through 23 for QC details. Analytical Note(s):

- Missed Hold Time – A copy of Issue Resolution Form #08-060 documenting missed regulatory hold time is included as Attachment 3.

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 24 for QC details.

All QC controls are within the established limits.

Hexavalent Chromium – 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 the GRP Letter of Instruction. See page 25 for QC details. Analytical Note(s):

- Missed Hold Time – A copy of Issue Resolution Form #08-060 documenting missed regulatory hold time is included as Attachment 3.

All QC controls are within the established limits.

ICP-AES Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See pages 26 through 28 for QC details. Analytical Note(s):

- Magnesium and Silicon contamination detected in the Blank was evaluated and affected sample results were C flagged.

- Calcium – The results for the Matrix Spike and Matrix Spike Duplicate (MS/MSD) for sample B1TVK4 were within the established laboratory limits. An additional MS/MSD was analyzed on sample B1TPK5 and the result for calcium exceeded the established laboratory limit. The MS/MSD QC result for sample B1TPK5 will be addressed when the report for SDG 20080896 is issued.

- Iron – The results for the Matrix Spike and Matrix Spike Duplicate (MS/MSD) for sample B1TVK4 were within the established laboratory limits. An additional MS/MSD was analyzed on sample B1TPK5 and the result for iron in the Matrix Spike was less than the established laboratory limit. The MS QC result for sample B1TPK5 will be addressed when the report for SDG 20080896 is issued.

- All other QC controls are within the established limits.

ICP-MS Metals – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See pages 29 through 32 for QC details.

All QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See pages 39 through 40 for QC details.

All QC controls are within the established limits.

Semi-VOA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GPP Letter of Instruction. See pages 41 through 46 for QC details.

All QC controls are within the established limits.

VOA – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample, were analyzed with this delivery group per the GRP Letter of Instruction. See pages 47 through 49 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TFL2 (SDG# 20080849, SAF# F08-067).

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 pages 54 through 63 for QC details. Analytical Note(s):

- Neptunium-237 – Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TNR1 (SDG# 20080637, SAF# F08-073). Additionally, Matrix Spikes were also analyzed on samples B1TNV4 (SDG# 20080771, SAF# F08-076) and B1TVK4 of this SDG.

- Strontium-89/90 and 85 (tracer) Duplicate QC was analyzed on sample# B1TNV4 (SDG# 20080771, SAF# F08-076).

- Technetium-99 (Liquid Scintillation Counting) – Duplicate and Matrix Spike were analyzed on sample# B1P0T8 (SDG# 20080704, SAF# F07-052).

All QC controls are within the established limits.

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

for William F. Bard
Scot L. Fitzgerald
WSCF Analytical Laboratory Manager

Andrew Kopriva
WSCF Client Services

M4W41-SLF-08-618

ATTACHMENT 3

ISSUE RESOLUTION FORM

Consisting of 2 pages
Including cover page

ISSUE RESOLUTION FORM

PNNL TRACKING NUMBER: 08-060

Date : **5-12-2008** SAF No. **F08-052**

SDG: **WSCF20080841** LOGIN No.: TEST: @ IC-30 and Cr+6

Sample No.(s) **B1TVK4** **(W08GR01072)**

Submitted By:	PD Mix	Submitted To:	H Hampt
Phone No.	372-1488	Phone No.	376-4319
Fax No.	372-0456	Fax No	

ISSUE	PROPOSED RESOLUTION
Missed regulatory holding times for Anion and Hexavalent Chromium analyses. Sample was collected in the field on April 22, 2008; however, was not delivered to the WSCF Laboratory until April 28, 2008 after the regulatory hold time requirements had been exceeded. Per client direction, WSCF proceeded with the following analyses -- • On April 28, 2008, the Anion analysis was successfully completed with all QC controls within established laboratory limits, and • On April 29, 2008, the Hexavalent Chromium analysis was successfully completed with all QC controls within established laboratory limits.	Accept results (accept as-is) and document missed holding times for Anion and Hexavalent Chromium analyses in the case narrative.

GRP COMMENTS

Accept proposed resolution.

Heidi Hampt 5/13/08

Signature and Date

M4W41-SLF-08-618

ATTACHMENT 4

ANALYTICAL RESULTS

Consisting of 54 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: William W Baird 6/12/08

Client Services: Andrew Koperva 6/12/08

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.

Contract#: FH-EIS-2003-MEM-001
Report#: WSCF20080841
Report Date: 12-jun-2008
Report WGPP/ver. 5.2

w13qlog v4.2 12-jun-2008 08:28:46

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20080841

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			40885	BLANK		SW-846 8270C Semi-Vols
			40885	LCS		SW-846 8270C Semi-Vols
			40885	MS	W08GR01072	SW-846 8270C Semi-Vols
			40885	MSD	W08GR01072	SW-846 8270C Semi-Vols
			40885	SAMPLE	W08GR01072	SW-846 8270C Semi-Vols
			40885	SPK-RPD	W08GR01072	SW-846 8270C Semi-Vols
			40885	SURR	W08GR01072	SW-846 8270C Semi-Vols
36405	1	36820	41155	BLANK		Alcohols, Glycols - 8015
36405	2	36820	41155	LCS		Alcohols, Glycols - 8015
36405	8	36820	41155	MS	W08GR01072	Alcohols, Glycols - 8015
36405	9	36820	41155	MSD	W08GR01072	Alcohols, Glycols - 8015
36405	7	36820	41155	SAMPLE	W08GR01072	Alcohols, Glycols - 8015
36405	9	36820	41155	SPK-RPD	W08GR01072	Alcohols, Glycols - 8015
36405	4	36820	41155	DUP	W08P001978	Alcohols, Glycols - 8015
36405	5	36820	41155	MS	W08P001978	Alcohols, Glycols - 8015
36405	6	36820	41155	MSD	W08P001978	Alcohols, Glycols - 8015
36405	6	36820	41155	SPK-RPD	W08P001978	Alcohols, Glycols - 8015
			41272	BLANK		VOA Ground Water Protection
			41272	LCS		VOA Ground Water Protection
			41272	SAMPLE	W08GR01072	VOA Ground Water Protection
			41272	SURR	W08GR01072	VOA Ground Water Protection
			41272	MS	W08GR01096	VOA Ground Water Protection
			41272	MSD	W08GR01096	VOA Ground Water Protection
			41272	SPK-RPD	W08GR01096	VOA Ground Water Protection

w13qlog v4.2 12-jun-2008 08:28:46

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20080841

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36128	1	36543	40906	BLANK		Strontium 89/90
36128	2	36543	40906	LCS		Strontium 89/90
36128	3	36543	40906	DUP	W08GR00998	Strontium 89/90
36128	6	36543	40906	SAMPLE	W08GR01072	Strontium 89/90
36128	7	36543	40906	SURR	W08GR01072	Strontium 89/90
36172	1	36589	40929	BLANK		TC99 by Liquid Scin.
36172	2	36589	40929	LCS		TC99 by Liquid Scin.
36172	4	36589	40929	DUP	W08GR00896	TC99 by Liquid Scin.
36172	3	36589	40929	MS	W08GR00896	TC99 by Liquid Scin.
36172	9	36589	40929	SAMPLE	W08GR01072	TC99 by Liquid Scin.
36130	1	36545	40939	BLANK		Gross Alpha/Gross Beta (AB32)
36130	2	36545	40939	LCS		Gross Alpha/Gross Beta (AB32)
36130	3	36545	40939	DUP	W08GR01072	Gross Alpha/Gross Beta (AB32)
36130	4	36545	40939	SAMPLE	W08GR01072	Gross Alpha/Gross Beta (AB32)
36116	1	36532	40946	BLANK		Gamma Energy Analysis-grd H2O
36116	2	36532	40946	LCS		Gamma Energy Analysis-grd H2O
36116	3	36532	40946	DUP	W08GR01072	Gamma Energy Analysis-grd H2O
36116	4	36532	40946	SAMPLE	W08GR01072	Gamma Energy Analysis-grd H2O
36241	1	36656	41009	BLANK		Neptunium by AEA
36241	2	36656	41009	LCS		Neptunium by AEA
36241	3	36656	41009	DUP	W08GR00750	Neptunium by AEA
36241	8	36656	41009	MS	W08GR00750	Neptunium by AEA
36241	6	36656	41009	MSD	W08GR00750	Neptunium by AEA
36241	8	36656	41009	SPK-RPD	W08GR00750	Neptunium by AEA
36241	5	36656	41009	MS	W08GR00998	Neptunium by AEA
36241	10	36656	41009	MS	W08GR01072	Neptunium by AEA
36241	9	36656	41009	SAMPLE	W08GR01072	Neptunium by AEA
36348	1	36763	41100	BLANK		Tritium by Liq Sct column prep
36348	2	36763	41100	LCS		Tritium by Liq Sct column prep
36348	4	36763	41100	DUP	W08GR01072	Tritium by Liq Sct column prep
36348	3	36763	41100	MS	W08GR01072	Tritium by Liq Sct column prep
36348	5	36763	41100	SAMPLE	W08GR01072	Tritium by Liq Sct column prep
36206	1	36622	41248	BLANK		Uranium Isotopics by AEA
36206	2	36622	41248	LCS		Uranium Isotopics by AEA
36206	3	36622	41248	DUP	W08GR01072	Uranium Isotopics by AEA
36206	4	36622	41248	SAMPLE	W08GR01072	Uranium Isotopics by AEA
36206	5	36622	41248	SURR	W08GR01072	Uranium Isotopics by AEA
36209	1	36625	41299	BLANK		Plutonium Isotopics by AEA
36209	2	36625	41299	LCS		Plutonium Isotopics by AEA
36209	3	36625	41299	DUP	W08GR01072	Plutonium Isotopics by AEA
36209	4	36625	41299	SAMPLE	W08GR01072	Plutonium Isotopics by AEA
36209	5	36625	41299	SURR	W08GR01072	Plutonium Isotopics by AEA
36210	1	36626	41300	BLANK		Americium by AEA
36210	2	36626	41300	LCS		Americium by AEA

36210	3	36626	41300	DUP	W08GR01072	Americium by AEA
36210	4	36626	41300	SAMPLE	W08GR01072	Americium by AEA
36210	5	36626	41300	SURR	W08GR01072	Americium by AEA
36645	1	37056	41391	BLANK		TC99 by ICP-200.8 MS
36645	2	37056	41391	LCS		TC99 by ICP-200.8 MS
36645	3	37056	41391	SAMPLE	W08GR01072	TC99 by ICP-200.8 MS

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Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20080841

