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FLUOR

Memorandum

M4W41-SLF-08-1006

To: H. Hampt E6-35 Date: September 15, 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 WSCF20081493 – SAF NUMBER F08-051

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

(2) HNF-SD-CD-QAPP-017, Rev. 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following information for sample delivery group WSCF20081493:

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

SLF/grf

Attachments 4

M4W41-SLF-08-1006

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20081493
Data Deliverable Date: 02-sep-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F08-051	B1TTV4	W08GR02687	WATER

M4W41-SLF-08-1006

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Introduction

One (1) S&GRP sample was received at the WSCF Laboratory on July 18, 2008. This 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 Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the sample container.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report,* pages 13 through 15, for a complete listing of approved analytical methods.

Inorganic Comments

Anions – 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 18 through 20 for QC details.

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1WBF8 from SDG 20081437 (SAF# f06-027).

All QC controls are within the established limits.

Cyanide – The hold time requirement (14 days) for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See page 21 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TTV4 of this SDG and B1V7P9 from SDG 20081455.
- The sample result for CN was greater than four times the spike concentration; therefore, the spike recovery information is not valid.
- All QC controls are within the established limits.

Hexavalent Chromium – The hold time requirement (24 hours) for this analysis was met. 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 22 for QC details.

All QC controls are within the established limits.

ICP-AES Metals – 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 23 through 25 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TTV1 (SDG# 20081283, SAF# F08-051).

- Batch QC (B1TTV1) – Calcium, Sodium, Silicon, and Magnesium sample results exceeded the spiking levels by a factor of four. Spike recoveries are not valid. Check standard was analyzed to ensure Sodium and Phosphorous linearity because sample results were greater than the calibration standard.

All other QC controls are within the established limits.

ICP-MS Metals – The hold time 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 26 through 28 for QC details.

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1W1B1 (SDG# 20081478, SAF# F08-134) and B1W1B6 (SDG 20081508, SAF# F08- 134).

All QC controls are within the established limits.

Organic Comments

Semi-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 GPP Letter of Instruction. See pages 36 through 41 for QC details. Analytical Notes(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V7P9, SDG 20081455.

- The surrogate Terphenly-d14 exceeded the laboratory established RPD value for the MS/MSD. The data was accepted since the Terphenly-d14 recovery in the MS/MSD met the laboratory established criteria.

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

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TVL1, SDG 20081492.

All other QC controls are within the established limits.

Rad Chem – There are no hold times associated with WSCF's radiochemical methods. A Duplicate, Matrix Spike *(Matrix Spikes apply only to Neptunium, Technetium & Tritium and Matrix Spike Duplicate applies to Neptunium),* Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 49 through 56 for QC details. Analytical Note(s):

- Rad Chem analyses requested to be performed on this sample included: Americium-241 by AEA, Gamma Energy Analysis, Plutonium Isotopic by AEA, Sr-89/90, Tc-99 by ICP-MS, Tc-99 by LSC, Np-237 by AEA, and Uranium Isotopic by AEA.

- Uranium by AEA: Duplicate was analyzed on sample# B1W1B1, (SDG#20081478, SAF# F08-133).

- Uranium by AEA: The RPD value for the U-234 and U-238 analytes in the duplicate sample B1W1B1 did not meet the limit established by the laboratory.

- The Np-237 recovery in the LCS did not meet the limit established by the laboratory.

All other QC controls are within the established limits.

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

Scot L. Fitzgerald
WSCF Analytical Laboratory Manager

Andrew Kopriva
WSCF Client Services

M4W41-SLF-08-1006

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 50 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: S. Fitzgerald 9-15-08

Client Services: A. Kopriva 9-15-08

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

Contract#: FH-EIS-2003-MEM-001
Report#: WSCF20081493
Report Date: 12-sep-2008
Report WGPP/ver. 5.2
Groundwater Remediation Program

w13qlog v4.2 12-sep-2008 15:25:32

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20081493

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
37148	2	37575	41908	BLANK		Hexavalent chromium
37148	8	37575	41908	BLANK		Hexavalent chromium
37148	3	37575	41908	LCS		Hexavalent chromium
37148	5	37575	41908	DUP	W08GR02687	Hexavalent chromium
37148	6	37575	41908	MS	W08GR02687	Hexavalent chromium
37148	7	37575	41908	MSD	W08GR02687	Hexavalent chromium
37148	4	37575	41908	SAMPLE	W08GR02687	Hexavalent chromium
37148	7	37575	41908	SPK-RPD	W08GR02687	Hexavalent chromium
37179	2	37598	41938	BLANK		Anions by Ion Chromatography
37179	14	37598	41938	BLANK		Anions by Ion Chromatography
37179	26	37598	41938	BLANK		Anions by Ion Chromatography
37179	3	37598	41938	LCS		Anions by Ion Chromatography
37179	15	37598	41938	LCS		Anions by Ion Chromatography
37179	5	37598	41938	DUP	W08GR02554	Anions by Ion Chromatography
37179	6	37598	41938	MS	W08GR02554	Anions by Ion Chromatography
37179	7	37598	41938	MSD	W08GR02554	Anions by Ion Chromatography
37179	7	37598	41938	SPK-RPD	W08GR02554	Anions by Ion Chromatography
37179	17	37598	41938	DUP	W08GR02555	Anions by Ion Chromatography
37179	18	37598	41938	MS	W08GR02555	Anions by Ion Chromatography
37179	19	37598	41938	MSD	W08GR02555	Anions by Ion Chromatography
37179	19	37598	41938	SPK-RPD	W08GR02555	Anions by Ion Chromatography
37179	11	37598	41938	SAMPLE	W08GR02687	Anions by Ion Chromatography
37278	1	37708	42027	BLANK		Cyanide by Midi/Spectrophotom
37278	2	37708	42027	LCS		Cyanide by Midi/Spectrophotom
37278	5	37708	42027	MS	W08GR02687	Cyanide by Midi/Spectrophotom
37278	6	37708	42027	MSD	W08GR02687	Cyanide by Midi/Spectrophotom
37278	4	37708	42027	SAMPLE	W08GR02687	Cyanide by Midi/Spectrophotom
37278	6	37708	42027	SPK-RPD	W08GR02687	Cyanide by Midi/Spectrophotom
37278	9	37708	42027	MS	W08P003521	Cyanide by Midi/Spectrophotom
37278	10	37708	42027	MSD	W08P003521	Cyanide by Midi/Spectrophotom
37278	10	37708	42027	SPK-RPD	W08P003521	Cyanide by Midi/Spectrophotom
37558	1	37996	42341	BLANK		ICP-200.8 MS All possible meta
37558	2	37996	42341	LCS		ICP-200.8 MS All possible meta
37558	4	37996	42341	MS	W08GR02623	ICP-200.8 MS All possible meta
37558	5	37996	42341	MSD	W08GR02623	ICP-200.8 MS All possible meta
37558	5	37996	42341	SPK-RPD	W08GR02623	ICP-200.8 MS All possible meta
37558	10	37996	42341	SAMPLE	W08GR02687	ICP-200.8 MS All possible meta
37558	7	37996	42341	MS	W08GR02799	ICP-200.8 MS All possible meta
37558	8	37996	42341	MSD	W08GR02799	ICP-200.8 MS All possible meta
37558	8	37996	42341	SPK-RPD	W08GR02799	ICP-200.8 MS All possible meta
37779	1	38213	42679	BLANK		ICP Metals Analysis, Grd H20 P
37779	2	38213	42679	LCS		ICP Metals Analysis, Grd H20 P
37779	4	38213	42679	MS	W08GR01854	ICP Metals Analysis, Grd H20 P
37779	5	38213	42679	MSD	W08GR01854	ICP Metals Analysis, Grd H20 P
37779	5	38213	42679	SPK-RPD	W08GR01854	ICP Metals Analysis, Grd H20 P
37779	10	38213	42679	SAMPLE	W08GR02687	ICP Metals Analysis, Grd H20 P

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Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20081493

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			42064	BLANK		SW-846 8270C Semi-Vols
			42064	LCS		SW-846 8270C Semi-Vols
			42064	SAMPLE	W08GR02687	SW-846 8270C Semi-Vols
			42064	SURR	W08GR02687	SW-846 8270C Semi-Vols
			42064	MS	W08P003521	SW-846 8270C Semi-Vols
			42064	MSD	W08P003521	SW-846 8270C Semi-Vols
			42064	SPK-RPD	W08P003521	SW-846 8270C Semi-Vols
			42390	BLANK		VOA Ground Water Protection
			42390	LCS		VOA Ground Water Protection
			42390	MS	W08GR02686	VOA Ground Water Protection
			42390	MSD	W08GR02686	VOA Ground Water Protection
			42390	SPK-RPD	W08GR02686	VOA Ground Water Protection
			42390	SAMPLE	W08GR02687	VOA Ground Water Protection
			42390	SURR	W08GR02687	VOA Ground Water Protection

