0081209

RECEIVED SEPTEMBER 10, 2008

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FLUOR

Memorandum

M4W41-SLF-08-979

To:	H. Hampt	E6-35	Date:	September 10, 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 WSCF20081283 – 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 WSCF20081283:

- 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#: WSCF20081283
Data Deliverable Date: 11-aug-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F08-051	B1TTV1	W08GR01854	WATER

M4W41-SLF-08-979

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Introduction

One S&GRP sample was received at the WSCF Laboratory on June 26, 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 draft copy of proposed Issue Resolution Form pertaining to SDGs 20081261, 1270, 1283, and 1371 documenting missed regulatory hold time for Silicon and Phosphorus 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.

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 16 through 18, for a complete listing of approved analytical methods.

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See pages 21 through 23 for QC details. Analytical Note(s):

- Duplicates, Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1W631 and B1W636 (SDG# 20081284, SAF# F06-027).
- Sample results were D flagged if dilution(s) were required.
- Sample results that were less than the reportable limit, however greater than the method detection limit were B flagged.

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. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V577 (SDG# 20081261, SAF# F08-103).

All QC controls are within the established limits.

Hexavalent Chromium – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See page 25 for QC details.

All QC controls are within the established limits.

ICP-AES Metals – With the exception of Silicon and Phosphorus, hold time requirements for this analysis were met. See comment below. 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):

- Missed Hold Time A copy of proposed Issue Resolution Form #08-XXX, documenting missed regulatory hold time for Silicon and Phosphorus is included as Attachment 3.

- Sodium, Calcium, Silicon, and Magnesium – sample concentrations exceeded spiking levels by a factor of 4. Spike recoveries are not valid. Check and high standards were analyzed to ensure linearity. No flags 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 31 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V577 (SDG# 20081261, SAF# F08-103).

Organic Comments

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 39 through 43 for QC details. Analytical Note(s):

- 2-Fluorophenol (Surrogate) – Spike Relative Percent Difference (RPD) slightly exceeded established laboratory limits.

All other 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 44 through 46 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V577 (SDG# 20081261, SAF# F08-103).

All QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – There are no hold times associated with WSCF's radiochemical methods. A Duplicate, Matrix Spike, Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 50 through 57 for QC details. Analytical Note(s):

- Americium-241 and 243 (tracer) – Batch QC was analyzed on sample# B1V577 (SDG# 20081261, SAF# F08-103). Contamination detected in the Blank was evaluated and the affected sample result was B flagged.

- Neptunium-237– Batch QC was analyzed on sample# B1V577 (SDG# 20081261, SAF# F08-103).

    - Matrix Spike and Matrix Spike Duplicate recoveries were less than established laboratory limits. Please note, however, the Neptunium-237 "matrix spike" result associated with each sample is used to calculate the separation efficiency of the procedure. As such, this "matrix spike" is actually performing the function of a radiochemical tracer. Acceptable recovery for the tracer is 30 – 105%. No flags issued.

    - Matrix Spikes were also analyzed on samples B1TVK5 (SDG# 20081270, SAF# F08-052), B1TTV1 of this SDG, and B1V662 (SDG# 20081134).

- Plutonium-238, 239/240 and242 (tracer) – Batch QC was analyzed on sample# B1V577 (SDG# 20081261, SAF# F08-103).

- Technetium-99 – Duplicate and Matrix Spike were analyzed on sample# B1TT54 (SDG# 20081085, SAF# F08-076). Matrix Spike recovery was less than established laboratory limits due to high sample activity. No flag issued. Additionally, Technetium-99 was also analyzed by ICP-MS.

- Uranium-233/234, 235, 238 and 232 (tracer) – Duplicate QC was analyzed on sample# B1V577 (SDG# 20081261, SAF# F08-103).

All other QC controls are within the established limits.

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

Scot L. Fitzgerald
WSCF Analytical Laboratory Manager

Pauline D. Mix
WSCF Client Services

M4W41-SLF-08-979

ATTACHMENT 3

ISSUE RESOLUTION FORM

Consisting of 3 pages
Including cover page

ISSUE RESOLUTION FORM

DRAFT

FH TRACKING NUMBER: 08-XXX

Date : **9-4-2008** SAF No. **F08-103, F08-052, F08-051, F08-134**

SDG: **WSCF20081261, -1270, -1283, -1371** LOGIN No.: TEST: @GPP6010

Sample No.(s) **B1V577, B1TVK5, B1TTV1, B1W1B5**

W08GR01833, W08GR01840, W08GR01854, W08GR02298

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

ISSUE	PROPOSED RESOLUTION
The 28-day regulatory hold time for Silicon and Phosphorus was missed on S&GRP samples identified above. Samples were collected in the field and submitted to the WSCF Laboratory for analysis in the late June and early July timeframe. However, due to large sample backlog, samples were not prepped for analysis until August 25, 2008, after the regulatory hold time had been exceeded. Samples were analyzed on August 31, 2008. QC control information is as follows for **Samples #B1V577 (F08-103), B1TVK5 (F08-052) and B1W1B5 (F08-134)** – Batch QC was performed on sample B1W1X6 (F08-039). Silicon – All QC controls were within established limits. Phosphorus – Sample concentration exceeded spiking levels by a factor of 4. All other QC controls were within established limits. **Sample # B1TTV1 (F08-051)** – Batch QC was performed on same sample (B1TTV1). Silicon – Sample concentration exceeded spiking levels by a factor of 4. All other QC controls were within established limits. Phosphorus – All QC controls were within established limits.	Document missed holding time in the case narrative.

GRP COMMENTS

Signature and Date

M4W41-SLF-08-979

ATTACHMENT 4

ANALYTICAL RESULTS

Consisting of 48 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: S. Fitzgerald 9/10/08

Client Services: P.D. Mix 9/9/2008

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

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Contract#: FH-EIS-2003-MEM-001
Report#: WSCF20081283
Report Date: 8-sep-2008
Report WGPP/ver. 5.2
Groundwater Remediation Program