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36113	2	36529	40837	BLANK		Anions by Ion Chromatography
36113	8	36529	40837	BLANK		Anions by Ion Chromatography
36113	3	36529	40837	LCS		Anions by Ion Chromatography
36113	5	36529	40837	DUP	W08GR01072	Anions by Ion Chromatography
36113	6	36529	40837	MS	W08GR01072	Anions by Ion Chromatography
36113	7	36529	40837	MSD	W08GR01072	Anions by Ion Chromatography
36113	4	36529	40837	SAMPLE	W08GR01072	Anions by Ion Chromatography
36113	7	36529	40837	SPK-RPD	W08GR01072	Anions by Ion Chromatography
36124	2	36539	40859	BLANK		Hexavalent chromium
36124	8	36539	40859	BLANK		Hexavalent chromium
36124	3	36539	40859	LCS		Hexavalent chromium
36124	5	36539	40859	DUP	W08GR01072	Hexavalent chromium
36124	6	36539	40859	MS	W08GR01072	Hexavalent chromium
36124	7	36539	40859	MSD	W08GR01072	Hexavalent chromium
36124	4	36539	40859	SAMPLE	W08GR01072	Hexavalent chromium
36124	7	36539	40859	SPK-RPD	W08GR01072	Hexavalent chromium
36199	1	36615	40947	BLANK		Cyanide by Midi/Spectrophotom
36199	2	36615	40947	LCS		Cyanide by Midi/Spectrophotom
36199	6	36615	40947	MS	W08GR01072	Cyanide by Midi/Spectrophotom
36199	7	36615	40947	MSD	W08GR01072	Cyanide by Midi/Spectrophotom
36199	5	36615	40947	SAMPLE	W08GR01072	Cyanide by Midi/Spectrophotom
36199	7	36615	40947	SPK-RPD	W08GR01072	Cyanide by Midi/Spectrophotom
36229	1	36645	40980	BLANK		ICP-200.8 MS All possible meta
36229	2	36645	40980	LCS		ICP-200.8 MS All possible meta
36229	4	36645	40980	MS	W08GR01072	ICP-200.8 MS All possible meta
36229	5	36645	40980	MSD	W08GR01072	ICP-200.8 MS All possible meta
36229	3	36645	40980	SAMPLE	W08GR01072	ICP-200.8 MS All possible meta
36229	5	36645	40980	SPK-RPD	W08GR01072	ICP-200.8 MS All possible meta
36274	1	36689	41132	BLANK		ICP Metals Analysis, Grd H20 P
36274	2	36689	41132	LCS		ICP Metals Analysis, Grd H20 P
36274	4	36689	41132	MS	W08GR01072	ICP Metals Analysis, Grd H20 P
36274	5	36689	41132	MSD	W08GR01072	ICP Metals Analysis, Grd H20 P
36274	3	36689	41132	SAMPLE	W08GR01072	ICP Metals Analysis, Grd H20 P
36274	5	36689	41132	SPK-RPD	W08GR01072	ICP Metals Analysis, Grd H20 P
36274	11	36689	41132	MS	W08GR01144	ICP Metals Analysis, Grd H20 P
36274	12	36689	41132	MSD	W08GR01144	ICP Metals Analysis, Grd H20 P
36274	12	36689	41132	SPK-RPD	W08GR01144	ICP Metals Analysis, Grd H20 P

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-265-403	LA-265-403: Hexavalent Chromium analysis by Spectrophotometer	
	EPA SW-846 7196A	HEXAVALENT CHROMIUM
	HEIS 7196_CR6	Hexavalent Chromium
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-533-410	LA-533-410: ANION ANALYSIS BY ION CHROMATOGRAPHY	
	EPA-600/R-94-111 300.0	DETERMINATION OF INORGANIC ANIONS BY ION CHROMATOGRAPHY
	HEIS 300.0_ANIONS_IC	Determination of Inorganic Anions by Ion Chromatography
LA-695-402	LA-695-402: DETERMINATION OF CYANIDE BY MIDIDISTILLATION AND SPECTROPHOTOMETRIC	
	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-523-455	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)
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
LA-508-481	LA-508-481: GAMMA ENERGY ANALYSIS USING PROCOUNT SOFTWARE	
	HEIS GAMMA_GS	Gamma Emmision Spectrometry

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
SAF Number: F08-052
Sample # W08GR01072
Client ID: B1TVK4 TRENT WSCF

Matrix: WATER

Group #: WSCF20080841
Department: Inorganic
Sampled: 04/22/08
Received: 04/28/08

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	U	< 0.0210	mg/L			1.00	0.021		04/28/08
Chloride	16887-00-6	LA-533-410	U	< 0.110	mg/L			1.00	0.11		04/28/08
Nitrogen in Nitrite	NO2-N	LA-533-410	U	< 9.90e-03	mg/L			1.00	9.9e-03		04/28/08
Nitrogen in Nitrate	NO3-N	LA-533-410	U	< 0.0360	mg/L			1.00	0.036		04/28/08
Phosphate (P) by IC	PO4-P	LA-533-410	U	< 0.0320	mg/L			1.00	0.032		04/28/08
Sulfate	14808-79-8	LA-533-410	U	< 0.0770	mg/L			1.00	0.077		04/28/08
Cyanide											
Cyanide	57-12-5	LA-695-402	U	< 4.00	ug/L			1.00	4.0		05/05/08
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 2.00e-03	mg/L			1.00	2.0e-03		04/29/08
ICP Metals Analysis, Grd H20 P Prep											**05/12/08**
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	U	< 30.0	ug/L			1.00	30		05/19/08
Iron	7439-89-6	LA-505-411	U	< 9.00	ug/L			1.00	9.0		05/19/08
Magnesium	7439 95-4	LA-505-411	C	6.00	ug/L			1.00	6.0		05/19/08
Potassium	7440-09-7	LA-505-411		69.5	ug/L			1.00	45		05/19/08
Sodium	7440-23-5	LA-505-411	U	< 27.0	ug/L			1.00	27		05/19/08
Calcium	7440-70-2	LA-505-411	U	< 34.0	ug/L			1.00	34		05/19/08
Lithium	7439-93-2	LA-505-411	U	< 4.00	ug/L			1.00	4.0		05/19/08
Beryllium	7440-41-7	LA-505-411	U	< 4.00	ug/L			1.00	4.0		05/19/08
Boron	7440-42-8	LA-505-411	U	< 8.00	ug/L			1.00	8.0		05/19/08
Silicon	7440-21-3	LA-505-411	U	< 38.0	ug/L			1.00	38		05/19/08
Phosphorus	7723-14-0	LA-505-411	U	< 79.0	ug/L			1.00	79		05/19/08
ICP-200.8 MS All possible meta Prep											**05/07/08**

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-052
Sample # W08GR01072
Client ID: B1TVK4 TRENT WSCF

Matrix: WATER

Group #: WSCF20080841
Department: Inorganic
Sampled: 04/22/08
Received: 04/28/08

ICP-200.8 MS All possible meta

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Manganese	7439-96-5	LA-505-412	U	< 0.100	ug/L			1.00	0.100		05/07/08
Nickel	7440-02-0	LA-505-412	U	< 0.200	ug/L			1.00	0.200		05/07/08
Silver	7440-22-4	LA-505-412	U	< 0.100	ug/L			1.00	0.100		05/07/08
Antimony	7440-36 0	LA-505-412	U	< 0.300	ug/L			1.00	0.300		05/07/08
Barium	7440-39-3	LA-505-412	U	< 0.200	ug/L			1.00	0.200		05/07/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		05/07/08
Chromium	7440-47-3	LA-505-412	U	< 0.500	ug/L			1.00	0.500		05/07/08
Cobalt	7440-48-4	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		05/07/08
Copper	7440-50-8	LA-505-412	U	< 0.100	ug/L			1.00	0.100		05/07/08
Vanadium	7440-62-2	LA-505-412	U	< 0.200	ug/L			1.00	0.200		05/07/08
Zinc	7440-66-6	LA-505-412		1.32	ug/L			1.00	0.800		05/07/08
Lead	7439-92-1	LA-505-412	U	< 0.100	ug/L			1.00	0.100		05/07/08
Mercury	7439-97-6	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		05/07/08
Uranium	7440-61-1	LA-505-412	U	< 0.0500	ug/L			1.00	0.0500		05/07/08
Arsenic	7440-38-2	LA-505-412	U	< 0.400	ug/L			1.00	0.400		05/07/08
Selenium	7782-49-2	LA-505-412	U	< 0.300	ug/L			1.00	0.300		05/07/08
Thallium	7440-28-0	LA-505-412	U	< 0.100	ug/L			1.00	0.100		05/07/08
Strontium	7440-24-6	LA-505-412	U	< 0.100	ug/L			1.00	0.100		05/07/08

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

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

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

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-052

Group #: WSCF20080841
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-AES: High magnesium and silicon preparation blank results; "C" flag if applicable.

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

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080841
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 04/22/08
Receive Date:04/28/08

Lab ID: W08GR01072
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
DUP	Chloride	16887-00-6	<0.11		RPD			n/a	20.000	U	04/28/08
DUP	Fluoride	16984-48-8	<2.1e-2		RPD			n/a	20.000	U	04/28/08
DUP	Nitrogen in Nitrite	NO2-N	<9.9e-3		RPD			n/a	20.000	U	04/28/08
DUP	Nitrogen in Nitrate	NO3-N	<3.6e-2		RPD			n/a	20.000	U	04/28/08
DUP	Phosphate (P) by IC	PO4-P	<3.2e-2		RPD			n/a	20.000	U	04/28/08
DUP	Sulfate	14808-79-8	<7.7e-2		RPD			n/a	20.000	U	04/28/08
MS	Chloride	16887-00-6	0.9627	96.754	% Recov	75.000	125.000				04/28/08
MS	Fluoride	16984-48-8	0.4647	94.260	% Recov	75.000	125.000				04/28/08
MS	Nitrogen in Nitrite	NO2-N	0.4741	96.362	% Recov	75.000	125.000				04/28/08
MS	Nitrogen in Nitrate	NO3-N	0.452	101.345	% Recov	75.000	125.000				04/28/08
MS	Phosphate (P) by IC	PO4-P	0.886	92.581	% Recov	75.000	125.000				04/28/08
MS	Sulfate	14808-79-8	1.7775	90.689	% Recov	75.000	125.000				04/28/08
MSD	Chloride	16887-00-6	0.919	92.362	% Recov	75.000	125.000				04/28/08
MSD	Fluoride	16984-48-8	0.4605	93.408	% Recov	75.000	125.000				04/28/08
MSD	Nitrogen in Nitrite	NO2-N	0.4689	95.305	% Recov	75.000	125.000				04/28/08
MSD	Nitrogen in Nitrate	NO3-N	0.4518	101.300	% Recov	75.000	125.000				04/28/08
MSD	Phosphate (P) by IC	PO4-P	0.9122	95.319	% Recov	75.000	125.000				04/28/08
MSD	Sulfate	14808-79-8	1.7754	90.582	% Recov	75.000	125.000				04/28/08
SPK-RPD	Chloride	16887-00-6	92.362		RPD			4.645	20.000		04/28/08
SPK-RPD	Fluoride	16984-48-8	93.408		RPD			0.908	20.000		04/28/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	95.305		RPD			1.103	20.000		04/28/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	101.300		RPD			0.044	20.000		04/28/08
SPK-RPD	Phosphate (P) by IC	PO4-P	95.319		RPD			2.914	20.000		04/28/08
SPK-RPD	Sulfate	14808-79-8	90.582		RPD			0.118	20.000		04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080841
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
BATCH QC											
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	04/28/08
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	04/28/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	04/28/08
BLANK	Fluoride	16984-48-8	<2.1e 2	n/a	mg/L	0.000	0.030			U	04/28/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	04/28/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	04/28/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e 2	n/a	mg/L	0.000	0.040			U	04/28/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	04/28/08
BLANK	Phosphate (P) by IC	PO4-P	<3.2e-2	n/a	mg/L	0.000	0.200			U	04/28/08
BLANK	Phosphate (P) by IC	PO4-P	<3.2e-2	n/a	mg/L	0.000	0.200			U	04/28/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	04/28/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	04/28/08
LCS	Chloride	16887-00-6	196.0634	97.544	% Recov	80.000	120.000				04/28/08
LCS	Fluoride	16984-48 8	106.078	106.504	% Recov	80.000	120.000				04/28/08
LCS	Nitrogen in Nitrite	NO2-N	98.9595	99.557	% Recov	80.000	120.000				04/28/08
LCS	Nitrogen in Nitrate	NO3-N	93.3881	103.649	% Recov	80.000	120.000				04/28/08
LCS	Phosphate (P) by IC	PO4-P	192.6179	99.596	% Recov	80.000	120.000				04/28/08
LCS	Sulfate	14808-79-8	378.4974	95.580	% Recov	80.000	120.000				04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080841
Matrix: WATER
Test: Cyanide by Midi/Spectrophotom