w13qlog v4.2 12-sep-2008 15:25:32

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20081493

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
37170	1	37602	42013	BLANK		Gamma Energy Analysis-grd H2O
37170	2	37602	42013	LCS		Gamma Energy Analysis-grd H2O
37170	3	37602	42013	DUP	W08GR02687	Gamma Energy Analysis-grd H2O
37170	4	37602	42013	SAMPLE	W08GR02687	Gamma Energy Analysis-grd H2O
37318	1	37747	42084	BLANK		TC99 by Liquid Scin.
37318	4	37747	42084	LCS		TC99 by Liquid Scin.
37318	3	37747	42084	DUP	W08GR02464	TC99 by Liquid Scin.
37318	2	37747	42084	MS	W08GR02464	TC99 by Liquid Scin.
37318	13	37747	42084	SAMPLE	W08GR02687	TC99 by Liquid Scin.
37398	1	37823	42142	BLANK		TC99 by ICP-200.8 MS
37398	2	37823	42142	LCS		TC99 by ICP-200.8 MS
37398	7	37823	42142	SAMPLE	W08GR02687	TC99 by ICP-200.8 MS
37369	1	37794	42253	BLANK		Strontium 89/90
37369	2	37794	42253	LCS		Strontium 89/90
37369	3	37794	42253	DUP	W08GR02623	Strontium 89/90
37369	8	37794	42253	SAMPLE	W08GR02687	Strontium 89/90
37369	9	37794	42253	SURR	W08GR02687	Strontium 89/90
37470	1	37904	42320	BLANK		Neptunium by AEA
37470	2	37904	42320	LCS		Neptunium by AEA
37470	3	37904	42320	DUP	W08GR02042	Neptunium by AEA
37470	5	37904	42320	MS	W08GR02042	Neptunium by AEA
37470	6	37904	42320	MSD	W08GR02042	Neptunium by AEA
37470	6	37904	42320	SPK-RPD	W08GR02042	Neptunium by AEA
37470	8	37904	42320	MS	W08GR02043	Neptunium by AEA
37470	12	37904	42320	MS	W08GR02687	Neptunium by AEA
37470	11	37904	42320	SAMPLE	W08GR02687	Neptunium by AEA
37470	10	37904	42320	MS	W08GR02802	Neptunium by AEA
37895	1	38323	42772	BLANK		Uranium Isotopics by AEA
37895	2	38323	42772	LCS		Uranium Isotopics by AEA
37895	3	38323	42772	DUP	W08GR02623	Uranium Isotopics by AEA
37895	8	38323	42772	SAMPLE	W08GR02687	Uranium Isotopics by AEA
37895	9	38323	42772	SURR	W08GR02687	Uranium Isotopics by AEA
37896	1	38324	42811	BLANK		Plutonium Isotopics by AEA
37896	2	38324	42811	LCS		Plutonium Isotopics by AEA
37896	3	38324	42811	DUP	W08GR02623	Plutonium Isotopics by AEA
37896	8	38324	42811	SAMPLE	W08GR02687	Plutonium Isotopics by AEA
37896	9	38324	42811	SURR	W08GR02687	Plutonium Isotopics by AEA
37897	1	38325	42813	BLANK		Americium by AEA
37897	2	38325	42813	LCS		Americium by AEA
37897	3	38325	42813	DUP	W08GR02623	Americium by AEA
37897	8	38325	42813	SAMPLE	W08GR02687	Americium by AEA
37897	9	38325	42813	SURR	W08GR02687	Americium by AEA

WSCF
METHOD REFERENCES REPORT

Department: Inorganic

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

LA-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)

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: F08-051
Sample # W08GR02687
Client ID: B1TTV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20081493
Department: Inorganic
Sampled: 07/18/08
Received: 07/18/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	D	0.167	mg/L			2.00	0.046		07/18/08
Chloride	16887-00-6	LA-533-410	D	23.6	mg/L			2.00	0.094		07/18/08
Nitrogen in Nitrite	NO2-N	LA-533-410	D	0.291	mg/L			2.00	0.026		07/18/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	94.6	mg/L			33.00	0.40		07/18/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 0.121	mg/L			2.00	0.12		07/18/08
Sulfate	14808-79-8	LA-533-410	D	136	mg/L			33.00	4.4		07/18/08
Cyanide											
Cyanide	57-12-5	LA-695-402	X	366	ug/L			1.00	4.0		07/27/08
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 2.00e-03	mg/L			1.00	2.0e-03		07/18/08
ICP Metals Analysis, Grd H20 P Prep											**08/25/08**
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	U	< 52.0	ug/L			1.00	52		08/31/08
Iron	7439-89-6	LA-505-411	U	< 25.0	ug/L			1.00	25		08/31/08
Magnesium	7439-95-4	LA-505-411		1.08e+04	ug/L			1.00	50		08/31/08
Manganese	7439-96-5	LA-505-411		327	ug/L			1.00	4.0		08/31/08
Potassium	7440-09-7	LA-505-411		7.69e+03	ug/L			1.00	1.7e+02		08/31/08
Sodium	7440-23-5	LA-505-411		1.79e+04	ug/L			1.00	51		08/31/08
Barium	7440-39-3	LA-505-411		33.9	ug/L			1.00	4.0		08/31/08
Calcium	7440-70-2	LA-505-411		3.70e+04	ug/L			1.00	73		08/31/08
Lithium	7439-93-2	LA-505-411		10.3	ug/L			1.00	4.0		08/31/08
Strontium	7440-24-6	LA-505-411		245	ug/L			1.00	4.0		08/31/08
Silicon	7440-21-3	LA-505-411		1.41e+03	ug/L			1.00	26		08/31/08
Phosphorus	7723-14-0	LA-505-411		60.4	ug/L			1.00	44		08/31/08

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

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

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: F08-051
Sample # W08GR02687
Client ID: B1TTV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20081493
Department: Inorganic
Sampled: 07/18/08
Received: 07/18/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta Prep											**08/11/08**
ICP-200.8 MS All possible meta											
Antimony	7440-36-0	LA-505-412	U	< 0.300	ug/L			1.00	0.300		08/12/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		08/12/08
Chromium	7440-47-3	LA-505-412		0.550	ug/L			1.00	0.500		08/12/08
Mercury	7439-97-6	LA-505-412		0.0700	ug/L			1.00	0.0500		08/12/08
Uranium	7440-61-1	LA-505-412		4.58	ug/L			1.00	0.0500		08/12/08
Arsenic	7440-38-2	LA-505-412		1.81	ug/L			1.00	0.400		08/12/08
Thallium	7440-28-0	LA-505-412	U	< 0.100	ug/L			1.00	0.100		08/12/08

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

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

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 LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081493
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 07/13/08
Receive Date:07/14/08

Lab ID: W08GR02554
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	32.2277		RPD			0.151	20.000		07/18/08
DUP	Fluoride	16984-48-8	<0.232		RPD			n/a	20.000	U	07/18/08
DUP	Nitrogen in Nitrite	NO2-N	0.4198		RPD			24.883	20.000 *		07/18/08
DUP	Nitrogen in Nitrate	NO3-N	<0.121		RPD			n/a	20.000	U	07/18/08
DUP	Phosphate (P) by IC	PO4-P	53.1355		RPD			0.717	20.000		07/18/08
DUP	Sulfate	14808-79-8	3.8006		RPD			4.278	20.000		07/18/08
MS	Chloride	16887-00-6	1.05191	105.720	% Recov	80.000	120.000				07/18/08
MS	Fluoride	16984-48-8	0.48092	97.550	% Recov	80.000	120.000				07/18/08
MS	Nitrogen in Nitrite	NO2-N	0.45644	92.772	% Recov	80.000	120.000				07/18/08
MS	Nitrogen in Nitrate	NO3-N	0.44235	99.182	% Recov	80.000	120.000				07/18/08
MS	Phosphate (P) by IC	PO4-P	0.93747	97.959	% Recov	80.000	120.000				07/18/08
MS	Sulfate	14808-79-8	1.94359	99.163	% Recov	80.000	120.000				07/18/08
MSD	Chloride	16887-00-6	0.9269	93.156	% Recov	80.000	120.000				07/18/08
MSD	Fluoride	16984-48-8	0.45525	92.343	% Recov	80.000	120.000				07/18/08
MSD	Nitrogen in Nitrite	NO2-N	0.45492	92.463	% Recov	80.000	120.000				07/18/08
MSD	Nitrogen in Nitrate	NO3-N	0.44141	98.971	% Recov	80.000	120.000				07/18/08
MSD	Phosphate (P) by IC	PO4-P	0.96088	100.405	% Recov	80.000	120.000				07/18/08
MSD	Sulfate	14808-79-8	1.93847	98.902	% Recov	80.000	120.000				07/18/08
SPK-RPD	Chloride	16887-00-6	93.156		RPD			12.635	20.000		07/18/08
SPK-RPD	Fluoride	16984-48-8	92.343		RPD			5.484	20.000		07/18/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	92.463		RPD			0.334	20.000		07/18/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	98.971		RPD			0.213	20.000		07/18/08
SPK-RPD	Phosphate (P) by IC	PO4-P	100.405		RPD			2.466	20.000		07/18/08
SPK-RPD	Sulfate	14808-79-8	98.902		RPD			0.264	20.000		07/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081493
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date: 07/13/08
Receive Date:07/14/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02555											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	47.5376		RPD			1.069	20.000		07/18/08
DUP	Fluoride	16984-48-8	<0.232		RPD			n/a	20.000	U	07/18/08
DUP	Nitrogen in Nitrite	NO2-N	0.6061		RPD			45.583	20.000 *		07/18/08
DUP	Nitrogen in Nitrate	NO3-N	<0.121		RPD			n/a	20.000	U	07/18/08
DUP	Phosphate (P) by IC	PO4-P	87.9083		RPD			0.130	20.000		07/18/08
DUP	Sulfate	14808-79-8	<1.32		RPD			n/a	20.000	U	07/18/08
MS	Chloride	16887-00-6	1.13401	113.971	% Recov	80.000	120.000				07/18/08
MS	Fluoride	16984-48-8	0.42991	87.203	% Recov	80.000	120.000				07/18/08
MS	Nitrogen in Nitrite	NO2-N	0.43708	88.837	% Recov	80.000	120.000				07/18/08
MS	Nitrogen in Nitrate	NO3-N	0.45971	103.074	% Recov	80.000	120.000				07/18/08
MS	Phosphate (P) by IC	PO4-P	0.96887	101.240	% Recov	80.000	120.000				07/18/08
MS	Sulfate	14808-79-8	1.94959	99.469	% Recov	80.000	120.000				07/18/08
MSD	Chloride	16887-00-6	0.95112	95.590	% Recov	80.000	120.000				07/18/08
MSD	Fluoride	16984-48-8	0.37088	75.229	% Recov	80.000	120.000		*		07/18/08
MSD	Nitrogen in Nitrite	NO2-N	0.44176	89.789	% Recov	80.000	120.000				07/18/08
MSD	Nitrogen in Nitrate	NO3-N	0.45556	102.143	% Recov	80.000	120.000				07/18/08
MSD	Phosphate (P) by IC	PO4-P	0.9828	102.696	% Recov	80.000	120.000				07/18/08
MSD	Sulfate	14808-79-8	1.92582	98.256	% Recov	80.000	120.000				07/18/08
SPK-RPD	Chloride	16887-00-6	95.590		RPD			17.542	20.000		07/18/08
SPK-RPD	Fluoride	16984-48-8	75.229		RPD			14.743	20.000		07/18/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	89.789		RPD			1.066	20.000		07/18/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	102.143		RPD			0.907	20.000		07/18/08
SPK-RPD	Phosphate (P) by IC	PO4-P	102.696		RPD			1.428	20.000		07/18/08
SPK-RPD	Sulfate	14808-79-8	98.256		RPD			1.227	20.000		07/18/08
BATCH QC											
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081493
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/18/08
BLANK	Chloride	16887-00-6	<4.69e-2	n/a	mg/L	0.000	0.030			U	07/18/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/18/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/18/08
BLANK	Fluoride	16984-48-8	<2.32e-2	n/a	mg/L	0.000	0.030			U	07/18/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/18/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/18/08
BLANK	Nitrogen in Nitrite	NO2-N	<1.28e-2	n/a	mg/L	0.000	0.020			U	07/18/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/18/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/18/08
BLANK	Nitrogen in Nitrate	NO3-N	<1.21e-2	n/a	mg/L	0.000	0.040			U	07/18/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	07/18/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	07/18/08
BLANK	Phosphate (P) by IC	PO4-P	<6.06e-2	n/a	mg/L	0.000	0.200			U	07/18/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/18/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/18/08
BLANK	Sulfate	14808-79-8	<0.132	n/a	mg/L	0.000	0.200			U	07/18/08
LCS	Chloride	16887-00-6	193.4649	96.251	% Recov	80.000	120.000				07/18/08
LCS	Chloride	16887-00-6	194.6405	96.836	% Recov	80.000	120.000				07/18/08
LCS	Fluoride	16984-48-8	104.4505	104.870	% Recov	80.000	120.000				07/18/08
LCS	Fluoride	16984-48-8	104.9513	105.373	% Recov	80.000	120.000				07/18/08
LCS	Nitrogen in Nitrite	NO2-N	97.2985	97.886	% Recov	80.000	120.000				07/18/08
LCS	Nitrogen in Nitrite	NO2-N	98.8829	99.480	% Recov	80.000	120.000				07/18/08
LCS	Nitrogen in Nitrate	NO3-N	89.0496	98.834	% Recov	80.000	120.000				07/18/08
LCS	Nitrogen in Nitrate	NO3-N	91.246	101.272	% Recov	80.000	120.000				07/18/08
LCS	Phosphate (P) by IC	PO4-P	189.455	97.960	% Recov	80.000	120.000				07/18/08
LCS	Phosphate (P) by IC	PO4-P	189.5092	97.988	% Recov	80.000	120.000				07/18/08
LCS	Sulfate	14808-79-8	390.0041	98.486	% Recov	80.000	120.000				07/18/08
LCS	Sulfate	14808-79-8	392.412	99.094	% Recov	80.000	120.000				07/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081493
Matrix: WATER
Test: Cyanide by Midi/Spectrophotom