w13qlog v4.2 08-sep-2008 12:39:43

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20081283

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36854	2	37274	41636	BLANK		Hexavalent chromium
36854	8	37274	41636	BLANK		Hexavalent chromium
36854	3	37274	41636	LCS		Hexavalent chromium
36854	5	37274	41636	DUP	W08GR01854	Hexavalent chromium
36854	6	37274	41636	MS	W08GR01854	Hexavalent chromium
36854	7	37274	41636	MSD	W08GR01854	Hexavalent chromium
36854	4	37274	41636	SAMPLE	W08GR01854	Hexavalent chromium
36854	7	37274	41636	SPK-RPD	W08GR01854	Hexavalent chromium
36894	2	37318	41673	BLANK		Anions by Ion Chromatography
36894	16	37318	41673	BLANK		Anions by Ion Chromatography
36894	27	37318	41673	BLANK		Anions by Ion Chromatography
36894	3	37318	41673	LCS		Anions by Ion Chromatography
36894	17	37318	41673	LCS		Anions by Ion Chromatography
36894	4	37318	41673	SAMPLE	W08GR01854	Anions by Ion Chromatography
36894	6	37318	41673	DUP	W08GR01855	Anions by Ion Chromatography
36894	7	37318	41673	MS	W08GR01855	Anions by Ion Chromatography
36894	8	37318	41673	MSD	W08GR01855	Anions by Ion Chromatography
36894	8	37318	41673	SPK-RPD	W08GR01855	Anions by Ion Chromatography
36894	19	37318	41673	DUP	W08GR01860	Anions by Ion Chromatography
36894	21	37318	41673	MS	W08GR01860	Anions by Ion Chromatography
36894	22	37318	41673	MSD	W08GR01860	Anions by Ion Chromatography
36894	22	37318	41673	SPK-RPD	W08GR01860	Anions by Ion Chromatography
36933	1	37349	41733	BLANK		Cyanide by Midi/Spectrophotom
36933	2	37349	41733	LCS		Cyanide by Midi/Spectrophotom
36933	5	37349	41733	MS	W08GR01833	Cyanide by Midi/Spectrophotom
36933	6	37349	41733	MSD	W08GR01833	Cyanide by Midi/Spectrophotom
36933	6	37349	41733	SPK-RPD	W08GR01833	Cyanide by Midi/Spectrophotom
36933	9	37349	41733	SAMPLE	W08GR01854	Cyanide by Midi/Spectrophotom
37144	1	37571	41904	BLANK		ICP-200.8 MS All possible meta
37144	2	37571	41904	LCS		ICP-200.8 MS All possible meta
37144	16	37571	41904	MS	W08D000029	ICP-200.8 MS All possible meta
37144	17	37571	41904	MSD	W08D000029	ICP-200.8 MS All possible meta
37144	17	37571	41904	SPK-RPD	W08D000029	ICP-200.8 MS All possible meta
37144	4	37571	41904	MS	W08GR01833	ICP-200.8 MS All possible meta
37144	5	37571	41904	MSD	W08GR01833	ICP-200.8 MS All possible meta
37144	5	37571	41904	SPK-RPD	W08GR01833	ICP-200.8 MS All possible meta
37144	7	37571	41904	SAMPLE	W08GR01854	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	3	38213	42679	SAMPLE	W08GR01854	ICP Metals Analysis, Grd H20 P
37779	5	38213	42679	SPK-RPD	W08GR01854	ICP Metals Analysis, Grd H20 P

w13qlog v4.2 08-sep-2008 12:39:43

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20081283

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			41812	BLANK		SW-846 8270C Semi-Vols
			41812	LCS		SW-846 8270C Semi-Vols
			41812	MS	W08GR01854	SW-846 8270C Semi-Vols
			41812	MSD	W08GR01854	SW-846 8270C Semi-Vols
			41812	SAMPLE	W08GR01854	SW-846 8270C Semi-Vols
			41812	SPK-RPD	W08GR01854	SW-846 8270C Semi-Vols
			41812	SURR	W08GR01854	SW-846 8270C Semi-Vols
			42206	BLANK		VOA Ground Water Protection
			42206	LCS		VOA Ground Water Protection
			42206	MS	W08GR01833	VOA Ground Water Protection
			42206	MSD	W08GR01833	VOA Ground Water Protection
			42206	SPK-RPD	W08GR01833	VOA Ground Water Protection
			42206	SAMPLE	W08GR01854	VOA Ground Water Protection
			42206	SURR	W08GR01854	VOA Ground Water Protection

w13qlog v4.2 08-sep-2008 12:39:43

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20081283

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36904	1	37325	41680	BLANK		Gamma Energy Analysis-grd H2O
36904	2	37325	41680	LCS		Gamma Energy Analysis-grd H2O
36904	3	37325	41680	DUP	W08GR01854	Gamma Energy Analysis-grd H2O
36904	4	37325	41680	SAMPLE	W08GR01854	Gamma Energy Analysis-grd H2O
37025	1	37449	41800	BLANK		TC99 by Liquid Scin.
37025	4	37449	41800	LCS		TC99 by Liquid Scin.
37025	3	37449	41800	DUP	W08GR01411	TC99 by Liquid Scin.
37025	2	37449	41800	MS	W08GR01411	TC99 by Liquid Scin.
37025	9	37449	41800	SAMPLE	W08GR01854	TC99 by Liquid Scin.
37087	1	37496	41868	BLANK		TC99 by ICP-200.8 MS
37087	2	37496	41868	LCS		TC99 by ICP-200.8 MS
37087	4	37496	41868	SAMPLE	W08GR01854	TC99 by ICP-200.8 MS
37330	1	37760	42122	BLANK		Neptunium by AEA
37330	2	37760	42122	LCS		Neptunium by AEA
37330	3	37760	42122	DUP	W08GR01833	Neptunium by AEA
37330	12	37760	42122	MS	W08GR01833	Neptunium by AEA
37330	6	37760	42122	MSD	W08GR01833	Neptunium by AEA
37330	12	37760	42122	SPK-RPD	W08GR01833	Neptunium by AEA
37330	8	37760	42122	MS	W08GR01840	Neptunium by AEA
37330	10	37760	42122	MS	W08GR01854	Neptunium by AEA
37330	9	37760	42122	SAMPLE	W08GR01854	Neptunium by AEA
37330	5	37760	42122	MS	W08P002697	Neptunium by AEA
37046	1	37471	42130	BLANK		Strontium 89/90
37046	2	37471	42130	LCS		Strontium 89/90
37046	3	37471	42130	DUP	W08GR01854	Strontium 89/90
37046	4	37471	42130	SAMPLE	W08GR01854	Strontium 89/90
37046	5	37471	42130	SURR	W08GR01854	Strontium 89/90
37403	1	37829	42209	BLANK		Uranium Isotopics by AEA
37403	2	37829	42209	LCS		Uranium Isotopics by AEA
37403	3	37829	42209	DUP	W08GR01833	Uranium Isotopics by AEA
37403	6	37829	42209	SAMPLE	W08GR01854	Uranium Isotopics by AEA
37403	7	37829	42209	SURR	W08GR01854	Uranium Isotopics by AEA
37404	1	37832	42216	BLANK		Plutonium Isotopics by AEA
37404	2	37832	42216	LCS		Plutonium Isotopics by AEA
37404	3	37832	42216	DUP	W08GR01833	Plutonium Isotopics by AEA
37404	6	37832	42216	SAMPLE	W08GR01854	Plutonium Isotopics by AEA
37404	7	37832	42216	SURR	W08GR01854	Plutonium Isotopics by AEA
37405	1	37837	42217	BLANK		Americium by AEA
37405	2	37837	42217	LCS		Americium by AEA
37405	3	37837	42217	DUP	W08GR01833	Americium by AEA
37405	6	37837	42217	SAMPLE	W08GR01854	Americium by AEA
37405	7	37837	42217	SURR	W08GR01854	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 # W08GR01854
Client ID: B1TTV1 TRENT WSCF