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cyanide by Midi/Spectrophotom	57-12-5	36.1	90.250	% Recov	75.000	125.000				05/05/08
MSD	Cyanide by Midi/Spectrophotom	57-12-5	36.1	90.250	% Recov	75.000	125.000				05/05/08
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	90.250		RPD			0.000	20.000		05/05/08
BATCH QC											
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	< 4	n/a	ug/L	-4.000	4.000			U	05/05/08
LCS	Cyanide by Midi/Spectrophotom	57-12-5	50.9	101.800	% Recov	85.000	115.000				05/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20080841
Matrix: WATER
Test: Hexavalent chromium

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Hexavalent chromium	18540-29-9	<0.002		RPD			n/a	15.000	U	04/29/08
MS	Hexavalent chromium	18540-29-9	0.0547	102.052	% Recov	85.000	115.000				04/29/08
MSD	Hexavalent chromium	18540-29-9	0.0547	102.052	% Recov	85.000	115.000				04/29/08
SPK-RPD	Hexavalent chromium	18540-29-9	102.052		RPD			0.000	20.000		04/29/08
BATCH QC											
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	04/29/08
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	04/29/08
LCS	Hexavalent chromium	18540-29-9	0.0495	98.214	% Recov	80.000	120.000				04/29/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080841
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 04/22/08
Receive Date:04/28/08

Lab ID: W08GR01072
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	Aluminum	7429-90-5	1005	100.500	% Recov	75.000	125.000				05/19/08
MS	Boron	7440-42-8	989.6	98.960	% Recov	70.000	130.000				05/19/08
MS	Beryllium	7440-41-7	523.9	104.780	% Recov	75.000	125.000				05/19/08
MS	Calcium	7440-70-2	1184	118.400	% Recov	75.000	125.000				05/19/08
MS	Iron	7439-89-6	1026	102.600	% Recov	75.000	125.000				05/19/08
MS	Potassium	7440-09-7	10620.5	106.205	% Recov	75.000	125.000				05/19/08
MS	Lithium	7439-93-2	492.4	98.480	% Recov	70.000	130.000				05/19/08
MS	Magnesium	7439-95-4	982.6	98.260	% Recov	75.000	125.000				05/19/08
MS	Sodium	7440-23-5	1021	102.100	% Recov	75.000	125.000				05/19/08
MS	Phosphorus	7723-14-0	1016	101.600	% Recov	70.000	130.000				05/19/08
MS	Silicon	7440-21-3	880.8	88.080	% Recov	70.000	130.000				05/19/08
MSD	Aluminum	7429-90-5	991.8	99.180	% Recov	75.000	125.000				05/19/08
MSD	Boron	7440-42-8	991.2	99.120	% Recov	75.000	125.000				05/19/08
MSD	Beryllium	7440-41-7	523.1	104.620	% Recov	75.000	125.000				05/19/08
MSD	Calcium	7440-70-2	1115	111.500	% Recov	75.000	125.000				05/19/08
MSD	Iron	7439-89-6	1024	102.400	% Recov	75.000	125.000				05/19/08
MSD	Potassium	7440-09-7	10560.5	105.605	% Recov	75.000	125.000				05/19/08
MSD	Lithium	7439-93-2	490.6	98.120	% Recov	75.000	125.000				05/19/08
MSD	Magnesium	7439-95-4	974.8	97.480	% Recov	75.000	125.000				05/19/08
MSD	Sodium	7440-23-5	1012	101.200	% Recov	75.000	125.000				05/19/08
MSD	Phosphorus	7723-14-0	995.9	99.590	% Recov	75.000	125.000				05/19/08
MSD	Silicon	7440-21-3	898.4	89.840	% Recov	75.000	125.000				05/19/08
SPK-RPD	Aluminum	7429-90-5	99.180		RPD			1.322	20.000		05/19/08
SPK-RPD	Boron	7440-42-8	99.120		RPD			0.162	20.000		05/19/08
SPK-RPD	Beryllium	7440-41-7	104.620		RPD			0.153	20.000		05/19/08
SPK-RPD	Calcium	7440-70-2	111.500		RPD			6.003	20.000		05/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080841
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Iron	7439-89-6	102.400		RPD			0.195	20.000		05/19/08
SPK-RPD	Potassium	7440-09-7	105.605		RPD			0.567	20.000		05/19/08
SPK-RPD	Lithium	7439-93-2	98.120		RPD			0.366	20.000		05/19/08
SPK-RPD	Magnesium	7439-95-4	97.480		RPD			0.797	20.000		05/19/08
SPK-RPD	Sodium	7440-23-5	101.200		RPD			0.885	20.000		05/19/08
SPK-RPD	Phosphorus	7723-14-0	99.590		RPD			1.998	20.000		05/19/08
SPK-RPD	Silicon	7440-21-3	89.840		RPD			1.978	20.000		05/19/08

Lab ID: W08GR01144
BATCH QC ASSOCIATED WITH SAMPLE

MS	Beryllium	7440-41-7	522	104.400	% Recov	75.000	125.000				05/19/08
MS	Calcium	7440-70-2	1510	151.000	% Recov	75.000	125.000			•	05/19/08
MS	Iron	7439-89-6	680.1	68.010	% Recov	75.000	125.000			•	05/19/08
MS	Potassium	7440-09-7	10407	104.070	% Recov	75.000	125.000				05/19/08
MS	Lithium	7439-93-2	492.2	98.440	% Recov	70.000	130.000				05/19/08
MS	Magnesium	7439-95-4	1101	110.100	% Recov	75.000	125.000				05/19/08
MS	Sodium	7440-23-5	1003	100.300	% Recov	75.000	125.000				05/19/08
MSD	Beryllium	7440-41-7	526.9	105.380	% Recov	75.000	125.000				05/19/08
MSD	Calcium	7440-70-2	2110	211.000	% Recov	75.000	125.000			•	05/19/08
MSD	Iron	7439-89-6	1070.1	107.010	% Recov	75.000	125.000				05/19/08
MSD	Potassium	7440-09-7	10557	105.570	% Recov	75.000	125.000				05/19/08
MSD	Lithium	7439-93-2	497.1	99.420	% Recov	75.000	125.000				05/19/08
MSD	Magnesium	7439-95-4	1175	117.500	% Recov	75.000	125.000				05/19/08
MSD	Sodium	7440-23-5	1073	107.300	% Recov	75.000	125.000				05/19/08
SPK-RPD	Beryllium	7440-41-7	105.380		RPD			0.934	20.000		05/19/08
SPK-RPD	Calcium	7440-70-2	211.000		RPD			33.149	20.000	•	05/19/08
SPK-RPD	Iron	7439-89-6	107.010		RPD			44.566	20.000	•	05/19/08
SPK-RPD	Potassium	7440-09-7	105.570		RPD			1.431	20.000		05/19/08
SPK-RPD	Lithium	7439-93-2	99.420		RPD			0.991	20.000		05/19/08
SPK-RPD	Magnesium	7439-95-4	117.500		RPD			6.503	20.000		05/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080841
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Sodium	7440-23-5	107.300		RPD			6.744	20.000		05/19/08
BATCH QC											
BLANK	Aluminum	7429-90-5	<30	n/a	ug/L					U	05/19/08
BLANK	Boron	7440-42-8	<8	n/a	ug/L					U	05/19/08
BLANK	Beryllium	7440-41-7	<4	n/a	ug/L					U	05/19/08
BLANK	Calcium	7440-70-2	<34	n/a	ug/L					U	05/19/08
BLANK	Iron	7439-89-6	<9	n/a	ug/L					U	05/19/08
BLANK	Potassium	7440-09-7	<45	n/a	ug/L					U	05/19/08
BLANK	Lithium	7439-93-2	<4	n/a	ug/L					U	05/19/08
BLANK	Magnesium	7439-95-4	11.6	11.600	ug/L						05/19/08
BLANK	Sodium	7440-23-5	<27	n/a	ug/L					U	05/19/08
BLANK	Phosphorus	7723-14-0	<79	n/a	ug/L					U	05/19/08
BLANK	Silicon	7440-21-3	57.4	57.400	ug/L						05/19/08
LCS	Aluminum	7429-90-5	976.8	97.680	% Recov	80.000	120.000				05/19/08
LCS	Boron	7440-42-8	978.4	97.840	% Recov	80.000	120.000				05/19/08
LCS	Beryllium	7440-41-7	520.1	104.020	% Recov	80.000	120.000				05/19/08
LCS	Calcium	7440-70-2	1075	107.500	% Recov	80.000	120.000				05/19/08
LCS	Iron	7439-89-6	1007	100.700	% Recov	80.000	120.000				05/19/08
LCS	Potassium	7440-09-7	10500	105.000	% Recov	80.000	120.000				05/19/08
LCS	Lithium	7439-93-2	489.7	97.940	% Recov	80.000	120.000				05/19/08
LCS	Magnesium	7439-95-4	974.4	97.440	% Recov	80.000	120.000				05/19/08
LCS	Sodium	7440-23-5	1003	100.300	% Recov	80.000	120.000				05/19/08
LCS	Phosphorus	7723-14-0	966.1	96.610	% Recov	80.000	120.000				05/19/08
LCS	Silicon	7440-21-3	886.3	88.630	% Recov	80.000	120.000				05/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080841
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 04/22/08
Receive Date:04/28/08