Sample Date: 07/18/08
Receive Date:07/18/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02687											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cyanide by Midi/Spectrophotom	57-12-5	40	100.000	% Recov	75.000	125.000				07/27/08
MSD	Cyanide by Midi/Spectrophotom	57-12-5	25	62.500	% Recov	75.000	125.000		•		07/27/08
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	62.500		RPD			46.154	20.000 •		07/27/08
Lab ID: W08P003521											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cyanide by Midi/Spectrophotom	57-12-5	27.5	68.750	% Recov	75.000	125.000		•		07/27/08
MSD	Cyanide by Midi/Spectrophotom	57-12-5	29.7	74.250	% Recov	75.000	125.000		•		07/27/08
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	74.250		RPD			7.692	20.000		07/27/08
BATCH QC											
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	< 4	n/a	ug/L	-4.000	4.000			U	07/27/08
LCS	Cyanide by Midi/Spectrophotom	57-12-5	46.2	92.400	% Recov	85.000	115.000				07/27/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081493
Matrix: WATER
Test: Hexavalent chromium

Sample Date: 07/18/08
Receive Date:07/18/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02687											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Hexavalent chromium	18540-29-9	<0.002		RPD			n/a	15.000	U	07/18/08
MS	Hexavalent chromium	18540-29-9	0.0526	98.134	% Recov	85.000	115.000				07/18/08
MSD	Hexavalent chromium	18540-29-9	0.0526	98.134	% Recov	85.000	115.000				07/18/08
SPK-RPD	Hexavalent chromium	18540-29-9	98.134		RPD			0.000	20.000		07/18/08
BATCH QC											
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	07/18/08
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	07/18/08
LCS	Hexavalent chromium	18540-29-9	0.0513	101.786	% Recov	80.000	120.000				07/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081493
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 06/26/08
Receive Date:06/26/08