Matrix: WATER

Group #: WSCF20081283
Department: Inorganic
Sampled: 06/26/08
Received: 06/26/08

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	BD	0.286	mg/L			5.00	0.10		06/26/08
Chloride	16887-00-6	LA-533-410	D	36.2	mg/L			5.00	0.55		06/26/08
Nitrogen in Nitrite	NO2-N	LA-533-410	D	2.97	mg/L			5.00	0.050		06/26/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	206	mg/L			51.00	1.8		06/26/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 0.160	mg/L			5.00	0.16		06/26/08
Sulfate	14808-79-8	LA-533-410	D	229	mg/L			5.00	0.38		06/26/08
Cyanide											
Cyanide	57-12-5	LA-695-402		548	ug/L			1.00	4.0		06/30/08
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	U	< 2.00e-03	mg/L			1.00	2.0e-03		06/26/08
ICP Metals Analysis, Grd H20 P Prep											**08/25/08**
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411		83.9	ug/L			1.00	52		08/31/08
Iron	7439-89-6	LA-505-411		146	ug/L			1.00	25		08/31/08
Magnesium	7439-95-4	LA-505-411		1.83e+04	ug/L			1.00	50		08/31/08
Manganese	7439-96-5	LA-505-411		81.2	ug/L			1.00	4.0		08/31/08
Potassium	7440-09-7	LA-505-411		7.76e+03	ug/L			1.00	1.7e+02		08/31/08
Sodium	7440-23-5	LA-505-411		8.63e+04	ug/L			1.00	51		08/31/08
Barium	7440-39-3	LA-505-411		33.1	ug/L			1.00	4.0		08/31/08
Calcium	7440-70-2	LA-505-411		7.36e+04	ug/L			1.00	73		08/31/08
Lithium	7439-93-2	LA-505-411		8.80	ug/L			1.00	4.0		08/31/08
Strontium	7440-24-6	LA-505-411		490	ug/L			1.00	4.0		08/31/08
Silicon	7440-21-3	LA-505-411		7.04e+03	ug/L			1.00	26		08/31/08
Phosphorus	7723-14-0	LA-505-411	U	< 44.0	ug/L			1.00	44		08/31/08

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

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

D - Analyte was identified at a secondary dilution factor(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 # W08GR01854
Client ID: B1TTV1 TRENT WSCF

Matrix: WATER

Group #: WSCF20081283
Department: Inorganic
Sampled: 06/26/08
Received: 06/26/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta Prep											**07/17/08**
ICP-200.8 MS All possible meta											
Antimony	7440-36-0	LA-505-412		0.340	ug/L			1.00	0.300		07/18/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		07/18/08
Chromium	7440-47-3	LA-505-412	U	< 0.500	ug/L			1.00	0.500		07/18/08
Mercury	7439-97-6	LA-505-412		0.160	ug/L			1.00	0.0500		07/18/08
Uranium	7440-61-1	LA-505-412		5.64	ug/L			1.00	0.0500		07/18/08
Arsenic	7440-38-2	LA-505-412		1.30	ug/L			1.00	0.400		07/18/08
Thallium	7440-28-0	LA-505-412	U	< 0.100	ug/L			1.00	0.100		07/18/08

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

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

D - Analyte was identified at a secondary dilution factor(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: WSCF20081283
Matrix: WATER
Test: Anions by Ion Chromatography

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

Lab ID: W08GR01855
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	1.3379		RPD			6.787	20.000		06/26/08
DUP	Fluoride	16984-48-8	<0.21		RPD			n/a	20.000	U	06/26/08
DUP	Nitrogen in Nitrite	NO2-N	<9.9e-2		RPD			n/a	20.000	U	06/26/08
DUP	Nitrogen in Nitrate	NO3-N	0.5607		RPD			1.112	20.000		06/26/08
DUP	Phosphate (P) by IC	PO4-P	1.7398		RPD			6.452	20.000		06/26/08
DUP	Sulfate	14808-79-8	7.2067		RPD			0.674	20.000		06/26/08
MS	Chloride	16887-00-6	0.96211	96.694	% Recov	80.000	120.000				06/26/08
MS	Fluoride	16984-48-8	0.45268	91.822	% Recov	80.000	120.000				06/26/08
MS	Nitrogen in Nitrite	NO2-N	0.48203	97.974	% Recov	80.000	120.000				06/26/08
MS	Nitrogen in Nitrate	NO3-N	0.44428	99.614	% Recov	80.000	120.000				06/26/08
MS	Phosphate (P) by IC	PO4-P	0.98342	102.761	% Recov	80.000	120.000				06/26/08
MS	Sulfate	14808-79-8	1.93206	98.574	% Recov	80.000	120.000				06/26/08
MSD	Chloride	16887-00-6	0.95917	96.399	% Recov	80.000	120.000				06/26/08
MSD	Fluoride	16984-48-8	0.44951	91.178	% Recov	80.000	120.000				06/26/08
MSD	Nitrogen in Nitrite	NO2-N	0.48415	98.404	% Recov	80.000	120.000				06/26/08
MSD	Nitrogen in Nitrate	NO3-N	0.44887	100.643	% Recov	80.000	120.000				06/26/08
MSD	Phosphate (P) by IC	PO4-P	0.98379	102.799	% Recov	80.000	120.000				06/26/08
MSD	Sulfate	14808-79-8	1.96267	100.136	% Recov	80.000	120.000				06/26/08
SPK-RPD	Chloride	16887-00-6	96.399		RPD			0.306	20.000		06/26/08
SPK-RPD	Fluoride	16984-48-8	91.178		RPD			0.704	20.000		06/26/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	98.404		RPD			0.438	20.000		06/26/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	100.643		RPD			1.028	20.000		06/26/08
SPK-RPD	Phosphate (P) by IC	PO4-P	102.799		RPD			0.037	20.000		06/26/08
SPK-RPD	Sulfate	14808-79-8	100.136		RPD			1.572	20.000		06/26/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081283
Matrix: WATER
Test: Anions by Ion Chromatography