Lab ID: W08GR01072
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	41.18	102.950	% Recov	70.000	130.000				05/07/08
MS	Arsenic	7440-38-2	35.8	89.500	% Recov	70.000	130.000				05/07/08
MS	Barium	7440-39-3	38.81	97.025	% Recov	70.000	130.000				05/07/08
MS	Cadmium	7440-43-9	37.59	93.975	% Recov	70.000	130.000				05/07/08
MS	Cobalt	7440-48-4	39.43	98.575	% Recov	70.000	130.000				05/07/08
MS	Chromium	7440-47-3	39.62	99.050	% Recov	70.000	130.000				05/07/08
MS	Copper	7440-50-8	40.22	100.550	% Recov	70.000	130.000				05/07/08
MS	Mercury	7439-97-6	2.06	103.000	% Recov	70.000	130.000				05/07/08
MS	Manganese	7439-96-5	39.09	97.725	% Recov	70.000	130.000				05/07/08
MS	Nickel	7440-02-0	40.11	100.275	% Recov	70.000	130.000				05/07/08
MS	Lead	7439-92-1	39.43	98.575	% Recov	70.000	130.000				05/07/08
MS	Antimony	7440-36-0	40.15	100.375	% Recov	70.000	130.000				05/07/08
MS	Selenium	7782-49-2	34.74	86.850	% Recov	70.000	130.000				05/07/08
MS	Strontium	7440-24-6	38.83	97.075	% Recov	70.000	130.000				05/07/08
MS	Thallium	7440-28-0	39.66	99.150	% Recov	70.000	130.000				05/07/08
MS	Uranium	7440-61-1	40.06	100.150	% Recov	70.000	130.000				05/07/08
MS	Vanadium	7440-62-2	39.79	99.475	% Recov	70.000	130.000				05/07/08
MS	Zinc	7440-66-6	38.08	95.200	% Recov	70.000	130.000				05/07/08
MSD	Silver	7440-22-4	40.99	102.475	% Recov	70.000	130.000				05/07/08
MSD	Arsenic	7440-38-2	35.78	89.450	% Recov	70.000	130.000				05/07/08
MSD	Barium	7440-39-3	38.58	96.450	% Recov	70.000	130.000				05/07/08
MSD	Cadmium	7440-43-9	37.32	93.300	% Recov	70.000	130.000				05/07/08
MSD	Cobalt	7440-48-4	38.41	96.025	% Recov	70.000	130.000				05/07/08
MSD	Chromium	7440-47-3	38.75	96.875	% Recov	70.000	130.000				05/07/08
MSD	Copper	7440-50-8	39.25	98.125	% Recov	70.000	130.000				05/07/08
MSD	Mercury	7439-97-6	2.04	102.000	% Recov	70.000	130.000				05/07/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080841
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Manganese	7439-96-5	38.13	95.325	% Recov	70.000	130.000				05/07/08
MSD	Nickel	7440-02-0	39.3	98.250	% Recov	70.000	130.000				05/07/08
MSD	Lead	7439-92-1	39.28	98.200	% Recov	70.000	130.000				05/07/08
MSD	Antimony	7440-36-0	39.85	99.625	% Recov	70.000	130.000				05/07/08
MSD	Selenium	7782-49-2	34.93	87.325	% Recov	70.000	130.000				05/07/08
MSD	Strontium	7440-24-6	38.59	96.475	% Recov	70.000	130.000				05/07/08
MSD	Thallium	7440-28-0	39.07	97.675	% Recov	70.000	130.000				05/07/08
MSD	Uranium	7440-61-1	39.36	98.400	% Recov	70.000	130.000				05/07/08
MSD	Vanadium	7440-62-2	38.98	97.450	% Recov	70.000	130.000				05/07/08
MSD	Zinc	7440-66-6	36.91	92.275	% Recov	70.000	130.000				05/07/08
SPK-RPD	Silver	7440-22-4	102.475		RPD			0.462	20.000		05/07/08
SPK-RPD	Arsenic	7440-38-2	89.450		RPD			0.056	20.000		05/07/08
SPK-RPD	Barium	7440-39-3	96.450		RPD			0.594	20.000		05/07/08
SPK-RPD	Cadmium	7440-43-9	93.300		RPD			0.721	20.000		05/07/08
SPK-RPD	Cobalt	7440-48-4	96.025		RPD			2.621	20.000		05/07/08
SPK-RPD	Chromium	7440-47-3	96.875		RPD			2.220	20.000		05/07/08
SPK-RPD	Copper	7440-50-8	98.125		RPD			2.441	20.000		05/07/08
SPK-RPD	Mercury	7439-97-6	102.000		RPD			0.976	20.000		05/07/08
SPK-RPD	Manganese	7439-96-5	95.325		RPD			2.486	20.000		05/07/08
SPK-RPD	Nickel	7440-02-0	98.250		RPD			2.040	20.000		05/07/08
SPK-RPD	Lead	7439-92-1	98.200		RPD			0.381	20.000		05/07/08
SPK-RPD	Antimony	7440-36-0	99.625		RPD			0.750	20.000		05/07/08
SPK-RPD	Selenium	7782-49-2	87.325		RPD			0.545	20.000		05/07/08
SPK-RPD	Strontium	7440-24-6	96.475		RPD			0.620	20.000		05/07/08
SPK-RPD	Thallium	7440-28-0	97.675		RPD			1.499	20.000		05/07/08
SPK-RPD	Uranium	7440-61-1	98.400		RPD			1.763	20.000		05/07/08
SPK-RPD	Vanadium	7440-62-2	97.450		RPD			2.057	20.000		05/07/08
SPK-RPD	Zinc	7440-66-6	92.275		RPD			3.120	20.000		05/07/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080841
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	Silver	7440-22-4	<0.1	n/a	ug/L					U	05/07/08
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	05/07/08
BLANK	Barium	7440-39-3	<0.2	n/a	ug/L					U	05/07/08
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L					U	05/07/08
BLANK	Cobalt	7440-48-4	<5e-2	n/a	ug/L					U	05/07/08
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L					U	05/07/08
BLANK	Copper	7440-50-8	<0.1	n/a	ug/L					U	05/07/08
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	05/07/08
BLANK	Manganese	7439-96-5	<0.1	n/a	ug/L					U	05/07/08
BLANK	Nickel	7440-02-0	<0.2	n/a	ug/L					U	05/07/08
BLANK	Lead	7439-92-1	<0.1	n/a	ug/L					U	05/07/08
BLANK	Antimony	7440-36-0	<0.3	n/a	ug/L					U	05/07/08
BLANK	Selenium	7782-49-2	<0.3	n/a	ug/L					U	05/07/08
BLANK	Strontium	7440-24-6	<0.1	n/a	ug/L					U	05/07/08
BLANK	Thallium	7440-28-0	<0.1	n/a	ug/L					U	05/07/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	05/07/08
BLANK	Vanadium	7440-62-2	<0.2	n/a	ug/L					U	05/07/08
BLANK	Zinc	7440-66-6	<0.8	n/a	ug/L					U	05/07/08
LCS	Silver	7440-22-4	42.48	106.200	% Recov	85.000	115.000				05/07/08
LCS	Arsenic	7440-38-2	37.48	93.700	% Recov	85.000	115.000				05/07/08
LCS	Barium	7440-39-3	39.14	97.850	% Recov	85.000	115.000				05/07/08
LCS	Cadmium	7440-43-9	37.83	94.575	% Recov	85.000	115.000				05/07/08
LCS	Cobalt	7440-48-4	38.45	96.125	% Recov	85.000	115.000				05/07/08
LCS	Chromium	7440-47-3	38.69	96.725	% Recov	85.000	115.000				05/07/08
LCS	Copper	7440-50-8	38.93	97.325	% Recov	85.000	115.000				05/07/08
LCS	Mercury	7439-97-6	2.07	103.500	% Recov	85.000	115.000				05/07/08
LCS	Manganese	7439-96-5	38.66	96.650	% Recov	85.000	115.000				05/07/08
LCS	Nickel	7440-02-0	38.89	97.225	% Recov	85.000	115.000				05/07/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20080841
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	Lead	7439-92-1	39.87	99.675	% Recov	85.000	115.000				05/07/08
LCS	Antimony	7440-36-0	40.56	101.400	% Recov	85.000	115.000				05/07/08
LCS	Selenium	7782-49-2	36.2	90.500	% Recov	85.000	115.000				05/07/08
LCS	Strontium	7440-24-6	39.87	99.675	% Recov	80.000	120.000				05/07/08
LCS	Thallium	7440-28-0	39.77	99.425	% Recov	85.000	115.000				05/07/08
LCS	Uranium	7440-61-1	40.03	100.075	% Recov	85.000	115.000				05/07/08
LCS	Vanadium	7440-62-2	39.46	98.650	% Recov	85.000	115.000				05/07/08
LCS	Zinc	7440-66-6	37.24	93.100	% Recov	85.000	115.000				05/07/08

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-052
Sample # W08GR01072
Client ID: B1TVK4 TRENT WSCF

Matrix: WATER

Group #: WSCF20080841
Department: Organic
Sampled: 04/22/08
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Alcohols, Glycols - 8015 Prep											**05/06/08**
Alcohols, Glycols - 8015											
Diethyl ether	60-29-7	Organics	U	< 5.00e+03	ug/L			1.00	5.0e+03		05/06/08
Ethylene glycol	107-21-1	Organics	U	< 5.00e+03	ug/L			1.00	5.0e+03		05/06/08
SW-846 8270C Semi-Vols Prep											**04/29/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 1.10	ug/L			1.00	1.1		04/30/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.60	ug/L			1.00	1.6		04/30/08
Phenol	108-95-2	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.40	ug/L			1.00	2.4		04/30/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Pyrene	129-00-0	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.670	ug/L			1.00	0.67		04/30/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.90	ug/L			1.00	2.9		04/30/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.70	ug/L			1.00	1.7		04/30/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
4-Nitroaniline	100-01-6	LA-523-456	U	< 1.10	ug/L			1.00	1.1		04/30/08
4-Bromophenylphenyl ether	101-55-3	LA-523-456	U	< 1.10	ug/L			1.00	1.1		04/30/08
2,4-Dimethylphenol	105-67-9	LA-523-456	U	< 1.10	ug/L			1.00	1.1		04/30/08
4-Chloroaniline	106-47-8	LA-523 456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Bis(2-chloro-1-methylethyl)eth	108-60-1	LA-523-456	U	< 1.10	ug/L			1.00	1.1		04/30/08
Bis(2-chloroethyl) ether	111-44-4	LA-523-456	U	< 1.00	ug/L			1.00	1.0		04/30/08
Bis(2-Chloroethoxy)methane	111-91-1	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	< 0.890	ug/L			1.00	0.89		04/30/08

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-052
Sample # W08GR01072
Client ID: B1TVK4 TRENT WSCF

Matrix: WATER

Group #: WSCF20080841
Department: Organic
Sampled: 04/22/08
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Di n-octylphthalate	117-84-0	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Hexachlorobenzene	118-74-1	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Anthracene	120-12-7	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Dimethyl phthalate	131-11-3	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Dibenzofuran	132-64-9	LA-523-456	U	< 2.40	ug/L			1.00	2.4		04/30/08
Benzo(ghi)perylene	191-24-2	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Indeno(1,2,3-cd)pyrene	193-39-5	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Benzo(b)fluoranthene	205-99-2	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Fluoranthene	206-44-0	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Benzo(k)fluoranthene	207-08-9	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Acenaphthylene	208-96-8	LA-523-456	U	< 2.60	ug/L			1.00	2.6		04/30/08
Chrysene	218-01-9	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Benzo(a)pyrene	50-32-8	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
2,4-Dinitrophenol	51-28-5	LA-523-456	U	< 2.20	ug/L			1.00	2.2		04/30/08
Dibenz(a,h)anthracene	53-70-3	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
4,6-Dinitro-2-methylphenol	534-52-1	LA-523-456	U	< 1.10	ug/L			1.00	1.1		04/30/08
1,3-Dichlorobenzene	541-73-1	LA-523-456	U	< 1.50	ug/L			1.00	1.5		04/30/08
Benzo(a)anthracene	56-55-3	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
2,6-Dinitrotoluene	606-20-2	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
4-Chlorophenylphenyl ether	7005-72-3	LA-523-456	U	< 1.90	ug/L			1.00	1.9		04/30/08
Hexachlorocyclopentadiene	77-47-4	LA-523-456	U	< 5.60	ug/L			1.00	5.6		04/30/08
Isophorone	78-59-1	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Diethylphthalate	84-66-2	LA-523-456	U	< 2.10	ug/L			1.00	2.1		04/30/08
Di-n-butylphthalate	84-74-2	LA-523-456	U	< 2.60	ug/L			1.00	2.6		04/30/08