Lab ID: W08GR01854
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	1007.1	100.710	% Recov	75.000	125.000				08/31/08
MS	Barium	7440-39-3	510.7	102.140	% Recov	75.000	125.000				08/31/08
MS	Calcium	7440-70-2	5350	535.000	% Recov	75.000	125.000			•	08/31/08
MS	Iron	7439-89-6	1023.3	102.330	% Recov	75.000	125.000				08/31/08
MS	Potassium	7440-09-7	10739	107.390	% Recov	75.000	125.000				08/31/08
MS	Lithium	7439-93-2	509.6	101.920	% Recov	70.000	130.000				08/31/08
MS	Magnesium	7439-95-4	2120	212.000	% Recov	75.000	125.000			•	08/31/08
MS	Manganese	7439-96-5	1047.8	104.780	% Recov	75.000	125.000				08/31/08
MS	Sodium	7440-23-5	3140	314.000	% Recov	75.000	125.000			•	08/31/08
MS	Phosphorus	7723-14-0	1052	105.200	% Recov	70.000	130.000				08/31/08
MS	Silicon	7440-21-3	1419	141.900	% Recov	70.000	130.000			•	08/31/08
MS	Strontium	7440-24-6	571.7	114.340	% Recov	75.000	125.000				08/31/08
MSD	Aluminum	7429-90-5	1023.1	102.310	% Recov	75.000	125.000				08/31/08
MSD	Barium	7440-39-3	508.4	101.680	% Recov	75.000	125.000				08/31/08
MSD	Calcium	7440-70-2	7740	774.000	% Recov	75.000	125.000			•	08/31/08
MSD	Iron	7439-89-6	1072.3	107.230	% Recov	75.000	125.000				08/31/08
MSD	Potassium	7440-09-7	11479	114.790	% Recov	75.000	125.000				08/31/08
MSD	Lithium	7439-93-2	524.6	104.920	% Recov	75.000	125.000				08/31/08
MSD	Magnesium	7439-95-4	2850	285.000	% Recov	75.000	125.000			•	08/31/08
MSD	Manganese	7439-96-5	1050.8	105.080	% Recov	75.000	125.000				08/31/08
MSD	Sodium	7440-23-5	8340	834.000	% Recov	75.000	125.000			•	08/31/08
MSD	Phosphorus	7723-14-0	1070	107.000	% Recov	75.000	125.000				08/31/08
MSD	Silicon	7440-21-3	1795	179.500	% Recov	75.000	125.000			•	08/31/08
MSD	Strontium	7440-24-6	587.7	117.540	% Recov	75.000	125.000				08/31/08
SPK-RPD	Aluminum	7429-90-5	102.310		RPD			1.576	20.000		08/31/08
SPK-RPD	Barium	7440-39-3	101.680		RPD			0.451	20.000		08/31/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081493
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 06/26/08
Receive Date:06/26/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Calcium	7440-70-2	774.000		RPD			36.516	20.000 •		08/31/08
SPK-RPD	Iron	7439-89-6	107.230		RPD			4.676	20.000		08/31/08
SPK-RPD	Potassium	7440-09-7	114.790		RPD			6.661	20.000		08/31/08
SPK-RPD	Lithium	7439-93-2	104.920		RPD			2.901	20.000		08/31/08
SPK-RPD	Magnesium	7439-95-4	285.000		RPD			29.376	20.000 •		08/31/08
SPK-RPD	Manganese	7439-96-5	105.080		RPD			0.286	20.000		08/31/08
SPK-RPD	Sodium	7440-23-5	834.000		RPD			90.592	20.000 •		08/31/08
SPK-RPD	Phosphorus	7723-14-0	107.000		RPD			1.697	20.000		08/31/08
SPK-RPD	Silicon	7440-21-3	179.500		RPD			23.398	20.000 •		08/31/08
SPK-RPD	Strontium	7440-24-6	117.540		RPD			2.760	20.000		08/31/08
BATCH QC											
BLANK	Aluminum	7429-90-5	<52	n/a	ug/L					U	08/31/08
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	08/31/08
BLANK	Calcium	7440-70-2	<73	n/a	ug/L					U	08/31/08
BLANK	Iron	7439-89-6	<25	n/a	ug/L					U	08/31/08
BLANK	Potassium	7440-09-7	<170	n/a	ug/L					U	08/31/08
BLANK	Lithium	7439-93-2	<4	n/a	ug/L					U	08/31/08
BLANK	Magnesium	7439-95-4	<50	n/a	ug/L					U	08/31/08
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	08/31/08
BLANK	Sodium	7440-23-5	<51	n/a	ug/L					U	08/31/08
BLANK	Phosphorus	7723-14-0	<44	n/a	ug/L					U	08/31/08
BLANK	Silicon	7440-21-3	<26	n/a	ug/L					U	08/31/08
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	08/31/08
LCS	Aluminum	7429-90-5	1035	103.500	% Recov	80.000	120.000				08/31/08
LCS	Barium	7440-39-3	506.6	101.320	% Recov	80.000	120.000				08/31/08
LCS	Calcium	7440-70-2	1102	110.200	% Recov	80.000	120.000				08/31/08
LCS	Iron	7439-89-6	1051	105.100	% Recov	80.000	120.000				08/31/08
LCS	Potassium	7440-09-7	11370	113.700	% Recov	80.000	120.000				08/31/08
LCS	Lithium	7439-93-2	562.3	112.460	% Recov	80.000	120.000				08/31/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081493
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	Magnesium	7439-95-4	1047	104.700	% Recov	80.000	120.000				08/31/08
LCS	Manganese	7439-96-5	1052	105.200	% Recov	80.000	120.000				08/31/08
LCS	Sodium	7440-23-5	1124	112.400	% Recov	80.000	120.000				08/31/08
LCS	Phosphorus	7723-14-0	1133	113.300	% Recov	80.000	120.000				08/31/08
LCS	Silicon	7440-21-3	1050	105.000	% Recov	80.000	120.000				08/31/08
LCS	Strontium	7440-24-6	530.3	106.060	% Recov	80.000	120.000				08/31/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081493
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 07/16/08
Receive Date:07/17/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02623											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	40.58	101.450	% Recov	70.000	130.000				08/12/08
MS	Cadmium	7440-43-9	39.41	98.525	% Recov	70.000	130.000				08/12/08
MS	Chromium	7440-47-3	40.05	100.125	% Recov	70.000	130.000				08/12/08
MS	Mercury	7439-97-6	2.02	101.000	% Recov	70.000	130.000				08/12/08
MS	Antimony	7440-36-0	41.01	102.525	% Recov	70.000	130.000				08/12/08
MS	Thallium	7440-28-0	40.6	101.500	% Recov	70.000	130.000				08/12/08
MS	Uranium	7440-61-1	42.52	106.300	% Recov	70.000	130.000				08/12/08
MSD	Arsenic	7440-38-2	40.96	102.400	% Recov	70.000	130.000				08/12/08
MSD	Cadmium	7440-43-9	40.02	100.050	% Recov	70.000	130.000				08/12/08
MSD	Chromium	7440-47-3	41.38	103.450	% Recov	70.000	130.000				08/12/08
MSD	Mercury	7439-97-6	2.04	102.000	% Recov	70.000	130.000				08/12/08
MSD	Antimony	7440-36-0	41.84	104.600	% Recov	70.000	130.000				08/12/08
MSD	Thallium	7440-28-0	40.39	100.975	% Recov	70.000	130.000				08/12/08
MSD	Uranium	7440-61-1	42.47	106.175	% Recov	70.000	130.000				08/12/08
SPK-RPD	Arsenic	7440-38-2	102.400		RPD			0.932	20.000		08/12/08
SPK-RPD	Cadmium	7440-43-9	100.050		RPD			1.536	20.000		08/12/08
SPK-RPD	Chromium	7440-47-3	103.450		RPD			3.267	20.000		08/12/08
SPK-RPD	Mercury	7439-97-6	102.000		RPD			0.985	20.000		08/12/08
SPK-RPD	Antimony	7440-36-0	104.600		RPD			2.004	20.000		08/12/08
SPK-RPD	Thallium	7440-28-0	100.975		RPD			0.519	20.000		08/12/08
SPK-RPD	Uranium	7440-61-1	106.175		RPD			0.118	20.000		08/12/08
Lab ID: W08GR02799											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	39.42	98.550	% Recov	70.000	130.000				08/12/08
MS	Cadmium	7440-43-9	40.46	101.150	% Recov	70.000	130.000				08/12/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081493
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 07/21/08
Receive Date:07/21/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Chromium	7440-47-3	41.32	103.300	% Recov	70.000	130.000				08/12/08
MS	Mercury	7439-97-6	1.96	98.000	% Recov	70.000	130.000				08/12/08
MS	Antimony	7440-36-0	40.22	100.550	% Recov	70.000	130.000				08/12/08
MS	Thallium	7440-28-0	39.62	99.050	% Recov	70.000	130.000				08/12/08
MS	Uranium	7440-61-1	40.15	100.375	% Recov	70.000	130.000				08/12/08
MSD	Arsenic	7440-38-2	39.1	97.750	% Recov	70.000	130.000				08/12/08
MSD	Cadmium	7440-43-9	39.86	99.650	% Recov	70.000	130.000				08/12/08
MSD	Chromium	7440-47-3	41.64	104.100	% Recov	70.000	130.000				08/12/08
MSD	Mercury	7439-97-6	1.97	98.500	% Recov	70.000	130.000				08/12/08
MSD	Antimony	7440-36-0	40.24	100.600	% Recov	70.000	130.000				08/12/08
MSD	Thallium	7440-28-0	39.87	99.675	% Recov	70.000	130.000				08/12/08
MSD	Uranium	7440-61-1	40.17	100.425	% Recov	70.000	130.000				08/12/08
SPK-RPD	Arsenic	7440-38-2	97.750		RPD			0.815	20.000		08/12/08
SPK-RPD	Cadmium	7440-43-9	99.650		RPD			1.494	20.000		08/12/08
SPK-RPD	Chromium	7440-47-3	104.100		RPD			0.771	20.000		08/12/08
SPK-RPD	Mercury	7439-97-6	98.500		RPD			0.509	20.000		08/12/08
SPK-RPD	Antimony	7440-36-0	100.600		RPD			0.050	20.000		08/12/08
SPK-RPD	Thallium	7440-28-0	99.675		RPD			0.629	20.000		08/12/08
SPK-RPD	Uranium	7440-61-1	100.425		RPD			0.050	20.000		08/12/08
BATCH QC											
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	08/12/08
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L					U	08/12/08
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L					U	08/12/08
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	08/12/08
BLANK	Antimony	7440-36-0	<0.3	n/a	ug/L					U	08/12/08
BLANK	Thallium	7440-28-0	<0.1	n/a	ug/L					U	08/12/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	08/12/08
LCS	Arsenic	7440-38-2	39.86	99.650	% Recov	85.000	115.000				08/12/08
LCS	Cadmium	7440-43-9	39.74	99.350	% Recov	85.000	115.000				08/12/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081493
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	Chromium	7440-47-3	40.25	100.625	% Recov	85.000	115.000				08/12/08
LCS	Mercury	7439-97-6	1.92	96.000	% Recov	85.000	115.000				08/12/08
LCS	Antimony	7440-36-0	39.24	98.100	% Recov	85.000	115.000				08/12/08
LCS	Thallium	7440-28-0	39.59	98.975	% Recov	85.000	115.000				08/12/08
LCS	Uranium	7440-61-1	40.02	100.050	% Recov	85.000	115.000				08/12/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-051

Group #: WSCF20081493
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		cyanide: Sample result 9X the spike concentration. Spike recovery information not valid. SVOA: The surrogate,terphenyl-d14 exceeded the 20% relative percent difference (spike-rpd) control limit. cgc Np237 LCS recovery is slightly out of range. Since all the other QC checks came out fine, this batch has been approved. lmh ICP-AES: No zirconium present in the LCS and spike standards. Sodium, calcium, silicon, and magnesium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. Check and high standards used to ensure sodium, calcium, and magnesium linearity because sample results are greater than the calibration standard. U-234 & U-238 batch duplicate is flagged for poor RPD due to the inhomogeneity of the sample. lmh

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-051
Sample # W08GR02687
Client ID: B1TTV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20081493
Department: Organic
Sampled: 07/18/08
Received: 07/18/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
SW-846 8270C Semi-Vols Prep											**07/23/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 1.10	ug/L			1.00	1.1		07/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.50	ug/L			1.00	1.5		07/28/08
Phenol	108-95-2	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.30	ug/L			1.00	2.3		07/28/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Pyrene	129-00-0	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.630	ug/L			1.00	0.63		07/28/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.70	ug/L			1.00	2.7		07/28/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.60	ug/L			1.00	1.6		07/28/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
4-Nitroaniline	100-01-6	LA-523-456	U	< 1.10	ug/L			1.00	1.1		07/28/08
4-Bromophenylphenyl ether	101-55-3	LA-523-456	U	< 1.10	ug/L			1.00	1.1		07/28/08
2,4-Dimethylphenol	105-67-9	LA-523-456	U	< 1.00	ug/L			1.00	1.0		07/28/08
4-Chloroaniline	106-47-8	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Bis(2-chloro-1-methylethyl)eth	108-60-1	LA-523-456	U	< 1.10	ug/L			1.00	1.1		07/28/08
Bis(2-chloroethyl) ether	111-44-4	LA-523-456	U	< 0.950	ug/L			1.00	0.95		07/28/08
Bis(2-Chloroethoxy)methane	111-91-1	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	< 0.840	ug/L			1.00	0.84		07/28/08
Di-n-octylphthalate	117-84-0	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Hexachlorobenzene	118-74-1	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Anthracene	120-12-7	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08