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
Lab ID: W08GR01860											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	<1.1		RPD			n/a	20.000	U	06/26/08
DUP	Fluoride	16984-48-8	<0.21		RPD			n/a	20.000	U	06/26/08
DUP	Nitrogen in Nitrite	NO2-N	<9.9e-2		RPD			n/a	20.000	U	06/26/08
DUP	Nitrogen in Nitrate	NO3-N	<0.36		RPD			n/a	20.000	U	06/26/08
DUP	Phosphate (P) by IC	PO4-P	<0.32		RPD			n/a	20.000	U	06/26/08
DUP	Sulfate	14808-79-8	7.0423		RPD			0.116	20.000		06/26/08
MS	Chloride	16887-00-6	0.96523	97.008	% Recov	80.000	120.000				06/26/08
MS	Fluoride	16984-48-8	0.44392	90.045	% Recov	80.000	120.000				06/26/08
MS	Nitrogen in Nitrite	NO2-N	0.47643	96.835	% Recov	80.000	120.000				06/26/08
MS	Nitrogen in Nitrate	NO3-N	0.45727	102.527	% Recov	80.000	120.000				06/26/08
MS	Phosphate (P) by IC	PO4-P	0.94514	98.761	% Recov	80.000	120.000				06/26/08
MS	Sulfate	14808-79-8	1.97026	100.523	% Recov	80.000	120.000				06/26/08
MSD	Chloride	16887-00-6	0.96779	97.265	% Recov	80.000	120.000				06/26/08
MSD	Fluoride	16984-48-8	0.45466	92.223	% Recov	80.000	120.000				06/26/08
MSD	Nitrogen in Nitrite	NO2-N	0.48221	98.010	% Recov	80.000	120.000				06/26/08
MSD	Nitrogen in Nitrate	NO3-N	0.44343	99.424	% Recov	80.000	120.000				06/26/08
MSD	Phosphate (P) by IC	PO4-P	0.93519	97.721	% Recov	80.000	120.000				06/26/08
MSD	Sulfate	14808-79-8	1.94992	99.486	% Recov	80.000	120.000				06/26/08
SPK-RPD	Chloride	16887-00-6	97.265		RPD			0.265	20.000		06/26/08
SPK-RPD	Fluoride	16984-48-8	92.223		RPD			2.390	20.000		06/26/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	98.010		RPD			1.206	20.000		06/26/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	99.424		RPD			3.073	20.000		06/26/08
SPK-RPD	Phosphate (P) by IC	PO4-P	97.721		RPD			1.059	20.000		06/26/08
SPK-RPD	Sulfate	14808-79-8	99.486		RPD			1.037	20.000		06/26/08
BATCH QC											
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	06/26/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081283
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	<0.11	n/a	mg/L	0.000	0.030			U	06/26/08
BLANK	Chloride	16887-00-6	<0.11	n/a	mg/L	0.000	0.030			U	06/26/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	06/26/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	06/26/08
BLANK	Fluoride	16984-48-8	<2.1e-2	n/a	mg/L	0.000	0.030			U	06/26/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	06/26/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	06/26/08
BLANK	Nitrogen in Nitrite	NO2-N	<9.9e-3	n/a	mg/L	0.000	0.020			U	06/26/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	06/26/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	06/26/08
BLANK	Nitrogen in Nitrate	NO3-N	<3.6e-2	n/a	mg/L	0.000	0.040			U	06/26/08
BLANK	Phosphate (P) by IC	PO4-P	<3.2e-2	n/a	mg/L	0.000	0.200			U	06/26/08
BLANK	Phosphate (P) by IC	PO4-P	<3.2e-2	n/a	mg/L	0.000	0.200			U	06/26/08
BLANK	Phosphate (P) by IC	PO4-P	<3.2e-2	n/a	mg/L	0.000	0.200			U	06/26/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	06/26/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	06/26/08
BLANK	Sulfate	14808-79-8	<7.7e-2	n/a	mg/L	0.000	0.200			U	06/26/08
LCS	Chloride	16887-00-6	200.0785	99.542	% Recov	80.000	120.000				06/26/08
LCS	Chloride	16887-00-6	201.0342	100.017	% Recov	80.000	120.000				06/26/08
LCS	Fluoride	16984-48-8	105.8527	106.278	% Recov	80.000	120.000				06/26/08
LCS	Fluoride	16984-48-8	107.3293	107.760	% Recov	80.000	120.000				06/26/08
LCS	Nitrogen in Nitrite	NO2-N	100.6246	101.232	% Recov	80.000	120.000				06/26/08
LCS	Nitrogen in Nitrite	NO2-N	100.901	101.510	% Recov	80.000	120.000				06/26/08
LCS	Nitrogen in Nitrate	NO3-N	92.947	103.160	% Recov	80.000	120.000				06/26/08
LCS	Nitrogen in Nitrate	NO3-N	93.6266	103.914	% Recov	80.000	120.000				06/26/08
LCS	Phosphate (P) by IC	PO4-P	207.5289	107.306	% Recov	80.000	120.000				06/26/08
LCS	Phosphate (P) by IC	PO4-P	207.9812	107.539	% Recov	80.000	120.000				06/26/08
LCS	Sulfate	14808-79-8	398.6443	100.668	% Recov	80.000	120.000				06/26/08
LCS	Sulfate	14808-79-8	399.1717	100.801	% Recov	80.000	120.000				06/26/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20081283
Matrix: WATER
Test: Cyanide by Midi/Spectrophotom

Sample Date: 06/24/08
Receive Date:06/24/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01833											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cyanide by Midi/Spectrophotom	57-12-5	40.1	100.250	% Recov	75.000	125.000				06/30/08
MSD	Cyanide by Midi/Spectrophotom	57-12-5	41.2	103.000	% Recov	75.000	125.000				06/30/08
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	103.000		RPD			2.706	20.000		06/30/08
BATCH QC											
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	< 4	n/a	ug/L	-4.000	4.000			U	06/30/08
LCS	Cyanide by Midi/Spectrophotom	57-12-5	50	100.000	% Recov	85.000	115.000				06/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081283
Matrix: WATER
Test: Hexavalent chromium

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
Lab ID: W08GR01854											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Hexavalent chromium	18540-29-9	<0.002		RPD			n/a	15.000	U	06/26/08
MS	Hexavalent chromium	18540-29-9	0.0526	98.134	% Recov	85.000	115.000				06/26/08
MSD	Hexavalent chromium	18540-29-9	0.0526	98.134	% Recov	85.000	115.000				06/26/08
SPK-RPD	Hexavalent chromium	18540-29-9	98.134		RPD			0.000	20.000		06/26/08
BATCH QC											
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	06/26/08
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	06/26/08
LCS	Hexavalent chromium	18540-29-9	0.0512	101.587	% Recov	80.000	120.000				06/26/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081283
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: WSCF20081283
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: WSCF20081283
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: WSCF20081283
Matrix: WATER
Test: ICP-200.8 MS All possible meta

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
Lab ID: W08D000029											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	34.32	85.800	% Recov	70.000	130.000				07/18/08
MS	Cadmium	7440-43-9	37.08	92.700	% Recov	70.000	130.000				07/18/08
MS	Chromium	7440-47-3	35.04	87.600	% Recov	70.000	130.000				07/18/08
MS	Mercury	7439-97-6	2.33	116.500	% Recov	70.000	130.000				07/18/08
MS	Antimony	7440-36-0	39.14	97.850	% Recov	70.000	130.000				07/18/08
MS	Thallium	7440-28-0	40.4	101.000	% Recov	70.000	130.000				07/18/08
MS	Uranium	7440-61-1	44.27	110.675	% Recov	70.000	130.000				07/18/08
MSD	Arsenic	7440-38-2	35.91	89.775	% Recov	70.000	130.000				07/18/08
MSD	Cadmium	7440-43-9	37.39	93.475	% Recov	70.000	130.000				07/18/08
MSD	Chromium	7440-47-3	36.88	92.200	% Recov	70.000	130.000				07/18/08
MSD	Mercury	7439-97-6	2.4	120.000	% Recov	70.000	130.000				07/18/08
MSD	Antimony	7440-36-0	39.53	98.825	% Recov	70.000	130.000				07/18/08
MSD	Thallium	7440-28-0	41.02	102.550	% Recov	70.000	130.000				07/18/08
MSD	Uranium	7440-61-1	44.75	111.875	% Recov	70.000	130.000				07/18/08
SPK-RPD	Arsenic	7440-38-2	89.775		RPD			4.528	20.000		07/18/08
SPK-RPD	Cadmium	7440-43-9	93.475		RPD			0.833	20.000		07/18/08
SPK-RPD	Chromium	7440-47-3	92.200		RPD			5.117	20.000		07/18/08
SPK-RPD	Mercury	7439-97-6	120.000		RPD			2.960	20.000		07/18/08
SPK-RPD	Antimony	7440-36-0	98.825		RPD			0.991	20.000		07/18/08
SPK-RPD	Thallium	7440-28-0	102.550		RPD			1.523	20.000		07/18/08
SPK-RPD	Uranium	7440-61-1	111.875		RPD			1.078	20.000		07/18/08
Lab ID: W08GR01833											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	36	90.000	% Recov	70.000	130.000				07/18/08
MS	Cadmium	7440-43-9	37.21	93.025	% Recov	70.000	130.000				07/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081283
Matrix: WATER
Test: ICP-200.8 MS All possible meta