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-052
Sample # W08GR01072
Client ID: B1TVK4 TRENT WSCF

Matrix: WATER

Group #: WSCF20080841
Department: Organic
Sampled: 04/22/08
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Phenanthrene	85-01-8	LA-523-456	U	< 0.610	ug/L			1.00	0.61		04/30/08
Butylbenzylphthalate	85-68-7	LA-523-456	U	< 0.670	ug/L			1.00	0.67		04/30/08
N-Nitrosodiphenylamine	86-30-6	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Fluorene	86-73-7	LA-523-456	U	< 1.60	ug/L			1.00	1.6		04/30/08
Carbazole	86-74-8	LA 523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Hexachlorobutadiene	87-68-3	LA-523-456	U	< 2.20	ug/L			1.00	2.2		04/30/08
2-Nitroaniline	88-74-4	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
2-Nitrophenol	88-75-5	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Naphthalene	91-20-3	LA-523-456	U	< 2.30	ug/L			1.00	2.3		04/30/08
2-Methylnaphthalene	91-57-6	LA-523-456	U	< 3.30	ug/L			1.00	3.3		04/30/08
2-Chloronaphthalene	91-58-7	LA-523-456	U	< 3.90	ug/L			1.00	3.9		04/30/08
3,3'-Dichlorobenzidine	91-94-1	LA-523-456	U	< 0.890	ug/L			1.00	0.89		04/30/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
1,2-Dichlorobenzene	95-50-1	LA-523-456	U	< 1.70	ug/L			1.00	1.7		04/30/08
2,4,5-Trichlorophenol	95-95-4	LA-523-456	U	< 0.720	ug/L			1.00	0.72		04/30/08
Nitrobenzene	98-95-3	LA-523-456	U	< 0.670	ug/L			1.00	0.67		04/30/08
3-Nitroaniline	99-09-2	LA-523-456	U	< 0.670	ug/L			1.00	0.67		04/30/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Hexachloroethane	67-72-1	LA-523-456	U	< 1.60	ug/L			1.00	1.6		04/30/08
2,4,6-Trichlorophenol	88-06-2	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 0.560	ug/L			1.00	0.56		04/30/08
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-052
Sample # W08GR01072
Client ID: B1TVK4 TRENT WSCF

Matrix: WATER

Group #: WSCF20080841
Department: Organic
Sampled: 04/22/08
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Styrene	100-42-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
2-Hexanone	591-78-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Bromomethane	74-83-9	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Chloromethane	74-87-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Chloroethene	75-00-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08

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

Attention: Steve Trent
SAF Number: F08-052
Sample # W08GR01072
Client ID: B1TVK4 TRENT WSCF

Matrix: WATER

Group #: WSCF20080841
Department: Organic
Sampled: 04/22/08
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Bromoform	75-25-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		05/01/08
Trichloromonofluoromethane	75-69-4	LA 523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
n-Butylbenzene	104-51-8	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		05/01/08

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

C - The Analyte was found in the Associated Blank.(inorg)
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WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-052

Group #: WSCF20080841
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-AES: High magnesium and silicon preparation blank results; "C" flag if applicable.

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

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080841
Matrix: WATER
Test: Alcohols, Glycols - 8015

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	2-Bromoethanol	540-51-2	17400	98.864	% Recov	70.000	125.000				05/06/08
MS	Diethyl ether	60-29-7	7300	102.817	% Recov	75.000	125.000				05/06/08
MS	Ethylene glycol	107-21-1	11000	100.000	% Recov	75.000	125.000				05/06/08
MSD	2-Bromoethanol	540-51-2	16900	96.023	% Recov	70.000	125.000				05/06/08
MSD	Diethyl ether	60-29-7	6700	94.366	% Recov	75.000	125.000				05/06/08
MSD	Ethylene glycol	107-21-1	11000	100.000	% Recov	75.000	125.000				05/06/08
SPK-RPD	2-Bromoethanol	540-51-2	96.023		RPD			2.916	20.000		05/06/08
SPK-RPD	Diethyl ether	60-29-7	94.366		RPD			8.572	20.000		05/06/08
SPK-RPD	Ethylene glycol	107-21-1	100.000		RPD			0.000	20.000		05/06/08
Lab ID: W08P001978											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	2-Bromoethanol	540-51-2	16300		RPD			7.670	25.000		05/06/08
DUP	Diethyl ether	60-29-7	<5000		RPD			n/a	25.000	U	05/06/08
DUP	Ethylene glycol	107-21-1	<5000		RPD			n/a	25.000	U	05/06/08
MS	2-Bromoethanol	540-51-2	17100	97.159	% Recov	70.000	125.000				05/06/08
MS	Diethyl ether	60-29-7	7300	102.817	% Recov	75.000	125.000				05/06/08
MS	Ethylene glycol	107-21-1	9200	83.636	% Recov	75.000	125.000				05/06/08
MSD	2-Bromoethanol	540-51-2	17100	97.159	% Recov	70.000	125.000				05/06/08
MSD	Diethyl ether	60-29-7	7500	105.634	% Recov	75.000	125.000				05/06/08
MSD	Ethylene glycol	107-21-1	9400	85.455	% Recov	75.000	125.000				05/06/08
SPK-RPD	2-Bromoethanol	540-51-2	97.159		RPD			0.000	20.000		05/06/08
SPK-RPD	Diethyl ether	60-29-7	105.634		RPD			2.703	20.000		05/06/08
SPK-RPD	Ethylene glycol	107 21-1	85.455		RPD			2.152	20.000		05/06/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080841
Matrix: WATER
Test: Alcohols, Glycols - 8015

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	2 Bromoethanol	540-51-2	17000	96.591	% Recov	75.000	125.000				05/06/08
BLANK	Diethyl ether	60-29-7	<5000	n/a	ug/L	0.000	10.000			U	05/06/08
BLANK	Ethylene glycol	107-21-1	<5000	n/a	ug/L	0.000	5.000			U	05/06/08
LCS	2-Bromoethanol	540-51-2	16700	94.886	% Recov	70.000	130.000				05/06/08
LCS	Diethyl ether	60-29-7	6900	97.183	% Recov	70.000	130.000				05/06/08
LCS	Ethylene glycol	107-21-1	8700	79.091	% Recov	70.000	130.000				05/06/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080841
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 04/22/08
Receive Date:04/28/08