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

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

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 quelifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-051
Sample # W08GR02687
Client ID: B1TTV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20081493
Department: Organic
Sampled: 07/18/08
Received: 07/18/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Dimethyl phthalate	131-11-3	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Dibenzofuran	132-64-9	LA-523-456	U	< 2.30	ug/L			1.00	2.3		07/28/08
Benzo(ghi)perylene	191-24-2	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Indeno(1,2,3-cd)pyrene	193-39-5	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Benzo(b)fluoranthene	205-99-2	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Fluoranthene	206-44-0	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Benzo(k)fluoranthene	207-08-9	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Acenaphthylene	208-96-8	LA-523-456	U	< 2.40	ug/L			1.00	2.4		07/28/08
Chrysene	218-01-9	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Benzo(a)pyrene	50-32-8	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
2,4-Dinitrophenol	51-28-5	LA-523-456	U	< 2.10	ug/L			1.00	2.1		07/28/08
Dibenz[a,h]anthracene	53-70-3	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
4,6-Dinitro-2-methylphenol	534-52-1	LA-523-456	U	< 1.10	ug/L			1.00	1.1		07/28/08
1,3-Dichlorobenzene	541-73-1	LA-523-456	U	< 1.40	ug/L			1.00	1.4		07/28/08
Benzo(a)anthracene	56-55-3	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
2,6-Dinitrotoluene	606-20-2	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
4-Chlorophenylphenyl ether	7005-72-3	LA-523-456	U	< 1.80	ug/L			1.00	1.8		07/28/08
Hexachlorocyclopentadiene	77-47-4	LA-523-456	U	< 5.30	ug/L			1.00	5.3		07/28/08
Isophorone	78-59-1	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Diethylphthalate	84-66-2	LA-523-456	U	< 2.00	ug/L			1.00	2.0		07/28/08
Di-n-butylphthalate	84-74-2	LA-523-456	U	< 2.40	ug/L			1.00	2.4		07/28/08
Phenanthrene	85-01-8	LA-523-456	U	< 0.580	ug/L			1.00	0.58		07/28/08
Butylbenzylphthalate	85-68-7	LA-523-456	U	< 0.630	ug/L			1.00	0.63		07/28/08
N-Nitrosodiphenylamine	86-30-6	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Fluorene	86-73-7	LA-523-456	U	< 1.50	ug/L			1.00	1.5		07/28/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-051
Sample # W08GR02687
Client ID: B1TTV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20081493
Department: Organic
Sampled: 07/18/08
Received: 07/18/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Carbazole	86-74-8	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Hexachlorobutadiene	87-68-3	LA-523-456	U	< 2.10	ug/L			1.00	2.1		07/28/08
2-Nitroaniline	88-74-4	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
2-Nitrophenol	88-75-5	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Naphthalene	91-20-3	LA-523-456	U	< 2.20	ug/L			1.00	2.2		07/28/08
2-Methylnaphthalene	91-57-6	LA-523-456	U	< 3.20	ug/L			1.00	3.2		07/28/08
2-Chloronaphthalene	91-58-7	LA-523-456	U	< 3.70	ug/L			1.00	3.7		07/28/08
3,3'-Dichlorobenzidine	91-94-1	LA-523-456	U	< 0.840	ug/L			1.00	0.84		07/28/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
1,2-Dichlorobenzene	95-50-1	LA-523-456	U	< 1.60	ug/L			1.00	1.6		07/28/08
2,4,5-Trichlorophenol	95-95-4	LA-523-456	U	< 0.680	ug/L			1.00	0.68		07/28/08
Nitrobenzene	98-95-3	LA-523-456	U	< 0.630	ug/L			1.00	0.63		07/28/08
3-Nitroaniline	99-09-2	LA-523-456	U	< 0.630	ug/L			1.00	0.63		07/28/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
Hexachloroethane	67-72-1	LA-523-456	U	< 1.50	ug/L			1.00	1.5		07/28/08
2,4,6-Trichlorophenol	88-06-2	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/28/08
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Styrene	100-42-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-051
Sample # W08GR02687
Client ID: B1TTV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20081493
Department: Organic
Sampled: 07/18/08
Received: 07/18/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
2-Hexanone	591-78-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Bromomethane	74-83-9	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Chloromethane	74-87-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Chloroethane	75-00-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Bromoform	75-25-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08

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

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

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: F08-051
Sample # W08GR02687
Client ID: B1TTV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20081493
Department: Organic
Sampled: 07/18/08
Received: 07/18/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		07/31/08
Trichloromonofluoromethane	75-69-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/31/08

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

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

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 F08-051 :F08-051

Group #: WSCF20081493
Department: Organic

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR02687	B1TTV4	TRENT	SW-846 8270C Semi-Vols	SMP 11.593 Tributyl Phosphate	126-73-8	11.5938		1.8	ug/L

RQ=Result Qualifier

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081493
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 07/18/08
Receive Date:07/18/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02687											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	2-Fluorophenol(Surr)	367-12-4	26.277	62.400	% Recov	50.000	110.000				07/28/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	38.741	92.000	% Recov	58.000	109.000				07/28/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	40.270	95.600	% Recov	60.000	118.000				07/28/08
SURR	Phenol-d5(Surr)	4165-62-2	30.132	71.600	% Recov	59.000	116.000				07/28/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	37.150	88.200	% Recov	60.000	120.000				07/28/08
SURR	Terphenyl-d14(Surr)	98904-43-9	48.171	114.000	% Recov	60.000	120.000				07/28/08
Lab ID: W08P003521											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,2,4-Trichlorobenzene	120-82-1	18.226	95.700	% Recov	50.000	120.000				07/28/08
MS	1,4-Dichlorobenzene	106-46-7	18.227	95.700	% Recov	41.000	113.000				07/28/08
MS	2,4-Dinitrotoluene	121-14-2	16.953	89.000	% Recov	65.000	109.000				07/28/08
MS	2-Fluorophenol(Surr)	367-12-4	14.466	75.900	% Recov	50.000	110.000				07/28/08
MS	Acenaphthene	83-32-9	17.746	93.200	% Recov	62.000	112.000				07/28/08
MS	4-Chloro-3-methylphenol	59-50-7	19.555	68.400	% Recov	59.000	115.000				07/28/08
MS	2-Chlorophenol	95-57-8	25.756	90.100	% Recov	69.000	111.000				07/28/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	17.905	94.000	% Recov	69.000	115.000				07/28/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	17.690	92.900	% Recov	58.000	109.000				07/28/08
MS	Phenol	108-95-2	20.503	71.800	% Recov	59.000	115.000				07/28/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	18.038	94.700	% Recov	60.000	118.000				07/28/08
MS	4-Nitrophenol	100-02-7	27.997	98.000	% Recov	32.000	130.000				07/28/08
MS	Pentachlorophenol	87-86-5	24.612	86.100	% Recov	51.000	121.000				07/28/08
MS	Phenol-d5(Surr)	4165-62-2	15.218	79.900	% Recov	59.000	116.000				07/28/08
MS	Pyrene	129-00-0	18.899	99.200	% Recov	58.000	116.000				07/28/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	16.555	86.900	% Recov	60.000	120.000				07/28/08
MS	Terphenyl-d14(Surr)	98904-43-9	13.945	73.200	% Recov	60.000	120.000				07/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081493
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 07/15/08
Receive Date:07/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	1,2,4-Trichlorobenzene	120-82-1	18.229	95.700	% Recov	50.000	120.000				07/28/08
MSD	1,4-Dichlorobenzene	106-46-7	17.732	93.100	% Recov	41.000	113.000				07/28/08
MSD	2,4-Dinitrotoluene	121-14-2	17.154	90.100	% Recov	65.000	109.000				07/28/08
MSD	2-Fluorophenol(Surr)	367-12-4	12.408	65.100	% Recov	50.000	110.000				07/28/08
MSD	Acenaphthene	83-32-9	17.803	93.500	% Recov	62.000	112.000				07/28/08
MSD	4-Chloro-3-methylphenol	59-50-7	21.119	73.900	% Recov	59.000	115.000				07/28/08
MSD	2-Chlorophenol	95-57-8	24.318	85.100	% Recov	69.000	111.000				07/28/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	17.682	92.800	% Recov	69.000	115.000				07/28/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	18.084	94.900	% Recov	58.000	109.000				07/28/08
MSD	Phenol	108-95-2	20.684	72.400	% Recov	59.000	115.000				07/28/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	18.764	98.500	% Recov	60.000	118.000				07/28/08
MSD	4-Nitrophenol	100-02-7	29.448	103.000	% Recov	32.000	130.000				07/28/08
MSD	Pentachlorophenol	87-86-5	27.161	95.100	% Recov	51.000	121.000				07/28/08
MSD	Phenol-d5(Surr)	4165-62-2	15.457	81.100	% Recov	59.000	116.000				07/28/08
MSD	Pyrene	129-00-0	19.509	102.000	% Recov	58.000	116.000				07/28/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	18.174	95.400	% Recov	60.000	120.000				07/28/08
MSD	Terphenyl-d14(Surr)	98904-43-9	19.632	103.000	% Recov	60.000	120.000				07/28/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	95.700		RPD			0.000	25.000		07/28/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	93.100		RPD			2.754	25.000		07/28/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	90.100		RPD			1.228	25.000		07/28/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	65.100		RPD			15.319	25.000		07/28/08
SPK-RPD	Acenaphthene	83-32-9	93.500		RPD			0.321	25.000		07/28/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	73.900		RPD			7.730	25.000		07/28/08
SPK-RPD	2-Chlorophenol	95-57-8	85.100		RPD			5.708	25.000		07/28/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	92.800		RPD			1.285	25.000		07/28/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	94.900		RPD			2.130	25.000		07/28/08
SPK-RPD	Phenol	108-95-2	72.400		RPD			0.832	16.000		07/28/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	98.500		RPD			3.934	25.000		07/28/08
SPK-RPD	4-Nitrophenol	100-02-7	103.000		RPD			4.975	25.000		07/28/08
SPK-RPD	Pentachlorophenol	87-86-5	95.100		RPD			9.934	25.000		07/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081493
Matrix: WATER
Test: SW-846 8270C Semi-Vols