Sample Date: 06/24/08
Receive Date:06/24/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Chromium	7440-47-3	37.52	93.800	% Recov	70.000	130.000				07/18/08
MS	Mercury	7439-97-6	2.22	111.000	% Recov	70.000	130.000				07/18/08
MS	Antimony	7440-36-0	38.61	96.525	% Recov	70.000	130.000				07/18/08
MS	Thallium	7440-28-0	39.35	98.375	% Recov	70.000	130.000				07/18/08
MS	Uranium	7440-61-1	40.08	100.200	% Recov	70.000	130.000				07/18/08
MSD	Arsenic	7440-38-2	36.3	90.750	% Recov	70.000	130.000				07/18/08
MSD	Cadmium	7440-43-9	37.27	93.175	% Recov	70.000	130.000				07/18/08
MSD	Chromium	7440-47-3	38.82	97.050	% Recov	70.000	130.000				07/18/08
MSD	Mercury	7439-97-6	2.32	116.000	% Recov	70.000	130.000				07/18/08
MSD	Antimony	7440-36-0	38.47	96.175	% Recov	70.000	130.000				07/18/08
MSD	Thallium	7440-28-0	40.11	100.275	% Recov	70.000	130.000				07/18/08
MSD	Uranium	7440-61-1	40.55	101.375	% Recov	70.000	130.000				07/18/08
SPK-RPD	Arsenic	7440-38-2	90.750		RPD			0.830	20.000		07/18/08
SPK-RPD	Cadmium	7440-43-9	93.175		RPD			0.161	20.000		07/18/08
SPK-RPD	Chromium	7440-47-3	97.050		RPD			3.406	20.000		07/18/08
SPK-RPD	Mercury	7439-97-6	116.000		RPD			4.405	20.000		07/18/08
SPK-RPD	Antimony	7440-36-0	96.175		RPD			0.363	20.000		07/18/08
SPK-RPD	Thallium	7440-28-0	100.275		RPD			1.913	20.000		07/18/08
SPK-RPD	Uranium	7440-61-1	101.375		RPD			1.166	20.000		07/18/08
BATCH QC											
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	07/18/08
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L					U	07/18/08
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L					U	07/18/08
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	07/18/08
BLANK	Antimony	7440-36-0	<0.3	n/a	ug/L					U	07/18/08
BLANK	Thallium	7440-28-0	<0.1	n/a	ug/L					U	07/18/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	07/18/08
LCS	Arsenic	7440-38-2	36.97	92.425	% Recov	85.000	115.000				07/18/08
LCS	Cadmium	7440-43-9	37.69	94.225	% Recov	85.000	115.000				07/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20081283
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	38.42	96.050	% Recov	85.000	115.000				07/18/08
LCS	Mercury	7439-97-6	2.27	113.500	% Recov	85.000	115.000				07/18/08
LCS	Antimony	7440-36-0	38.62	96.550	% Recov	85.000	115.000				07/18/08
LCS	Thallium	7440-28-0	39.58	98.950	% Recov	85.000	115.000				07/18/08
LCS	Uranium	7440-61-1	39.94	99.850	% Recov	85.000	115.000				07/18/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-051

Group #: WSCF20081283
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Tc-99 matrix spike failed due to the high sample concentration. Spike criterion does not apply. lmh SVOA: The spike relative percent difference (precision) for the surrogate, 2-Fluorophenol, exceeded the 20% control limit. cgc 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.

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-051
Sample # W08GR01854
Client ID: B1TTV1 TRENT WSCF

Matrix: WATER

Group #: WSCF20081283
Department: Organic
Sampled: 06/26/08
Received: 06/26/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
SW-846 8270C Semi-Vols Prep											**06/30/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 1.10	ug/L			1.00	1.1		07/11/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.50	ug/L			1.00	1.5		07/11/08
Phenol	108-95-2	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.30	ug/L			1.00	2.3		07/11/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
Pyrene	129-00-0	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.630	ug/L			1.00	0.63		07/11/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.70	ug/L			1.00	2.7		07/11/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.60	ug/L			1.00	1.6		07/11/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
4-Nitroaniline	100-01-6	LA-523-456	U	< 1.10	ug/L			1.00	1.1		07/11/08
4-Bromophenylphenyl ether	101-55-3	LA-523-456	U	< 1.10	ug/L			1.00	1.1		07/11/08
2,4-Dimethylphenol	105-67-9	LA-523-456	U	< 1.00	ug/L			1.00	1.0		07/11/08
4-Chloroaniline	106-47-8	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
Bis(2-chloro-1-methylethyl)eth	108-60-1	LA-523-456	U	< 1.10	ug/L			1.00	1.1		07/11/08
Bis(2-chloroethyl) ether	111-44-4	LA-523-456	U	< 0.950	ug/L			1.00	0.95		07/11/08
Bis(2-Chloroethoxy)methane	111-91-1	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	< 0.840	ug/L			1.00	0.84		07/11/08
Di-n-octylphthalate	117-84-0	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
Hexachlorobenzene	118-74-1	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
Anthracene	120-12-7	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08

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

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-051
Sample # W08GR01854
Client ID: B1TTV1 TRENT WSCF

Matrix: WATER

Group #: WSCF20081283
Department: Organic
Sampled: 06/26/08
Received: 06/26/08

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

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-051
Sample # W08GR01854
Client ID: B1TTV1 TRENT WSCF

Matrix: WATER

Group #: WSCF20081283
Department: Organic
Sampled: 06/26/08
Received: 06/26/08

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		07/11/08
Hexachlorobutadiene	87-68-3	LA-523-456	U	< 2.10	ug/L			1.00	2.1		07/11/08
2-Nitroaniline	88-74-4	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
2-Nitrophenol	88-75-5	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
Naphthalene	91-20-3	LA-523-456	U	< 2.20	ug/L			1.00	2.2		07/11/08
2-Methylnaphthalene	91-57-6	LA-523-456	U	< 3.20	ug/L			1.00	3.2		07/11/08
2-Chloronaphthalene	91-58-7	LA-523-456	U	< 3.70	ug/L			1.00	3.7		07/11/08
3,3'-Dichlorobenzidine	91-94-1	LA-523-456	U	< 0.840	ug/L			1.00	0.84		07/11/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
1,2-Dichlorobenzene	95-50-1	LA-523-456	U	< 1.60	ug/L			1.00	1.6		07/11/08
2,4,5-Trichlorophenol	95-95-4	LA-523-456	U	< 0.680	ug/L			1.00	0.68		07/11/08
Nitrobenzene	98-95-3	LA-523-456	U	< 0.630	ug/L			1.00	0.63		07/11/08
3-Nitroaniline	99-09-2	LA-523-456	U	< 0.630	ug/L			1.00	0.63		07/11/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
Hexachloroethane	67-72-1	LA-523-456	U	< 1.50	ug/L			1.00	1.5		07/11/08
2,4,6-Trichlorophenol	88-06-2	LA-523-456	U	< 0.530	ug/L			1.00	0.53		07/11/08
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Styrene	100-42-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-051
Sample # W08GR01854
Client ID: B1TTV1 TRENT WSCF