Lab ID: W08GR01072
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	1,2,4-Trichlorobenzene	120-82-1	18.825	84.700	% Recov	50.000	120.000				04/30/08
MS	1,4-Dichlorobenzene	106-46-7	18.625	83.800	% Recov	41.000	113.000				04/30/08
MS	2,4-Dinitrotoluene	121-14-2	19.317	86.900	% Recov	65.000	109.000				04/30/08
MS	2-Fluorophenol(Surr)	367-12-4	17.571	79.100	% Recov	50.000	110.000				04/30/08
MS	Acenaphthene	83-32-9	20.028	90.100	% Recov	62.000	112.000				04/30/08
MS	4-Chloro-3-methylphenol	59-50-7	30.953	92.900	% Recov	59.000	115.000				04/30/08
MS	2-Chlorophenol	95-57-8	29.675	89.000	% Recov	69.000	111.000				04/30/08
MS	N-Nitrosodi-n-dipropylamine	621-64 7	21.014	94.600	% Recov	69.000	115.000				04/30/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	18.991	85.500	% Recov	58.000	109.000				04/30/08
MS	Phenol	108-95-2	29.880	89.600	% Recov	59.000	115.000				04/30/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	20.352	91.600	% Recov	60.000	118.000				04/30/08
MS	4-Nitrophenol	100-02-7	27.602	82.800	% Recov	32.000	130.000				04/30/08
MS	Pentachlorophenol	87-86-5	32.619	97.900	% Recov	51.000	121.000				04/30/08
MS	Phenol-d5(Surr)	4165-62-2	19.232	86.500	% Recov	59.000	116.000				04/30/08
MS	Pyrene	129-00-0	23.726	107.000	% Recov	58.000	116.000				04/30/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	19.399	87.300	% Recov	60.000	120.000				04/30/08
MS	Terphenyl-d14(Surr)	98904-43-9	22.300	100.000	% Recov	60.000	120.000				04/30/08
MSD	1,2,4-Trichlorobenzene	120-82-1	19.163	86.200	% Recov	50.000	120.000				04/30/08
MSD	1,4-Dichlorobenzene	106-46-7	18.441	83.000	% Recov	41.000	113.000				04/30/08
MSD	2,4-Dinitrotoluene	121-14-2	18.301	82.400	% Recov	65.000	109.000				04/30/08
MSD	2-Fluorophenol(Surr)	367-12-4	16.614	74.800	% Recov	50.000	110.000				04/30/08
MSD	Acenaphthene	83-32-9	19.254	86.600	% Recov	62.000	112.000				04/30/08
MSD	4-Chloro-3-methylphenol	59-50-7	29.719	89.200	% Recov	59.000	115.000				04/30/08
MSD	2-Chlorophenol	95-57-8	28.479	85.400	% Recov	69.000	111.000				04/30/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	19.950	89.800	% Recov	69.000	115.000				04/30/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	17.878	80.500	% Recov	58.000	109.000				04/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080841
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Phenol	108-95-2	28.982	86.900	% Recov	59.000	115.000				04/30/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	19.670	88.500	% Recov	60.000	118.000				04/30/08
MSD	4-Nitrophenol	100-02-7	26.045	78.100	% Recov	32.000	130.000				04/30/08
MSD	Pentachlorophenol	87-86-5	30.771	92.300	% Recov	51.000	121.000				04/30/08
MSD	Phenol-d5(Surr)	4165-62-2	18.470	83.100	% Recov	59.000	116.000				04/30/08
MSD	Pyrene	129-00-0	21.523	96.900	% Recov	58.000	116.000				04/30/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	17.596	79.200	% Recov	60.000	120.000				04/30/08
MSD	Terphenyl-d14(Surr)	98904-43-9	20.801	93.600	% Recov	60.000	120.000				04/30/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	86.200		RPD			1.755	25.000		05/01/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	83.000		RPD			0.959	25.000		05/01/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	82.400		RPD			5.316	25.000		05/01/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	74.800		RPD			5.588	25.000		05/01/08
SPK-RPD	Acenaphthene	83-32-9	86.600		RPD			3.962	25.000		05/01/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	89.200		RPD			4.064	25.000		05/01/08
SPK-RPD	2-Chlorophenol	95-57-8	85.400		RPD			4.128	25.000		05/01/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	89.800		RPD			5.206	25.000		05/01/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	80.500		RPD			6.024	25.000		05/01/08
SPK-RPD	Phenol	108-95-2	86.900		RPD			3.059	16.000		05/01/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	88.500		RPD			3.443	25.000		05/01/08
SPK-RPD	4-Nitrophenol	100-02-7	78.100		RPD			5.842	25.000		05/01/08
SPK-RPD	Pentachlorophenol	87-86-5	92.300		RPD			5.889	25.000		05/01/08
SPK-RPD	Phenol d5(Surr)	4165-62-2	83.100		RPD			4.009	25.000		05/01/08
SPK-RPD	Pyrene	129-00-0	96.900		RPD			9.907	25.000		05/01/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	79.200		RPD			9.730	25.000		05/01/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	93.600		RPD			6.612	25.000		05/01/08
SURR	2-Fluorophenol(Surr)	367-12-4	16.588	74.600	% Recov	50.000	110.000				04/30/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	19.312	86.900	% Recov	58.000	109.000				04/30/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	20.754	93.400	% Recov	60.000	118.000				04/30/08
SURR	Phenol-d5(Surr)	4165-62-2	19.792	89.100	% Recov	59.000	116.000				04/30/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	18.291	82.300	% Recov	60.000	120.000				04/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080841
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Terphenyl-d14(Surr)	98904-43-9	22.722	102.000	% Recov	60.000	120.000				04/30/08
BATCH QC											
BLANK	1,2-Dichlorobenzene	95-50-1	< 1.5	n/a	ug/L					U	05/01/08
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 2.2	n/a	ug/L					U	05/01/08
BLANK	1,3-Dichlorobenzene	541-73-1	< 1.3	n/a	ug/L					U	05/01/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.4	n/a	ug/L					U	05/01/08
BLANK	2,4-Dichlorophenol	120-83-2	< 0.50	n/a	ug/L					U	05/01/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 0.50	n/a	ug/L					U	05/01/08
BLANK	2,4,5-Trichlorophenol	95-95-4	< 0.65	n/a	ug/L					U	05/01/08
BLANK	2,4,6-Trichlorophenol	88-06-2	< 0.50	n/a	ug/L					U	05/01/08
BLANK	2,4-Dimethylphenol	105-67-9	< 0.95	n/a	ug/L					U	05/01/08
BLANK	2,6-Dinitrotoluene	606-20-2	< 0.50	n/a	ug/L					U	05/01/08
BLANK	2-Chloronaphthalene	91-58-7	< 3.5	n/a	ug/L					U	05/01/08
BLANK	2-Fluorophenol(Surr)	367-12-4	17.970	89.800	% Recov	50.000	110.000				05/01/08
BLANK	2-Methylnaphthalene	91-57-6	< 3.0	n/a	ug/L					U	05/01/08
BLANK	2-Methylphenol (cresol, o-)	95-48-7	< 0.50	n/a	ug/L					U	05/01/08
BLANK	2-Nitroaniline	88-74-4	< 0.50	n/a	ug/L					U	05/01/08
BLANK	2-Nitrophenol	88-75-5	< 0.50	n/a	ug/L					U	05/01/08
BLANK	3 & 4 Methylphenol Total	65794-96-9	< 0.50	n/a	ug/L	0.000	5.000			U	05/01/08
BLANK	3-Nitroaniline	99-09-2	< 0.60	n/a	ug/L					U	05/01/08
BLANK	4,6-Dinitro-2-methylphenol	534-52-1	< 1.0	n/a	ug/L					U	05/01/08
BLANK	4-Bromophenylphenyl ether	101-55-3	< 1.0	n/a	ug/L					U	05/01/08
BLANK	4-Chlorophenylphenyl ether	7005-72-3	< 1.7	n/a	ug/L					U	05/01/08
BLANK	Acenaphthene	83-32-9	< 2.6	n/a	ug/L					U	05/01/08
BLANK	Acenaphthylene	208-96-8	< 2.3	n/a	ug/L					U	05/01/08
BLANK	Anthracene	120-12-7	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Bis(2-chloroethyl) ether	111-44-4	< 0.90	n/a	ug/L					U	05/01/08
BLANK	Benzo(a)anthracene	56-55-3	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Benzo(b)fluoranthene	205-99-2	< 0.50	n/a	ug/L					U	05/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080841
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	Benzo(ghi)perylene	191-24-2	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Benzo(a)pyrene	50-32-8	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Bis(2-Chloroethoxy)methane	111-91-1	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Bis(2-ethylhexyl) phthalate	117-81-7	< 0.80	n/a	ug/L					U	05/01/08
BLANK	Bis(2-chloro-1-methylethyl)eth	108-60-1	< 1.0	n/a	ug/L	0.000	10.000			U	05/01/08
BLANK	Benzo(k)fluoranthene	207-08-9	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Butylbenzylphthalate	85-68-7	< 0.60	n/a	ug/L					U	05/01/08
BLANK	Carbazole	86-74-8	< 0.50	n/a	ug/L					U	05/01/08
BLANK	4-Chloroaniline	106-47-8	< 0.50	n/a	ug/L					U	05/01/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 0.50	n/a	ug/L					U	05/01/08
BLANK	2-Chlorophenol	95-57-8	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Chrysene	218-01-9	< 0.50	n/a	ug/L					U	05/01/08
BLANK	3,3'-Dichlorobenzidine	91-94-1	< 0.80	n/a	ug/L					U	05/01/08
BLANK	Dibenz[a,h]anthracene	53-70-3	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Dibenzofuran	132-64-9	< 2.2	n/a	ug/L					U	05/01/08
BLANK	Di-n-butylphthalate	84-74-2	< 2.3	n/a	ug/L					U	05/01/08
BLANK	Diethylphthalate	84-66-2	< 1.9	n/a	ug/L					U	05/01/08
BLANK	Dimethyl phthalate	131-11-3	< 0.50	n/a	ug/L					U	05/01/08
BLANK	2,4-Dinitrophenol	51-28-5	< 2.0	n/a	ug/L					U	05/01/08
BLANK	Di-n-octylphthalate	117-84-0	< 0.50	n/a	ug/L					U	05/01/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 0.60	n/a	ug/L					U	05/01/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	18.781	93.900	% Recov	58.000	109.000				05/01/08
BLANK	Fluorene	86-73-7	< 1.4	n/a	ug/L					U	05/01/08
BLANK	Fluoranthene	206-44-0	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Hexachlorobenzene	118-74-1	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Hexachlorobutadiene	87-68-3	< 2.0	n/a	ug/L					U	05/01/08
BLANK	Hexachlorocyclopentadiene	77-47-4	< 5.0	n/a	ug/L					U	05/01/08
BLANK	Hexachloroethane	67-72-1	< 1.4	n/a	ug/L					U	05/01/08
BLANK	Indeno(1,2,3-cd)pyrene	193-39-5	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Isophorone	78-59-1	< 0.50	n/a	ug/L					U	05/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080841
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	Phenol	108-95-2	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Naphthalene	91-20-3	< 2.1	n/a	ug/L					U	05/01/08
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	19.415	97.100	% Recov	60.000	118.000				05/01/08
BLANK	Nitrobenzene	98-95-3	< 0.60	n/a	ug/L					U	05/01/08
BLANK	4-Nitrophenol	100-02-7	< 1.0	n/a	ug/L					U	05/01/08
BLANK	4-Nitroaniline	100-01-6	< 1.0	n/a	ug/L					U	05/01/08
BLANK	N-Nitrosodiphenylamine	86-30-6	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Pentachlorophenol	87-86-5	< 1.5	n/a	ug/L					U	05/01/08
BLANK	Phenanthrene	85-01-8	< 0.55	n/a	ug/L					U	05/01/08
BLANK	Phenol-d5(Surr)	4165-62-2	18.254	91.300	% Recov	59.000	116.000				05/01/08
BLANK	Pyrene	129-00-0	< 0.50	n/a	ug/L					U	05/01/08
BLANK	Tributyl phosphate	126-73-8	< 0.50	n/a	ug/L					U	05/01/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	16.479	82.400	% Recov	60.000	120.000				05/01/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	20.004	100.000	% Recov	60.000	120.000				05/01/08
LCS	1,2,4-Trichlorobenzene	120-82-1	16.552	82.800	% Recov	46.000	107.000				04/30/08
LCS	1,4-Dichlorobenzene	106-46-7	15.903	79.500	% Recov	42.000	111.000				04/30/08
LCS	2,4-Dinitrotoluene	121-14-2	17.372	86.900	% Recov	59.000	106.000				04/30/08
LCS	2-Fluorophenol(Surr)	367-12-4	14.771	73.900	% Recov	50.000	110.000				04/30/08
LCS	Acenaphthene	83-32-9	17.452	87.300	% Recov	61.000	116.000				04/30/08
LCS	4-Chloro-3-methylphenol	59-50-7	26.640	88.800	% Recov	61.000	106.000				04/30/08
LCS	2-Chlorophenol	95-57-8	26.022	86.700	% Recov	66.000	106.000				04/30/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	18.558	92.800	% Recov	71.000	114.000				04/30/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	16.471	82.400	% Recov	58.000	109.000				04/30/08
LCS	Phenol	108-95-2	26.262	87.500	% Recov	67.000	105.000				04/30/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	17.586	87.900	% Recov	60.000	118.000				04/30/08
LCS	4-Nitrophenol	100-02-7	26.138	87.100	% Recov	32.000	118.000				04/30/08
LCS	Pentachlorophenol	87-86-5	28.342	94.500	% Recov	62.000	114.000				04/30/08
LCS	Phenol-d5(Surr)	4165-62-2	17.060	85.300	% Recov	59.000	116.000				04/30/08
LCS	Pyrene	129-00-0	19.874	99.400	% Recov	66.000	118.000				04/30/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	16.288	81.400	% Recov	60.000	120.000				04/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080841
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	Terphenyl-d14(Surr)	98904-43-9	19.613	98.100	% Recov	60.000	120.000				04/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080841
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	52.120	104.000	% Recov	75.000	125.000				05/01/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	51.720	103.000	% Recov	75.000	125.000				05/01/08
SURR	Toluene-d8(Surr)	2037-26-5	52.050	104.000	% Recov	75.000	125.000				05/01/08
Lab ID: W08GR01096											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,1-Dichloroethene	75-35-4	21.350	85.400	% Recov	63.000	117.000				05/01/08
MS	Benzene	71-43-2	23.560	94.200	% Recov	75.000	129.000				05/01/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	51.120	102.000	% Recov	75.000	125.000				05/01/08
MS	Chlorobenzene	108-90-7	25.450	102.000	% Recov	79.000	119.000				05/01/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	51.480	103.000	% Recov	75.000	125.000				05/01/08
MS	Toluene-d8(Surr)	2037-26-5	50.620	101.000	% Recov	75.000	125.000				05/01/08
MS	Toluene	108-88-3	24.510	98.000	% Recov	76.000	120.000				05/01/08
MS	Trichloroethene	79-01-6	21.250	85.000	% Recov	73.000	123.000				05/01/08
MSD	1,1-Dichloroethene	75-35-4	21.510	86.000	% Recov	63.000	117.000				05/01/08
MSD	Benzene	71-43-2	23.710	94.800	% Recov	75.000	129.000				05/01/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	51.980	104.000	% Recov	75.000	125.000				05/01/08
MSD	Chlorobenzene	108-90-7	25.640	103.000	% Recov	79.000	119.000				05/01/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.860	106.000	% Recov	75.000	125.000				05/01/08
MSD	Toluene-d8(Surr)	2037-26-5	50.600	101.000	% Recov	75.000	125.000				05/01/08
MSD	Toluene	108-88-3	24.920	99.700	% Recov	76.000	120.000				05/01/08
MSD	Trichloroethene	79-01-6	21.460	85.800	% Recov	73.000	123.000				05/01/08
SPK-RPD	1,1-Dichloroethene	75-35-4	86.000		RPD			0.700	20.000		05/01/08
SPK-RPD	Benzene	71-43-2	94.800		RPD			0.635	20.000		05/01/08
SPK-RPD	Chlorobenzene	108-90-7	103.000		RPD			0.976	20.000		05/01/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	106.000		RPD			2.871	20.000		05/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080841
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 04/23/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Toluene-d8(Surr)	2037-26-5	101.000		RPD			0.000	20.000		05/01/08
SPK-RPD	Toluene	108-88-3	99.700		RPD			1.720	20.000		05/01/08
SPK-RPD	Trichloroethene	79-01-6	85.800		RPD			0.937	20.000		05/01/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	05/01/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L					U	05/01/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L					U	05/01/08
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	n/a	ug/L	0.000	5.000			U	05/01/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L					U	05/01/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L					U	05/01/08
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 1.0	n/a	ug/L					U	05/01/08
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	05/01/08
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/L					U	05/01/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	05/01/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	51.290	103.000	% Recov	75.000	125.000				05/01/08
BLANK	Bromoform	75-25-2	< 1.0	n/a	ug/L					U	05/01/08
BLANK	n-Butylbenzene	104-51-8	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	05/01/08
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/L					U	05/01/08
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Chloroethane	75-00-3	< 1.0	n/a	ug/L					U	05/01/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	50.450	101.000	% Recov	75.000	125.000				05/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080841
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	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L					U	05/01/08
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Bromomethane	74-83-9	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Chloromethane	74-87-3	< 1.0	n/a	ug/L					U	05/01/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	0.000	5.000			U	05/01/08
BLANK	Toluene-d8(Surr)	2037-26-5	49.780	99.600	% Recov	75.000	125.000				05/01/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	05/01/08
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Trichloromonofluoromethane	75-69-4	< 1.0	n/a	ug/L	0.000	5.000			U	05/01/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	05/01/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	05/01/08
LCS	1,1-Dichloroethene	75-35-4	23.090	92.400	% Recov	75.000	125.000				05/01/08
LCS	Benzene	71-43-2	22.840	91.400	% Recov	75.000	125.000				05/01/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	51.580	103.000	% Recov	75.000	125.000				05/01/08
LCS	Chlorobenzene	108-90-7	24.450	97.800	% Recov	75.000	125.000				05/01/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	51.740	103.000	% Recov	75.000	125.000				05/01/08
LCS	Toluene-d8(Surr)	2037-26-5	50.940	102.000	% Recov	75.000	125.000				05/01/08
LCS	Toluene	108-88-3	23.660	94.600	% Recov	75.000	125.000				05/01/08
LCS	Trichloroethene	79-01-6	19.990	80.000	% Recov	75.000	125.000				05/01/08