Sample Date: 07/15/08
Receive Date:07/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Phenol-d5(Surr)	4165-62-2	81.100		RPD			1.491	25.000		07/28/08
SPK-RPD	Pyrene	129-00-0	102.000		RPD			2.783	25.000		07/28/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	95.400		RPD			9.325	25.000		07/28/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	103.000		RPD			33.825	25.000 *		07/28/08
BATCH QC											
BLANK	1,2-Dichlorobenzene	95-50-1	< 1.5	n/a	ug/L					U	07/28/08
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 2.2	n/a	ug/L					U	07/28/08
BLANK	1,3-Dichlorobenzene	541-73-1	< 1.3	n/a	ug/L					U	07/28/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.4	n/a	ug/L					U	07/28/08
BLANK	2,4-Dichlorophenol	120-83-2	< 0.50	n/a	ug/L					U	07/28/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 0.50	n/a	ug/L					U	07/28/08
BLANK	2,4,5-Trichlorophenol	95-95-4	< 0.65	n/a	ug/L					U	07/28/08
BLANK	2,4,6-Trichlorophenol	88-06-2	< 0.50	n/a	ug/L					U	07/28/08
BLANK	2,4-Dimethylphenol	105-67-9	< 0.95	n/a	ug/L					U	07/28/08
BLANK	2,6-Dinitrotoluene	606-20-2	< 0.50	n/a	ug/L					U	07/28/08
BLANK	2-Chloronaphthalene	91-58-7	< 3.5	n/a	ug/L					U	07/28/08
BLANK	2-Fluorophenol(Surr)	367-12-4	15.626	78.100	% Recov	50.000	110.000				07/28/08
BLANK	2-Methylnaphthalene	91-57-6	< 3.0	n/a	ug/L					U	07/28/08
BLANK	2-Methylphenol (cresol, o-)	95-48-7	< 0.50	n/a	ug/L					U	07/28/08
BLANK	2-Nitroaniline	88-74-4	< 0.50	n/a	ug/L					U	07/28/08
BLANK	2-Nitrophenol	88-75-5	< 0.50	n/a	ug/L					U	07/28/08
BLANK	3 & 4 Methylphenol Total	65794-96-9	< 0.50	n/a	ug/L	0.000	5.000			U	07/28/08
BLANK	3-Nitroaniline	99-09-2	< 0.60	n/a	ug/L					U	07/28/08
BLANK	4,6-Dinitro-2-methylphenol	534-52-1	< 1.0	n/a	ug/L					U	07/28/08
BLANK	4-Bromophenylphenyl ether	101-55-3	< 1.0	n/a	ug/L					U	07/28/08
BLANK	4-Chlorophenylphenyl ether	7005-72-3	< 1.7	n/a	ug/L					U	07/28/08
BLANK	Acenaphthene	83-32-9	< 2.6	n/a	ug/L					U	07/28/08
BLANK	Acenaphthylene	208-96-8	< 2.3	n/a	ug/L					U	07/28/08
BLANK	Anthracene	120-12-7	< 0.50	n/a	ug/L					U	07/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081493
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	Bis(2-chloroethyl) ether	111-44-4	< 0.90	n/a	ug/L					U	07/28/08
BLANK	Benzo(a)anthracene	56-55-3	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Benzo(b)fluoranthene	205-99-2	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Benzo(ghi)perylene	191-24-2	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Benzo(a)pyrene	50-32-8	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Bis(2-Chloroethoxy)methane	111-91-1	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Bis(2-ethylhexyl) phthalate	117-81-7	< 0.80	n/a	ug/L					U	07/28/08
BLANK	Bis(2-chloro-1-methylethyl)eth	108-60-1	< 1.0	n/a	ug/L	0.000	10.000			U	07/28/08
BLANK	Benzo(k)fluoranthene	207-08-9	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Butylbenzylphthalate	85-68-7	< 0.60	n/a	ug/L					U	07/28/08
BLANK	Carbazole	86-74-8	< 0.50	n/a	ug/L					U	07/28/08
BLANK	4-Chloroaniline	106-47-8	< 0.50	n/a	ug/L					U	07/28/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 0.50	n/a	ug/L					U	07/28/08
BLANK	2-Chlorophenol	95-57-8	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Chrysene	218-01-9	< 0.50	n/a	ug/L					U	07/28/08
BLANK	3,3'-Dichlorobenzidine	91-94-1	< 0.80	n/a	ug/L					U	07/28/08
BLANK	Dibenz[a,h]anthracene	53-70-3	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Dibenzofuran	132-64-9	< 2.2	n/a	ug/L					U	07/28/08
BLANK	Di-n-butylphthalate	84-74-2	< 2.3	n/a	ug/L					U	07/28/08
BLANK	Diethylphthalate	84-66-2	< 1.9	n/a	ug/L					U	07/28/08
BLANK	Dimethyl phthalate	131-11-3	< 0.50	n/a	ug/L					U	07/28/08
BLANK	2,4-Dinitrophenol	51-28-5	< 2.0	n/a	ug/L					U	07/28/08
BLANK	Di-n-octylphthalate	117-84-0	< 0.50	n/a	ug/L					U	07/28/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 0.60	n/a	ug/L					U	07/28/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	19.610	98.000	% Recov	58.000	109.000				07/28/08
BLANK	Fluorene	86-73-7	< 1.4	n/a	ug/L					U	07/28/08
BLANK	Fluoranthene	206-44-0	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Hexachlorobenzene	118-74-1	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Hexachlorobutadiene	87-68-3	< 2.0	n/a	ug/L					U	07/28/08
BLANK	Hexachlorocyclopentadiene	77-47-4	< 5.0	n/a	ug/L					U	07/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081493
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	Hexachloroethane	67-72-1	< 1.4	n/a	ug/L					U	07/28/08
BLANK	Indeno(1,2,3-cd)pyrene	193-39-5	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Isophorone	78-59-1	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Phenol	108-95-2	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Naphthalene	91-20-3	< 2.1	n/a	ug/L					U	07/28/08
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	19.569	97.800	% Recov	60.000	118.000				07/28/08
BLANK	Nitrobenzene	98-95-3	< 0.60	n/a	ug/L					U	07/28/08
BLANK	4-Nitrophenol	100-02-7	< 1.0	n/a	ug/L					U	07/28/08
BLANK	4-Nitroaniline	100-01-6	< 1.0	n/a	ug/L					U	07/28/08
BLANK	N-Nitrosodiphenylamine	86-30-6	< 0.50	n/a	ug/L					U	07/28/08
BLANK	Pentachlorophenol	87-86-5	< 1.5	n/a	ug/L					U	07/28/08
BLANK	Phenanthrene	85-01-8	< 0.55	n/a	ug/L					U	07/28/08
BLANK	Phenol-d5(Surr)	4165-62-2	17.973	89.900	% Recov	59.000	116.000				07/28/08
BLANK	Pyrene	129-00-0	< 0.50	n/a	ug/L					U	07/28/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	17.563	87.800	% Recov	60.000	120.000				07/28/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	21.016	105.000	% Recov	60.000	120.000				07/28/08
LCS	1,2,4-Trichlorobenzene	120-82-1	18.737	93.700	% Recov	46.000	107.000				07/28/08
LCS	1,4-Dichlorobenzene	106-46-7	18.444	92.200	% Recov	42.000	111.000				07/28/08
LCS	2,4-Dinitrotoluene	121-14-2	17.917	89.600	% Recov	59.000	106.000				07/28/08
LCS	2-Fluorophenol(Surr)	367-12-4	16.202	81.000	% Recov	50.000	110.000				07/28/08
LCS	Acenaphthene	83-32-9	18.875	94.400	% Recov	61.000	116.000				07/28/08
LCS	4-Chloro-3-methylphenol	59-50-7	26.833	89.400	% Recov	61.000	106.000				07/28/08
LCS	2-Chlorophenol	95-57-8	26.965	89.900	% Recov	66.000	106.000				07/28/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	18.542	92.700	% Recov	71.000	114.000				07/28/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	18.810	94.000	% Recov	58.000	109.000				07/28/08
LCS	Phenol	108-95-2	24.077	80.300	% Recov	67.000	105.000				07/28/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	19.683	98.400	% Recov	60.000	118.000				07/28/08
LCS	4-Nitrophenol	100-02-7	26.594	88.600	% Recov	32.000	118.000				07/28/08
LCS	Pentachlorophenol	87-86-5	27.679	92.300	% Recov	62.000	114.000				07/28/08
LCS	Phenol-d5(Surr)	4165-62-2	18.416	92.100	% Recov	59.000	116.000				07/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081493
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	Pyrene	129-00-0	20.857	104.000	% Recov	66.000	118.000				07/28/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	17.865	89.300	% Recov	60.000	120.000				07/28/08
LCS	Terphenyl-d14(Surr)	98904-43-9	21.387	107.000	% Recov	60.000	120.000				07/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081493
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 07/18/08
Receive Date:07/18/08