Matrix: WATER

Group #: WSCF20081283
Department: Organic
Sampled: 06/26/08
Received: 06/26/08

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		07/03/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
2-Hexanone	591-78-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Bromomethane	74-83-9	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Chloromethane	74-87-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Chloroethane	75-00-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Bromoform	75-25-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
2-Butanone	78-93-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08

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

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

D - Analyte was identified at a secondary dilution factor(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 # W08GR01854
Client ID: B1TTV1 TRENT WSCF

Matrix: WATER

Group #: WSCF20081283
Department: Organic
Sampled: 06/26/08
Received: 06/26/08

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		07/03/08
Trichloromonofluoromethane	75-69-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		07/03/08

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

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

D - Analyte was identified at a secondary dilution factor(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 #: WSCF20081283
Department: Organic

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01854	B1TTV1	TRENT	SW-846 8270C Semi-Vols	SMP 11.594 Tributyl Phosphate	126-73-8	11.5946		2.4	ug/L

RQ=Result Qualifier

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081283
Matrix: WATER
Test: SW-846 8270C Semi-Vols

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	1,2,4-Trichlorobenzene	120-82-1	17.258	90.600	% Recov	50.000	120.000				07/11/08
MS	1,4-Dichlorobenzene	106-46-7	16.583	87.100	% Recov	41.000	113.000				07/11/08
MS	2,4-Dinitrotoluene	121-14-2	16.043	84.200	% Recov	65.000	109.000				07/11/08
MS	2-Fluorophenol(Surr)	367-12-4	16.400	86.100	% Recov	50.000	110.000				07/11/08
MS	Acenaphthene	83-32-9	16.974	89.100	% Recov	62.000	112.000				07/11/08
MS	4-Chloro-3-methylphenol	59-50-7	24.536	85.900	% Recov	59.000	115.000				07/11/08
MS	2-Chlorophenol	95-57-8	25.525	89.300	% Recov	69.000	111.000				07/11/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	17.378	91.200	% Recov	69.000	115.000				07/11/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	18.249	95.800	% Recov	58.000	109.000				07/11/08
MS	Phenol	108-95-2	23.000	80.500	% Recov	59.000	115.000				07/11/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	17.592	92.400	% Recov	60.000	118.000				07/11/08
MS	4-Nitrophenol	100-02-7	24.462	85.600	% Recov	32.000	130.000				07/11/08
MS	Pentachlorophenol	87-86-5	26.278	92.000	% Recov	51.000	121.000				07/11/08
MS	Phenol-d5(Surr)	4165-62-2	17.191	90.300	% Recov	59.000	116.000				07/11/08
MS	Pyrene	129-00-0	20.004	105.000	% Recov	58.000	116.000				07/11/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	17.313	90.900	% Recov	60.000	120.000				07/11/08
MS	Terphenyl-d14(Surr)	98904-43-9	21.507	113.000	% Recov	60.000	120.000				07/11/08
MSD	1,2,4-Trichlorobenzene	120-82-1	16.173	84.900	% Recov	50.000	120.000				07/11/08
MSD	1,4-Dichlorobenzene	106-46-7	15.687	82.400	% Recov	41.000	113.000				07/11/08
MSD	2,4-Dinitrotoluene	121-14-2	15.988	83.900	% Recov	65.000	109.000				07/11/08
MSD	2-Fluorophenol(Surr)	367-12-4	11.993	63.000	% Recov	50.000	110.000				07/11/08
MSD	Acenaphthene	83-32-9	16.557	86.900	% Recov	62.000	112.000				07/11/08
MSD	4-Chloro-3-methylphenol	59-50-7	20.466	71.600	% Recov	59.000	115.000				07/11/08
MSD	2-Chlorophenol	95-57-8	22.306	78.100	% Recov	69.000	111.000				07/11/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	17.464	91.700	% Recov	69.000	115.000				07/11/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	18.125	95.200	% Recov	58.000	109.000				07/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081283
Matrix: WATER
Test: SW-846 8270C Semi-Vols

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
MSD	Phenol	108-95-2	24.018	84.100	% Recov	59.000	115.000				07/11/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	18.182	95.500	% Recov	60.000	118.000				07/11/08
MSD	4-Nitrophenol	100-02-7	28.447	99.600	% Recov	32.000	130.000				07/11/08
MSD	Pentachlorophenol	87-86-5	22.042	77.100	% Recov	51.000	121.000				07/11/08
MSD	Phenol-d5(Surr)	4165-62-2	15.289	80.300	% Recov	59.000	116.000				07/11/08
MSD	Pyrene	129-00-0	18.948	99.500	% Recov	58.000	116.000				07/11/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	17.469	91.700	% Recov	60.000	120.000				07/11/08
MSD	Terphenyl-d14(Surr)	98904-43-9	22.920	120.000	% Recov	60.000	120.000				07/11/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	84.900		RPD			6.496	25.000		07/10/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	82.400		RPD			5.546	25.000		07/10/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	83.900		RPD			0.357	25.000		07/10/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	63.000		RPD			30.986	25.000 *		07/10/08
SPK-RPD	Acenaphthene	83-32-9	86.900		RPD			2.500	25.000		07/10/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	71.600		RPD			18.159	25.000		07/10/08
SPK-RPD	2-Chlorophenol	95-57-8	78.100		RPD			13.381	25.000		07/10/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	91.700		RPD			0.547	25.000		07/10/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	95.200		RPD			0.628	25.000		07/10/08
SPK-RPD	Phenol	108-95-2	84.100		RPD			4.374	16.000		07/10/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	95.500		RPD			3.300	25.000		07/10/08
SPK-RPD	4-Nitrophenol	100-02-7	99.600		RPD			15.119	25.000		07/10/08
SPK-RPD	Pentachlorophenol	87-86-5	77.100		RPD			17.623	25.000		07/10/08
SPK-RPD	Phenol-d5(Surr)	4165-62-2	80.300		RPD			11.723	25.000		07/10/08
SPK-RPD	Pyrene	129-00-0	99.500		RPD			5.379	25.000		07/10/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	91.700		RPD			0.876	25.000		07/10/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	120.000		RPD			6.009	25.000		07/10/08
SURR	2-Fluorophenol(Surr)	367-12-4	18.581	88.300	% Recov	50.000	110.000				07/11/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	19.725	93.700	% Recov	58.000	109.000				07/11/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	19.880	94.400	% Recov	60.000	118.000				07/11/08
SURR	Phenol-d5(Surr)	4165-62-2	18.800	89.300	% Recov	59.000	116.000				07/11/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	18.304	86.900	% Recov	60.000	120.000				07/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081283
Matrix: WATER
Test: SW-846 8270C Semi-Vols