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-052
Sample # W08GR01072
Client ID: B1TVK4 TRENT WSCF

Matrix: WATER

Group #: WSCF20080841
Department: Radiochemistry
Sampled: 04/22/08
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Americium by AEA											
Americium-241	14596-10-2	LA-508-471		0.120	pCi/L	+-0.0672	pCi/L	1.00	0.078		05/07/08
Am 243 tracer by AEA	AM243	LA-508-471		10.0	pCi/L			1.00	0.045		05/07/08
Gamma Energy Analysis-grd H2O											
Antimony-125	14234-35-6	LA-508-481	U	-2.14	pCi/L	+-12.6	pCi/L	1.00	21		04/29/08
Cobalt-60	10198-40-0	LA-508-481	U	0.155	pCi/L	+-1.55	pCi/L	1.00	7.8		04/29/08
Cesium-137	10045-97-3	LA-508-481	U	0.0708	pCi/L	+-0.708	pCi/L	1.00	8.0		04/29/08
Europium-152	14683-23-9	LA-508-481	U	2.99	pCi/L	+-14.4	pCi/L	1.00	25		04/29/08
Europium-154	15585-10-1	LA-508-481	U	-3.93	pCi/L	+-13.4	pCi/L	1.00	20		04/29/08
Europium-155	14391-16-3	LA-508-481	U	-8.50	pCi/L	+-14.9	pCi/L	1.00	24		04/29/08
Gross Alpha/Gross Beta (AB32)											
Gross alpha	12587-46-1	LA-508-415		1.10	pCi/L	+-0.528	pCi/L	1.00	0.58		04/29/08
Gross beta	12587-47-2	LA-508-415		2.60	pCi/L	+-0.988	pCi/L	1.00	1.4		04/29/08
Neptunium by AEA											
Neptunium-237	13994-20-2	LA-508-471	U	0.0900	pCi/L	+-0.180	pCi/L	1.00	0.33		05/08/08
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	-0.0290	pCi/L	+-0.0702	pCi/L	1.00	0.14		05/07/08
Pu-239/240 by AEA	PU-239/240	LA-508-471	U	0.0390	pCi/L	+-0.0351	pCi/L	1.00	0.045		05/07/08
Pu-242 tracer by AEA	PU242	LA-508-471		16.0	pCi/L			1.00	0.045		05/07/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	0.910	pCi/L	+-2.27	pCi/L	1.00	1.2		04/29/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		79.1	Percent			1.00	0.0		04/29/08
TC99 by ICP-200.8 MS Prep											**06/09/08**
TC99 by ICP-200.8 MS											
Technetium by ICP-MS	14133-76-7	LA-505-412	U	< 1.00e-03	ug/L			1.00	1.0e-03		06/09/08

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-052
Sample # W08GR01072
Client ID: B1TVK4 TRENT WSCF

Matrix: WATER

Group #: WSCF20080841
Department: Radiochemistry
Sampled: 04/22/08
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421	U	3.30	pCi/L	+-3.56	pCi/L	1.00	5.7		05/02/08
Tritium by Liq Sct column prep											
Tritium	10028-17-8	LA-508-421	U	71.0	pCi/L	+-108	pCi/L	1.00	2.1e+02		05/16/08
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471	U	0.0230	pCi/L	+-0.0251	pCi/L	1.00	0.034		05/07/08
Uranium-235	15117-96-1	LA-508-471		0.0200	pCi/L	+-0.0206	pCi/L	1.00	0.014		05/07/08
Uranium-238	U-238	LA-508-471		0.0370	pCi/L	+-0.0307	pCi/L	1.00	0.034		05/07/08
U-232 tracer by AEA	U232	LA-508-471		10.0	pCi/L			1.00	0.060		05/07/08

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

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

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

WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F08-052 :F08-052

Group #: WSCF20080841
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01072	B1TVK4	TRENT	Gamma Energy Analysis-grd H2O	BI-214				2.6e+02	pCi/L
W08GR01072	B1TVK4	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error				18	%
W08GR01072	B1TVK4	TRENT	Gamma Energy Analysis-grd H2O	RA-226				2.1e+02	pCi/L
W08GR01072	B1TVK4	TRENT	Gamma Energy Analysis-grd H2O	RA-226 Count Error				19	%

RQ=Result Qualifier

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WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-052

Group #: WSCF20080841
Department: Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-AES: High magnesium and silicon preparation blank results; "C" flag if applicable.

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

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080841
Matrix: WATER
Test: Americium by AEA

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Americium-241	14596-10-2	U3.8e-2		RPD			n/a	20.000		05/07/08
DUP	Am-243 tracer by AEA	AM243	10.06	81.160	% Recov	30.000	105.000				05/07/08
SURR	Am-243 tracer by AEA	AM243	10.06	82.530	% Recov	30.000	105.000				05/07/08
BATCH QC											
BLANK	Americium-241	14596-10 2	5.7e-2	0.057	pCi/L	-10.000	1000.000				05/07/08
BLANK	Am-243 tracer by AEA	AM243	10.06	80.570	% Recov	30.000	105.000				05/07/08
LCS	Americium-241	14596-10-2	12.37	104.388	% Recov	80.000	120.000				05/07/08
LCS	Am-243 tracer by AEA	AM243	11.17	88.110	% Recov	30.000	105.000				05/07/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080841
Matrix: WATER
Test: Gamma Energy Analysis-grd H2O

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Cobalt-60	10198-40-0	U-1		RPD			n/a	20.000		05/01/08
DUP	Cesium-137	10045-97-3	U-1.749		RPD			n/a	20.000		05/01/08
DUP	Europium-152	14683-23-9	U1.447		RPD			n/a	20.000		05/01/08
DUP	Europium-154	15585-10-1	U-1.238		RPD			n/a	20.000		05/01/08
DUP	Europium-155	14391-16-3	U-10.57		RPD			n/a	20.000		05/01/08
DUP	Antimony-125	14234-35-6	U5.394		RPD			n/a	20.000		05/01/08
BATCH QC											
BLANK	Cobalt-60	10198-40-0	U-0.6216	n/a	pCi/L	-10.000	1000.000				05/02/08
BLANK	Cesium-137	10045-97-3	U-0.8604	n/a	pCi/L	-10.000	1000.000				05/02/08
BLANK	Europium-152	14683-23-9	U1.193	n/a	pCi/L	-10.000	1000.000				05/02/08
BLANK	Europium-154	15585-10-1	U-1.782	n/a	pCi/L	-10.000	1000.000				05/02/08
BLANK	Europium-155	14391-16-3	U-5.905	n/a	pCi/L	-10.000	1000.000				05/02/08
BLANK	Antimony-125	14234-35-6	U4.64	n/a	pCi/L	-10.000	1000.000				05/02/08
LCS	Cobalt-60	10198-40-0	10110	101.710	% Recov	80.000	120.000				05/02/08
LCS	Cesium-137	10045-97-3	6239	103.295	% Recov	80.000	120.000				05/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080841
Matrix: WATER
Test: Gross Alpha/Gross Beta (AB32)

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Gross alpha	12587-46-1	U6.7E-01		RPD			n/a	20.000		04/29/08
DUP	Gross beta	12587-47-2	2.6		RPD			0.000	20.000		04/29/08
BATCH QC											
BLANK	Gross alpha	12587-46-1	U4.5E-02	n/a	pCi/L	-10.000	10.000				04/29/08
BLANK	Gross beta	12587-47-2	1.6E-01	0.160	pCi/L	-10.000	10.000				04/29/08
LCS	Gross alpha	12587-46-1	43.2	111.513	% Recov	80.000	120.000				04/29/08
LCS	Gross beta	12587-47-2	122.0	108.734	% Recov	80.000	120.000				04/29/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080841
Matrix: WATER
Test: Neptunium by AEA

Sample Date: 03/27/08
Receive Date:03/27/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00750											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Neptunium-237	13994-20-2	U4.2e-2		RPD			n/a	20.000		05/08/08
MS	Neptunium-237	13994-20-2	95.1	95.100	% Recov	75.000	125.000				05/08/08
MSD	Neptunium-237	13994-20-2	96.5	96.500	% Recov	75.000	125.000				05/08/08
SPK-RPD	Neptunium-237	13994-20-2	96.500		% RPD			1.461	20.000		05/08/08
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	102.4	102.400	% Recov	75.000	125.000				05/08/08
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	97.4	97.400	% Recov	75.000	125.000				05/08/08
BATCH QC											
BLANK	Neptunium-237	13994-20-2	U-0.12	n/a	pCi/L	-10.000	1000.000				05/08/08
LCS	Neptunium-237	13994-20-2	11.52	90.388	% Recov	80.000	120.000				05/08/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080841
Matrix: WATER
Test: Plutonium Isotopics by AEA