Lab ID: W08GR02686
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	1,1-Dichloroethene	75-35-4	23.020	92.100	% Recov	63.000	117.000				07/30/08
MS	Benzene	71-43-2	23.780	95.100	% Recov	75.000	129.000				07/30/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	47.400	94.800	% Recov	75.000	125.000				07/30/08
MS	Chlorobenzene	108-90-7	24.280	97.100	% Recov	79.000	119.000				07/30/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	53.620	107.000	% Recov	75.000	125.000				07/30/08
MS	Toluene-d8(Surr)	2037-26-5	48.000	96.000	% Recov	75.000	125.000				07/30/08
MS	Toluene	108-88-3	23.520	94.100	% Recov	76.000	120.000				07/30/08
MS	Trichloroethene	79-01-6	20.430	81.700	% Recov	73.000	123.000				07/30/08
MSD	1,1-Dichloroethene	75-35-4	22.140	88.600	% Recov	63.000	117.000				07/30/08
MSD	Benzene	71-43-2	24.080	96.300	% Recov	75.000	129.000				07/30/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	46.670	93.300	% Recov	75.000	125.000				07/30/08
MSD	Chlorobenzene	108-90-7	24.520	98.100	% Recov	79.000	119.000				07/30/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.610	105.000	% Recov	75.000	125.000				07/30/08
MSD	Toluene-d8(Surr)	2037-26-5	47.380	94.800	% Recov	75.000	125.000				07/30/08
MSD	Toluene	108-88-3	23.920	95.700	% Recov	76.000	120.000				07/30/08
MSD	Trichloroethene	79-01-6	20.170	80.700	% Recov	73.000	123.000				07/30/08
SPK-RPD	1,1-Dichloroethene	75-35-4	88.600		RPD			3.874	20.000		07/30/08
SPK-RPD	Benzene	71-43-2	96.300		RPD			1.254	20.000		07/30/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	93.300		RPD			1.595	20.000		07/30/08
SPK-RPD	Chlorobenzene	108-90-7	98.100		RPD			1.025	20.000		07/30/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	105.000		RPD			1.887	20.000		07/30/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	94.800		RPD			1.258	20.000		07/30/08
SPK-RPD	Toluene	108-88-3	95.700		RPD			1.686	20.000		07/30/08
SPK-RPD	Trichloroethene	79-01-6	80.700		RPD			1.232	20.000		07/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081493
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 07/18/08
Receive Date:07/18/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02687											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	47.450	94.900	% Recov	75.000	125.000				07/31/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.690	105.000	% Recov	75.000	125.000				07/31/08
SURR	Toluene-d8(Surr)	2037-26-5	47.700	95.400	% Recov	75.000	125.000				07/31/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	07/30/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L					U	07/30/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L					U	07/30/08
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	n/a	ug/L	0.000	5.000			U	07/30/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L					U	07/30/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L					U	07/30/08
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 1.0	n/a	ug/L					U	07/30/08
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	07/30/08
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/L					U	07/30/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	07/30/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	47.100	94.200	% Recov	75.000	125.000				07/30/08
BLANK	Bromoform	75-25-2	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	07/30/08
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/L					U	07/30/08
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 1.0	n/a	ug/L					U	07/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081493
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	Chloroethane	75-00-3	< 1.0	n/a	ug/L					U	07/30/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	53.120	106.000	% Recov	75.000	125.000				07/30/08
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L					U	07/30/08
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Bromomethane	74-83-9	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Chloromethane	74-87-3	< 1.0	n/a	ug/L					U	07/30/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	0.000	5.000			U	07/30/08
BLANK	Toluene-d8(Surr)	2037-26-5	47.550	95.100	% Recov	75.000	125.000				07/30/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	07/30/08
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Trichloromonofluoromethane	75-69-4	< 1.0	n/a	ug/L	0.000	5.000			U	07/30/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	07/30/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	07/30/08
LCS	1,1-Dichloroethene	75-35-4	21.760	87.000	% Recov	75.000	125.000				07/31/08
LCS	Benzene	71-43-2	24.040	96.200	% Recov	75.000	125.000				07/31/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	48.240	96.500	% Recov	75.000	125.000				07/31/08
LCS	Chlorobenzene	108-90-7	24.250	97.000	% Recov	75.000	125.000				07/31/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.120	104.000	% Recov	75.000	125.000				07/31/08
LCS	Toluene-d8(Surr)	2037-26-5	48.440	96.900	% Recov	75.000	125.000				07/31/08
LCS	Toluene	108-88-3	23.750	95.000	% Recov	75.000	125.000				07/31/08
LCS	Trichloroethene	79-01-6	19.410	77.600	% Recov	75.000	125.000				07/31/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-051

Group #: WSCF20081493
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		cyanide: Sample result 9X the spike concentration. Spike recovery information not valid. SVOA: The surrogate,terphenyl-d14 exceeded the 20% relative percent difference (spike-rpd) control limit. cgc Np237 LCS recovery is slightly out of range. Since all the other QC checks came out fine, this batch has been approved. lmh ICP-AES: No zirconium present in the LCS and spike standards. Sodium, calcium, silicon, and magnesium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. Check and high standards used to ensure sodium, calcium, and magnesium linearity because sample results are greater than the calibration standard. U-234 & U-238 batch duplicate is flagged for poor RPD due to the inhomogeneity of the sample. lmh

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-051
Sample # W08GR02687
Client ID: B1TTV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20081493
Department: Radiochemistry
Sampled: 07/18/08
Received: 07/18/08

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	U	0.0580	pCi/L	+-0.0951	pCi/L	1.00	0.16		09/11/08
Am-243 tracer by AEA	AM243	LA-508-471		10.0	pCi/L			1.00	0.085		09/11/08
Gamma Energy Analysis-grd H2O											
Cobalt-60	10198-40-0	LA-508-481		38.6	pCi/L	+-8.47	pCi/L	1.00	11		07/21/08
Cesium-137	10045-97-3	LA-508-481	U	-0.0644	pCi/L	+-0.644	pCi/L	1.00	10		07/21/08
Neptunium by AEA											
Neptunium-237	13994-20-2	LA-508-471	U	0.0770	pCi/L	+-0.116	pCi/L	1.00	0.10		08/11/08
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	0.0530	pCi/L	+-0.0763	pCi/L	1.00	0.12		09/10/08
Pu-239/240 by AEA	PU-239/240	LA-508-471	U	0.0180	pCi/L	+-0.0259	pCi/L	1.00	0.041		09/10/08
Pu-242 tracer by AEA	PU242	LA-508-471		16.0	pCi/L			1.00	0.012		09/10/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.510	pCi/L	+-2.28	pCi/L	1.00	0.93		07/30/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		94.2	Percent			1.00	0.0		07/30/08
TC99 by ICP-200.8 MS Prep											**08/01/08**
TC99 by ICP-200.8 MS											
Technetium by ICP-MS	14133-76-7	LA-505-412		0.590	ug/L			1.00	1.0e-03		08/01/08
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		9.40e+03	pCi/L	+-1.88e+03	pCi/L	1.00	5.9		07/29/08
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		1.80	pCi/L	+-0.504	pCi/L	1.00	0.041		09/09/08
Uranium-235	15117-96-1	LA-508-471		0.0810	pCi/L	+-0.0446	pCi/L	1.00	0.013		09/09/08
Uranium-238	U-238	LA-508-471		1.20	pCi/L	+-0.348	pCi/L	1.00	0.032		09/09/08
U-232 tracer by AEA	U232	LA-508-471		10.0	pCi/L			1.00	0.073		09/09/08

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

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

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: F08-051
Sample # W08GR02687
Client ID: B1TTV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20081493
Department: Radiochemistry
Sampled: 07/18/08
Received: 07/18/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date

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

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

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 F08-051 :F08-051

Group #: WSCF20081493
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR02687	B1TTV4	TRENT	Gamma Energy Analysis-grd H2O	BI-214				2.5e+02	pCi/L
W08GR02687	B1TTV4	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error				21	%
W08GR02687	B1TTV4	TRENT	Gamma Energy Analysis-grd H2O	PB-212				40	pCi/L
W08GR02687	B1TTV4	TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error				36	%
W08GR02687	B1TTV4	TRENT	Gamma Energy Analysis-grd H2O	PB-214				2.3e+02	pCi/L
W08GR02687	B1TTV4	TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error				34	%
W08GR02687	B1TTV4	TRENT	Gamma Energy Analysis-grd H2O	RA-226				1.7e+02	pCi/L
W08GR02687	B1TTV4	TRENT	Gamma Energy Analysis-grd H2O	RA-226 Count Error				22	%

RQ=Result Qualifier

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081493
Matrix: WATER
Test: Americium by AEA

Sample Date: 07/16/08
Receive Date:07/17/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02623											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Americium-241	14596-10-2	U-4.1e-2		RPD			n/a	20.000		09/10/08
DUP	Am-243 tracer by AEA	AM243	10.01	70.770	% Recov	30.000	105.000				09/10/08
Lab ID: W08GR02687											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Am-243 tracer by AEA	AM243	10.01	65.870	% Recov	30.000	105.000				09/11/08
BATCH QC											
BLANK	Americium-241	14596-10-2	U1.4e-2	n/a	pCi/L	-10.000	1000.000				09/10/08
BLANK	Am-243 tracer by AEA	AM243	10.01	59.080	% Recov	30.000	105.000				09/10/08
LCS	Americium-241	14596-10-2	13.3	112.236	% Recov	80.000	120.000				09/10/08
LCS	Am-243 tracer by AEA	AM243	10.01	59.871	% Recov	30.000	105.000				09/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081493
Matrix: WATER
Test: Gamma Energy Analysis-grd H2O

Sample Date: 07/18/08
Receive Date:07/18/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02687											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Cobalt-60	10198-40-0	36.76		RPD			4.831	20.000		07/22/08
DUP	Cesium-137	10045-97-3	U-0.5258		RPD			n/a	20.000		07/22/08
BATCH QC											
BLANK	Cobalt-60	10198-40-0	U2.519	n/a	pCi/L	-10.000	1000.000				07/24/08
BLANK	Cesium-137	10045-97-3	U-2.097	n/a	pCi/L	-10.000	1000.000				07/24/08
LCS	Cobalt-60	10198-40-0	10070	101.308	% Recov	80.000	120.000				07/23/08
LCS	Cesium-137	10045-97-3	6286	104.073	% Recov	80.000	120.000				07/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081493
Matrix: WATER
Test: Neptunium by AEA

Sample Date: 07/02/08
Receive Date:07/02/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02042											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Neptunium-237	13994-20-2	0.35		RPD			n/a	20.000		08/11/08
MS	Neptunium-237	13994-20-2	96.4	96.400	% Recov	75.000	125.000				08/11/08
MSD	Neptunium-237	13994-20-2	97	97.000	% Recov	75.000	125.000				08/11/08
SPK-RPD	Neptunium-237	13994-20-2	97.000		% RPD			0.620	20.000		08/11/08
Lab ID: W08GR02043											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	92.6	92.600	% Recov	75.000	125.000				08/11/08
Lab ID: W08GR02687											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	86	86.000	% Recov	75.000	125.000				08/11/08
Lab ID: W08GR02802											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	75.3	75.300	% Recov	75.000	125.000				08/11/08
BATCH QC											
BLANK	Neptunium-237	13994-20-2	U0.17	n/a	pCi/L	-10.000	1000.000				08/11/08
LCS	Neptunium-237	13994-20-2	9.6	75.324	% Recov	80.000	120.000				08/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081493
Matrix: WATER
Test: Plutonium Isotopics by AEA