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
SURR	Terphenyl-d14(Surr)	98904-43-9	22.461	107.000	% Recov	60.000	120.000				07/11/08
BATCH QC											
BLANK	1,2-Dichlorobenzene	95-50-1	< 1.5	n/a	ug/L					U	07/10/08
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 2.2	n/a	ug/L					U	07/10/08
BLANK	1,3-Dichlorobenzene	541-73-1	< 1.3	n/a	ug/L					U	07/10/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.4	n/a	ug/L					U	07/10/08
BLANK	2,4-Dichlorophenol	120-83-2	< 0.50	n/a	ug/L					U	07/10/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 0.50	n/a	ug/L					U	07/10/08
BLANK	2,4,5-Trichlorophenol	95-95-4	< 0.65	n/a	ug/L					U	07/10/08
BLANK	2,4,6-Trichlorophenol	88-06-2	< 0.50	n/a	ug/L					U	07/10/08
BLANK	2,4-Dimethylphenol	105-67-9	< 0.95	n/a	ug/L					U	07/10/08
BLANK	2,6-Dinitrotoluene	606-20-2	< 0.50	n/a	ug/L					U	07/10/08
BLANK	2-Chloronaphthalene	91-58-7	< 3.5	n/a	ug/L					U	07/10/08
BLANK	2-Fluorophenol(Surr)	367-12-4	16.346	81.700	% Recov	50.000	110.000				07/10/08
BLANK	2-Methylnaphthalene	91-57-6	< 3.0	n/a	ug/L					U	07/10/08
BLANK	2-Methylphenol (cresol, o-)	95-48-7	< 0.50	n/a	ug/L					U	07/10/08
BLANK	2-Nitroaniline	88-74-4	< 0.50	n/a	ug/L					U	07/10/08
BLANK	2-Nitrophenol	88-75-5	< 0.50	n/a	ug/L					U	07/10/08
BLANK	3 & 4 Methylphenol Total	65794-96-9	< 0.50	n/a	ug/L	0.000	5.000			U	07/10/08
BLANK	3-Nitroaniline	99-09-2	< 0.60	n/a	ug/L					U	07/10/08
BLANK	4,6-Dinitro-2-methylphenol	534-52-1	< 1.0	n/a	ug/L					U	07/10/08
BLANK	4-Bromophenylphenyl ether	101-55-3	< 1.0	n/a	ug/L					U	07/10/08
BLANK	4-Chlorophenylphenyl ether	7005-72-3	< 1.7	n/a	ug/L					U	07/10/08
BLANK	Acenaphthene	83-32-9	< 2.6	n/a	ug/L					U	07/10/08
BLANK	Acenaphthylene	208-96-8	< 2.3	n/a	ug/L					U	07/10/08
BLANK	Anthracene	120-12-7	< 0.50	n/a	ug/L					U	07/10/08
BLANK	Bis(2-chloroethyl) ether	111-44-4	< 0.90	n/a	ug/L					U	07/10/08
BLANK	Benzo(a)anthracene	56-55-3	< 0.50	n/a	ug/L					U	07/10/08
BLANK	Benzo(b)fluoranthene	205-99-2	< 0.50	n/a	ug/L					U	07/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081283
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	07/10/08
BLANK	Benzo(a)pyrene	50-32-8	< 0.50	n/a	ug/L					U	07/10/08
BLANK	Bis(2-Chloroethoxy)methane	111-91-1	< 0.50	n/a	ug/L					U	07/10/08
BLANK	Bis(2-ethylhexyl) phthalate	117-81-7	< 0.80	n/a	ug/L					U	07/10/08
BLANK	Bis(2-chloro-1-methylethyl)eth	108-60-1	< 1.0	n/a	ug/L	0.000	10.000			U	07/10/08
BLANK	Benzo(k)fluoranthene	207-08-9	< 0.50	n/a	ug/L					U	07/10/08
BLANK	Butylbenzylphthalate	85-68-7	< 0.60	n/a	ug/L					U	07/10/08
BLANK	Carbazole	86-74-8	< 0.50	n/a	ug/L					U	07/10/08
BLANK	4-Chloroaniline	106-47-8	< 0.50	n/a	ug/L					U	07/10/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 0.50	n/a	ug/L					U	07/10/08
BLANK	2-Chlorophenol	95-57-8	< 0.50	n/a	ug/L					U	07/10/08
BLANK	Chrysene	218-01-9	< 0.50	n/a	ug/L					U	07/10/08
BLANK	3,3'-Dichlorobenzidine	91-94-1	< 0.80	n/a	ug/L					U	07/10/08
BLANK	Dibenz[a,h]anthracene	53-70-3	< 0.50	n/a	ug/L					U	07/10/08
BLANK	Dibenzofuran	132-64-9	< 2.2	n/a	ug/L					U	07/10/08
BLANK	Di-n-butylphthalate	84-74-2	< 2.3	n/a	ug/L					U	07/10/08
BLANK	Diethylphthalate	84-66-2	< 1.9	n/a	ug/L					U	07/10/08
BLANK	Dimethyl phthalate	131-11-3	< 0.50	n/a	ug/L					U	07/10/08
BLANK	2,4-Dinitrophenol	51-28-5	< 2.0	n/a	ug/L					U	07/10/08
BLANK	Di-n-octylphthalate	117-84-0	< 0.50	n/a	ug/L					U	07/10/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 0.60	n/a	ug/L					U	07/10/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	18.915	94.600	% Recov	58.000	109.000				07/10/08
BLANK	Fluorene	86-73-7	< 1.4	n/a	ug/L					U	07/10/08
BLANK	Fluoranthene	206-44-0	< 0.50	n/a	ug/L					U	07/10/08
BLANK	Hexachlorobenzene	118-74-1	< 0.50	n/a	ug/L					U	07/10/08
BLANK	Hexachlorobutadiene	87-68-3	< 2.0	n/a	ug/L					U	07/10/08
BLANK	Hexachlorocyclopentadiene	77-47-4	< 5.0	n/a	ug/L					U	07/10/08
BLANK	Hexachloroethane	67-72-1	< 1.4	n/a	ug/L					U	07/10/08
BLANK	Indeno(1,2,3-cd)pyrene	193-39-5	< 0.50	n/a	ug/L					U	07/10/08
BLANK	Isophorone	78-59-1	< 0.50	n/a	ug/L					U	07/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081283
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	07/10/08
BLANK	Naphthalene	91-20-3	< 2.1	n/a	ug/L					U	07/10/08
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	19.220	96.100	% Recov	60.000	118.000				07/10/08
BLANK	Nitrobenzene	98-95-3	< 0.60	n/a	ug/L					U	07/10/08
BLANK	4-Nitrophenol	100-02-7	< 1.0	n/a	ug/L					U	07/10/08
BLANK	4-Nitroaniline	100-01-6	< 1.0	n/a	ug/L					U	07/10/08
BLANK	N-Nitrosodiphenylamine	86-30-6	< 0.50	n/a	ug/L					U	07/10/08
BLANK	Pentachlorophenol	87-86-5	< 1.5	n/a	ug/L					U	07/10/08
BLANK	Phenanthrene	85-01-8	< 0.55	n/a	ug/L					U	07/10/08
BLANK	Phenol-d5(Surr)	4165-62-2	18.773	93.900	% Recov	59.000	116.000				07/10/08
BLANK	Pyrene	129-00-0	< 0.50	n/a	ug/L					U	07/10/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	17.789	88.900	% Recov	60.000	120.000				07/10/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	21.094	105.000	% Recov	60.000	120.000				07/10/08
LCS	1,2,4-Trichlorobenzene	120-82-1	17.003	85.000	% Recov	46.000	107.000				07/10/08
LCS	1,4-Dichlorobenzene	106-46-7	16.512	82.600	% Recov	42.000	111.000				07/10/08
LCS	2,4-Dinitrotoluene	121-14-2	16.151	80.800	% Recov	59.000	106.000				07/10/08
LCS	2-Fluorophenol(Surr)	367-12-4	15.158	75.800	% Recov	50.000	110.000				07/10/08
LCS	Acenaphthene	83-32-9	16.856	84.300	% Recov	61.000	116.000				07/10/08
LCS	4-Chloro-3-methylphenol	59-50-7	24.335	81.100	% Recov	61.000	106.000				07/10/08
LCS	2-Chlorophenol	95-57-8	24.775	82.600	% Recov	66.000	106.000				07/10/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	15.765	78.800	% Recov	71.000	114.000				07/10/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	18.114	90.600	% Recov	58.000	109.000				07/10/08
LCS	Phenol	108-95-2	23.953	79.800	% Recov	67.000	105.000				07/10/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	17.877	89.400	% Recov	60.000	118.000				07/10/08
LCS	4-Nitrophenol	100-02-7	24.597	82.000	% Recov	32.000	118.000				07/10/08
LCS	Pentachlorophenol	87-86-5	23.327	77.800	% Recov	62.000	114.000				07/10/08
LCS	Phenol-d5(Surr)	4165-62-2	17.031	85.200	% Recov	59.000	116.000				07/10/08
LCS	Pyrene	129-00-0	20.288	101.000	% Recov	66.000	118.000				07/10/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	16.695	83.500	% Recov	60.000	120.000				07/10/08
LCS	Terphenyl-d14(Surr)	98904-43-9	21.615	108.000	% Recov	60.000	120.000				07/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081283
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date: 06/24/08
Receive Date:06/24/08