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Plutonium-238	13981-16-3	U-1.6e-2		RPD			n/a	20.000		05/07/08
DUP	Pu-239/240 by AEA	PU-239/240	U1.1e-2		RPD			n/a	20.000		05/07/08
DUP	Pu-242 tracer by AEA	PU242	15.59	78.050	% Recov	30.000	105.000				05/07/08
SURR	Pu-242 tracer by AEA	PU242	15.59	85.990	% Recov	30.000	105.000				05/07/08
BATCH QC											
BLANK	Plutonium-238	13981-16-3	U4.2e-2	n/a	pCi/L	-10.000	1000.000				05/07/08
BLANK	Pu-239/240 by AEA	PU-239/240	U1.6e-2	n/a	pCi/L	-10.000	1000.000				05/07/08
BLANK	Pu-242 tracer by AEA	PU242	15.59	81.690	% Recov	30.000	105.000				05/07/08
LCS	Pu-239/240 by AEA	PU-239/240	12.63	98.326	% Recov	80.000	120.000				05/07/08
LCS	Pu-242 tracer by AEA	PU242	17.3	87.500	% Recov	30.000	105.000				05/07/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080841
Matrix: WATER
Test: Strontium 89/90

Sample Date: 04/10/08
Receive Date:04/10/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	95.7	95.700	% Recov	30.000	105.000				04/29/08
DUP	Strontium-89/90	SR-RAD	U-1.5		RPD			n/a	20.000		04/29/08
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	79.1	79.100	% Recov	30.000	105.000				04/29/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	101.4	101.400	% Recov	30.000	105.000				04/29/08
BLANK	Strontium-89/90	10098-97-2	U-3.2	n/a	pCi/L	-10.000	100.000				04/29/08
LCS	Sr-85 Tracer by Beta Counting	SR85	101.2	101.200	% Recov	30.000	105.000				04/29/08
LCS	Strontium-89/90	10098-97-2	130.0	92.593	% Recov	80.000	120.000				04/29/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20080841
Matrix: WATER
Test: TC99 by ICP-200.8 MS

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	Technetium by ICP MS	14133-76-7	< 1e-3	n/a	ug/L					U	06/09/08
LCS	Technetium by ICP-MS	14133-76-7	0.155	108.392	% Recov	49.000	125.000				06/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080841
Matrix: WATER
Test: TC99 by Liquid Scin.

Sample Date: 04/02/08
Receive Date:04/02/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00896											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tc-99 by Liquid Scin.	14133-76-7	U4.1		RPD			n/a	20.000		05/02/08
MS	Tc-99 by Liquid Scin.	14133-76-7	761.56	101.238	% Recov	75.000	125.000				05/02/08
BATCH QC											
BLANK	Tc-99 by Liquid Scin.	14133-76-7	U3.5	n/a	pCi/L	-10.000	10.000				05/02/08
LCS	Tc-99 by Liquid Scin.	14133-76-7	189.8	100.904	% Recov	80.000	120.000				05/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080841
Matrix: WATER
Test: Tritium by Liq Sct column prep

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tritium	10028-17-8	U2.2		RPD			n/a	20.000		05/16/08
MS	Tritium	10028-17-8	23228.8	89.198	% Recov	75.000	125.000				05/16/08
BATCH QC											
BLANK	Tritium	10028-17-8	U2.7E+01	n/a	pCi/L	-10.000	1000.000				05/16/08
LCS	Tritium	10028-17-8	2750.0	92.912	% Recov	80.000	120.000				05/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080841
Matrix: WATER
Test: Uranium Isotopics by AEA

Sample Date: 04/22/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	U-232 tracer by AEA	U232	10.35	88.660	% Recov	30.000	105.000				05/07/08
DUP	Uranium-233/234	U-233/234	U1.4e-2		RPD			n/a	20.000		05/07/08
DUP	Uranium-235	15117-96-1	U1e-2		RPD			n/a	20.000		05/07/08
DUP	Uranium-238	U-238	U9.4e-3		RPD			n/a	20.000		05/07/08
SURR	U-232 tracer by AEA	U232	10.35	89.200	% Recov	30.000	105.000				05/07/08
BATCH QC											
BLANK	U-232 tracer by AEA	U232	10.35	89.470	% Recov	30.000	105.000				05/07/08
BLANK	Uranium-233/234	13966-29-5	U2.7e-2	n/a	pCi/L	-10.000	1000.000				05/07/08
BLANK	Uranium-235	15117-96-1	2e-2	0.020	pCi/L	-10.000	1000.000				05/07/08
BLANK	Uranium-238	24678-82-8	1.8e-2	0.018	pCi/L	-10.000	1000.000				05/07/08
LCS	U-232 tracer by AEA	U232	11.48	73.170	% Recov	30.000	105.000				05/07/08
LCS	Uranium-233/234	13966-29-5	n/a	n/a	% Recov	75.000	125.000				05/07/08
LCS	Uranium-238	24678-82-8	19.37	102.189	% Recov	80.000	120.000				05/07/08

M4W41-SLF-08-618

ATTACHMENT 5

SAMPLE RECEIPT INFORMATION

Consisting of 5 pages
Including cover page

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

File

ACKNOWLEDGMENT OF SAMPLES RECEIVED

06/12/08

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 123516/ES10
Group#: 20080841
Project#: F08-052
Proj Mgr: Steve Trent E6-35
Phone: 373-5869

The following samples were received from you on 04/28/08. 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
W08GR01072	B1TVK4	TRENT	Water				04/22/08
		@2008	@8015GPP	@AB-32	@AEA-30	@AEA-31	
		@AEA-32	@AEA-33	@GEA-GPP	@GPP6010	@H3-33	@IC-3
		@SR89_90	@SVOCGPP	@TC99-30	@TC99-MS	@VOA-GPP	CN-02
		CR+6					

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-30	Plutonium Isotopics by AEA
@AEA-31	Americium by AEA
@AEA-32	Uranium Isotopics by AEA
@AEA-33	Neptunium by AEA
@GEA-GPP	Gamma Energy Analysis-grd H2O
@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.
@TC99-MS	TC99 by ICP-200.8 MS
@VOA-GPP	VOA Ground Water Protection
CN-02	Cyanide by Midi/Spectrophotom
CR+6	Hexavalent chromium

Fluor Hanford Inc. 06/12/08

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F08-052-001 | PAGE 1 OF 3

COLLECTOR NCO SAMPLER BAILEY	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION EB, I-008 C5853	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - QC Sampling		**SAF NO.** F08-052
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-488-1	**ACTUAL SAMPLE DEPTH** N/A	**COA** 123516ES10
SHIPPED TO Waste Sampling & Characterization 2008841	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A

PRICE CODE 7N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegitation, W=Water, WI=Wipe, X=Other

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 HANDLING AND/OR STORAGE

PRESERVATION	HCl or H2SO4 to pH <2/Cool~4C	Cool~4C	Cool~4C	HNO3 to pH <2	Cool~4C	NaOH to pH >= 12/Cool~4C	Cool~4C	HNO3 to pH <2(ULTREX)	HNO3 to pH <2	HNO3 to pH <2
TYPE OF CONTAINER	aGs*	aGs*	aG	P	aG	G/P	P	Nalgene	P	P
NO. OF CONTAINER(S)	4 L	3 L	4 L	1 L	1 L	1 L	1 L	1 L	1 L	1 L
VOLUME	40mL VOA	40mL 8015	1000mL SVOA	500mL 2008 6010	500mL	250mL	120mL IC	500mL	500mL	1000mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	Cyanide (Total) - 335.2;	SEE ITEM (5) IN SPECIAL INSTRUCTIONS	Tc-99 by ICPMS (Technetium-99)	SEE ITEM (6) IN SPECIAL INSTRUCTIONS	Gross Alpha; Gross Beta;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1TVK4 W086R01072	WATER	4-22-08	1235	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
LOT NO.				803901	7312110	29911	27038	28946	24690	27006	29038	28006	88688

CHAIN OF POSSESSION / **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JE BAILEY / JE Bailey	4-22-08 1330	M0745 REF #1	4-22-08 1330
M0745 REF #1	4/28/08 0850	J. Herrick / J. Herrick	4/28/08 0850
J. Herrick / J. Herrick	4/28/08 0935	Victor T. Sims	4/28/08 0935

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

LABORATORY SECTION	**RECEIVED BY**	**TITLE**	**DATE/TIME**
FINAL SAMPLE DISPOSITION	**DISPOSAL METHOD**	**DISPOSED BY**	**DATE/TIME**

A-6003-618(01/06)

Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F08-052-001	PAGE 2 OF 3
COLLECTOR NCO SAMPLER	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 7N	**DATA TURNAROUND**
SAMPLING LOCATION EB, I-008 C5853	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - QC Sampling		**SAF NO.** F08-052	**AIR QUALITY** [ ]	**45 Days / 45 Days**
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)VOA - 8260B (TCL); VOA - 8260B (Add-On) {1-Butanol, Trichlorofluoromethane, cis-1,2-Dichloroethylene, n-Butylbenzene, trans-1,2-Dichloroethylene}
(2)Alcohols, Glycols, & Ketones - 8015 {Diethyl ether, Ethylene glycol}
(3)Semi-VOA - 8270B (TCL); Semi-VOA - 8270B (Add-On) {3+4 Methylphenol (cresol, m+p), Tributyl phosphate}
(4)ICP/MS - 200.8 (TAL) {Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Lead, Selenium, Strontium, Thallium, Uranium} ICP Metals - 6010B (TAL) {Aluminum, Calcium, Iron, Magnesium, Potassium, Sodium} ICP Metals - 6010B (Add-On) {Beryllium, Boron, Lithium, Phosphorus, Silicon} 200.8_HG - ICPMS;
(5)IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphate, Sulfate}
(6)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155} Gamma Spec - Add-on {Antimony-125}

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Fluor Hanford Inc.	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F08-052-001	PAGE 3 OF 3

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 7N	DATA TURNAROUND
NCO SAMPLER BAILEY	TRENT, SJ	373-5869	WIDRIG, DL	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
EB, I-008 C5853	200-BP-5 OU Characterization for 299-E33-340 - QC Sampling		F08-052		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
	HNF-N-488-1	N/A	123516ES10	GOVERNMENT VEHICLE	
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Waste Sampling & Characterization	N/A		N/A		

MATRIX*
A=Air
DL=Drum Liquids
DS=Drum Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegitation
W=Water
WI=Wipe
X=Other

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 HANDLING AND/OR STORAGE

PRESERVATION	HNO3 to pH <2	HNO3 to pH<2	HNO3 to pH <2	HNO3 to pH <2	HCl to pH <2	HNO3 to pH <2	None			
TYPE OF CONTAINER	P	G/P	G/P	G/P	G/P	G/P	G			
NO. OF CONTAINER(S)	1	1	1	1	2	1	1			
VOLUME	1000mL ✓	1000mL ✓	1000mL ✓	1L ✓	1L ✓	1000mL ✓	250mL ✓			
SAMPLE ANALYSIS	Isotopic Plutonium;	Isotopic Uranium;	Neptunium-237;	Strontium-89,90 -- Total Sr;	Technetium-99;	Americium-241;	Tritium - H3;			

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1TVK4	WATER	4-22-08	1235	✓	✓	✓	✓	✓	✓	✓			
LOT NO.				28688	28688	28688	28688	28688	28688	29468			

CHAIN OF POSSESSION — **SIGN/ PRINT NAMES**

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
JKBAILEY/JKBailey	4-22-08 1330	MO745 REF #1	4-22-08 1330
MO 745 REF #1	4/28/08 0850	J. Herrick	4/28/08 0850
J. Herrick	4/28/08 0935	Victor Sim	4/28/08 0935

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME

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