Sample Date: 07/16/08
Receive Date:07/17/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02623											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Plutonium-238	13981-16-3	U-1.7e-2		RPD			n/a	20.000		09/09/08
DUP	Pu-239/240 by AEA	PU-239/240	U1.3e-2		RPD			n/a	20.000		09/09/08
DUP	Pu-242 tracer by AEA	PU242	15.59	95.780	% Recov	30.000	105.000				09/09/08
Lab ID: W08GR02687											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Pu-242 tracer by AEA	PU242	15.59	88.800	% Recov	30.000	105.000				09/10/08
BATCH QC											
BLANK	Plutonium-238	13981-16-3	U1.4e-2	n/a	pCi/L	-10.000	1000.000				09/09/08
BLANK	Pu-239/240 by AEA	PU-239/240	U1.4e-2	n/a	pCi/L	-10.000	1000.000				09/09/08
BLANK	Pu-242 tracer by AEA	PU242	15.59	87.210	% Recov	30.000	105.000				09/09/08
LCS	Pu-239/240 by AEA	PU-239/240	12.39	96.458	% Recov	80.000	120.000				09/09/08
LCS	Pu-242 tracer by AEA	PU242	17.3	97.780	% Recov	30.000	105.000				09/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081493
Matrix: WATER
Test: Strontium 89/90

Sample Date: 07/16/08
Receive Date:07/17/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02623											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	93.5	93.500	% Recov	30.000	105.000				07/30/08
DUP	Strontium-89/90	SR-RAD	U-4.1		RPD			n/a	20.000		07/30/08
Lab ID: W08GR02687											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	94.2	94.200	% Recov	30.000	105.000				07/30/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	87.5	87.500	% Recov	30.000	105.000				07/30/08
BLANK	Strontium-89/90	10098-97-2	U-8.6E-01	n/a	pCi/L	-10.000	100.000				07/30/08
LCS	Sr-85 Tracer by Beta Counting	SR85	87	87.000	% Recov	30.000	105.000				07/30/08
LCS	Strontium-89/90	10098-97-2	153	110.231	% Recov	80.000	120.000				07/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081493
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	08/01/08
LCS	Technetium by ICP-MS	14133-76-7	0.14	97.902	% Recov	49.000	125.000				08/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081493
Matrix: WATER
Test: TC99 by Liquid Scin.

Sample Date: 10/25/07
Receive Date: 10/25/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02464											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tc-99 by Liquid Scin.	14133-76-7	1.4E+02		RPD			6.897	20.000		07/29/08
MS	Tc-99 by Liquid Scin.	14133-76-7	801.2	106.507	% Recov	75.000	125.000				07/29/08
BATCH QC											
BLANK	Tc-99 by Liquid Scin.	14133-76-7	U-4.2	n/a	pCi/L	-10.000	10.000				07/29/08
LCS	Tc-99 by Liquid Scin.	14133-76-7	198.3	105.423	% Recov	80.000	120.000				07/29/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081493
Matrix: WATER
Test: Uranium Isotopics by AEA

Sample Date: 07/16/08
Receive Date:07/17/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR02623											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	U-232 tracer by AEA	U232	10.22	100.190	% Recov	30.000	105.000				09/09/08
DUP	Uranium-233/234	U-233/234	0.66		RPD			20.408	20.000 *		09/09/08
DUP	Uranium-235	15117-96-1	U8.9e-3		RPD			n/a	20.000		09/09/08
DUP	Uranium-238	U-238	0.29		RPD			47.368	20.000 *		09/09/08
Lab ID: W08GR02687											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	U-232 tracer by AEA	U232	10.22	96.950	% Recov	30.000	105.000				09/09/08
BATCH QC											
BLANK	U-232 tracer by AEA	U232	10.22	100.650	% Recov	30.000	105.000				09/09/08
BLANK	Uranium-233/234	13966-29-5	4.7e-2	0.047	pCi/L	-10.000	1000.000				09/09/08
BLANK	Uranium-235	15117-96-1	1.8e-2	0.018	pCi/L	-10.000	1000.000				09/09/08
BLANK	Uranium-238	24678-82-8	1.3e-2	0.013	pCi/L	-10.000	1000.000				09/09/08
LCS	U-232 tracer by AEA	U232	11.35	77.670	% Recov	30.000	105.000				09/09/08
LCS	Uranium-233/234	13966-29-5	N/A	n/a	% Recov	75.000	125.000				09/09/08
LCS	Uranium-238	24678 82-8	19.97	105.355	% Recov	80.000	120.000				09/09/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-051

Group #: WSCF20081493
Department: Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		cyanide: Sample result 9X the spike concentration. Spike recovery information not valid. SVOA: The surrogate,terphenyl-d14 exceeded the 20% relative percent difference (spike-rpd) control limit. cgc Np237 LCS recovery is slightly out of range. Since all the other QC checks came out fine, this batch has been approved. lmh ICP-AES: No zirconium present in the LCS and spike standards. Sodium, calcium, silicon, and magnesium sample results exceed spiking level by a factor of 4 so spike recoveries are not valid. Check and high standards used to ensure sodium, calcium, and magnesium linearity because sample results are greater than the calibration standard. U-234 & U-238 batch duplicate is flagged for poor RPD due to the inhomogeneity of the sample. lmh

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

M4W41-SLF-08-1006

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 4 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
09/02/08
TS

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program
Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 123516/ES10
Group#: 20081493
Project#: F08-051
Proj Mgr: Steve Trent E6-35
Phone: 373-5869

The following samples were received from you on 07/18/08. 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	Matrix / Tests Scheduled					Sample Date
W08GR02687	B1TTV4	TRENT	Water				07/18/0
		@2008	@AEA-30	@AEA-31	@AEA-32	@AEA-33	
		@GEA-GPP	@GPP6010	@IC-30	@SR89_90	@SVOCGPP	@TC9
		@TC99-MS	@VOA-GPP	CN-02	CR+6		

Test Acronym Description

Test Acronym	Description
@2008	ICP-200.8 MS All possible meta
@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
@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

Prior Hanford Inc. 09/02/08 | CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST | F08-051-010 | PAGE 1 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 7N	DATA TURNAROUND
NCO SAMPLER K.J. Young	TRENT, SJ	373-5869	WIDRIG, DL	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION C5853, I-033	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Groundwater		**SAF NO.** F08-051		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA** 123516ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization 20081493	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** 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
Radioactive Tie To: B1TVK0
Lot # -7

PRESERVATION	HNO3 to pH <2(ULTREX)	HCl or H2SO4 to pH <2/Cool~4C	Cool~4C	HNO3 to pH <2	Cool~4C	NaOH to pH >= 12/Cool~4C	Cool~4C	HNO3 to pH <2	HNO3 to pH <2	HCl to pH <2
TYPE OF CONTAINER	Nalgene	aGs*	aG	G/P	aG	G/P	P	Square Bottle - Poly	G/P	G/P
NO. OF CONTAINER(S)	1	3	4	1	1	1	1	1	1	2
VOLUME	500mL	40mL	1000mL	500mL	500mL	250mL	500mL	500mL	1000mL	1000mL
SAMPLE ANALYSIS	Tc-99 by ICPMS (Technetium-99)	SEE ITEM (1) IN SPECIAL INSTRUCTIONS VOA	Semi-VOA - 8270B (TCL);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS 200 6010	Chromium Hex - 7196;	Cyanide (Total) - 335.2;	SEE ITEM (3) IN SPECIAL INSTRUCTIONS IC	Gamma Spectroscopy (Cesium-137, Cobalt-60)	Strontium-89,90 – Total Sr;	Technetium-99;
	030014	813301	027107	030014	029918	025718	030014	N/A	031851	031851

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1TTV4 W086R02687	WATER	7/18/08	1106	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
				—		—	—				—	—	—

ICED

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
K.J. Young	7/18/08 1240	CA Fluor	7/18/08 1240

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** Analytical batch QC must be run on a sample associated with this SAF.
(1)VOA - 8260B (TCL); VOA - 8260B (Add-On) {1-Butanol, Trichloromonofluoromethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene}
(2)ICP/MS - 200.8 (TAL) {Antimony, Cadmium, Chromium} ICP/MS - 200.8 (Add-on) {Arsenic, Thallium, Uranium} ICP Metals - 6010B (TAL) {Aluminum, Barium, Calcium, Iron, Magnesium, Manganese, Potassium, Sodium} ICP Metals - 6010B (Add-On) {Lithium, Phosphorus, Silicon, Strontium} 200.8_HG - ICPMS;
(3)IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}

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

60 of 61

A-6003-618(01/06)

COLLECTOR NCO SAMPLER KJ. Young	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 7N	**DATA TURNAROUND**
SAMPLING LOCATION C5853, I-033	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for 299-E33-340 - Groundwater		**SAF NO.** F08-051	**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		

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)

Lot # ->

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie To: B1TVK0

PRESERVATION	HNO3 to pH <2	HNO3 to pH<2	HNO3 to pH <2	HNO3 to pH <2									
TYPE OF CONTAINER	P	G/P	G/P	G/P									
NO. OF CONTAINER(S)	1 ✓	1 ✓	1 ✓	1 ✓									
VOLUME	1000mL 031851	1000mL 031851	1000mL 031851	1000mL 031851									
SAMPLE ANALYSIS	Isotopic Plutonium;	Isotopic Uranium;	Neptunium-237;	Americium-241;									

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1TTV4	WATER	7/16/08	1100	✓	✓	✓	✓						
				✓	✓	✓	✓						

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
KJ. Young KJ. Young	7/18/08 1240	CA Hudson CA Hudson	7/18/08 1240

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
** Analytical batch QC must be run on a sample associated with this SAF.

ICED

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

A-6003-618(01/06)