Lab ID: W08GR01833
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	25.770	103.000	% Recov	63.000	117.000				07/03/08
MS	Benzene	71-43-2	25.510	102.000	% Recov	75.000	129.000				07/03/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	50.200	100.000	% Recov	75.000	125.000				07/03/08
MS	Chlorobenzene	108-90-7	26.220	105.000	% Recov	79.000	119.000				07/03/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	54.920	110.000	% Recov	75.000	125.000				07/03/08
MS	Toluene-d8(Surr)	2037-26-5	48.850	97.700	% Recov	75.000	125.000				07/03/08
MS	Toluene	108-88-3	26.220	105.000	% Recov	76.000	120.000				07/03/08
MS	Trichloroethene	79-01-6	22.970	91.900	% Recov	73.000	123.000				07/03/08
MSD	1,1-Dichloroethene	75-35-4	23.680	94.700	% Recov	63.000	117.000				07/03/08
MSD	Benzene	71-43-2	25.680	103.000	% Recov	75.000	129.000				07/03/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	49.520	99.000	% Recov	75.000	125.000				07/03/08
MSD	Chlorobenzene	108-90-7	26.330	105.000	% Recov	79.000	119.000				07/03/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	53.960	108.000	% Recov	75.000	125.000				07/03/08
MSD	Toluene-d8(Surr)	2037-26-5	49.150	98.300	% Recov	75.000	125.000				07/03/08
MSD	Toluene	108-88-3	27.010	108.000	% Recov	76.000	120.000				07/03/08
MSD	Trichloroethene	79-01-6	23.180	92.700	% Recov	73.000	123.000				07/03/08
SPK-RPD	1,1-Dichloroethene	75-35-4	94.700		RPD			8.397	20.000		07/03/08
SPK-RPD	Benzene	71-43-2	103.000		RPD			0.976	20.000		07/03/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	99.000		RPD			1.005	20.000		07/03/08
SPK-RPD	Chlorobenzene	108-90-7	105.000		RPD			0.000	20.000		07/03/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	108.000		RPD			1.835	20.000		07/03/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	98.300		RPD			0.612	20.000		07/03/08
SPK-RPD	Toluene	108-88-3	108.000		RPD			2.817	20.000		07/03/08
SPK-RPD	Trichloroethene	79-01-6	92.700		RPD			0.867	20.000		07/03/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081283
Matrix: WATER
Test: VOA Ground Water Protection

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
Lab ID: W08GR01854											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	49.790	99.600	% Recov	75.000	125.000				07/03/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	53.630	107.000	% Recov	75.000	125.000				07/03/08
SURR	Toluene-d8(Surr)	2037-26-5	49.860	99.700	% Recov	75.000	125.000				07/03/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	07/02/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L					U	07/02/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L					U	07/02/08
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	n/a	ug/L	0.000	5.000			U	07/02/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L					U	07/02/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L					U	07/02/08
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 1.0	n/a	ug/L					U	07/02/08
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	07/02/08
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/L					U	07/02/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	07/02/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	50.180	100.000	% Recov	75.000	125.000				07/02/08
BLANK	Bromoform	75-25-2	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	07/02/08
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/L					U	07/02/08
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 1.0	n/a	ug/L					U	07/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20081283
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	07/02/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	54.680	109.000	% Recov	75.000	125.000				07/02/08
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L					U	07/02/08
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Bromomethane	74-83-9	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Chloromethane	74-87-3	< 1.0	n/a	ug/L					U	07/02/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	0.000	5.000			U	07/02/08
BLANK	Toluene-d8(Surr)	2037-26-5	47.890	95.800	% Recov	75.000	125.000				07/02/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	07/02/08
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Trichloromonofluoromethane	75-69-4	< 1.0	n/a	ug/L	0.000	5.000			U	07/02/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	07/02/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	07/02/08
LCS	1,1-Dichloroethene	75-35-4	28.410	114.000	% Recov	75.000	125.000				07/02/08
LCS	Benzene	71-43-2	24.960	99.800	% Recov	75.000	125.000				07/02/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	49.420	98.800	% Recov	75.000	125.000				07/02/08
LCS	Chlorobenzene	108-90-7	25.770	103.000	% Recov	75.000	125.000				07/02/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	54.780	110.000	% Recov	75.000	125.000				07/02/08
LCS	Toluene-d8(Surr)	2037-26-5	48.890	97.800	% Recov	75.000	125.000				07/02/08
LCS	Toluene	108-88-3	26.120	104.000	% Recov	75.000	125.000				07/02/08
LCS	Trichloroethene	79-01-6	22.470	89.900	% Recov	75.000	125.000				07/02/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-051

Group #: WSCF20081283
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Tc-99 matrix spike failed due to the high sample concentration. Spike criterion does not apply. lmh SVOA: The spike relative percent difference (precision) for the surrogate, 2-Fluorophenol, exceeded the 20% control limit. cgc 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.

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-051
Sample # W08GR01854
Client ID: B1TTV1 TRENT WSCF

Matrix: WATER

Group #: WSCF20081283
Department: Radiochemistry
Sampled: 06/26/08
Received: 06/26/08

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	B	0.190	pCi/L	+-0.0703	pCi/L	1.00	0.030		08/04/08
Am-243 tracer by AEA	AM243	LA-508-471		10.0	pCi/L			1.00	0.011		08/04/08
Gamma Energy Analysis-grd H2O											
Cobalt-60	10198-40-0	LA-508-481		49.6	pCi/L	+-8.40	pCi/L	1.00	7.6		07/01/08
Cesium-137	10045-97-3	LA-508-481	U	-1.03	pCi/L	+-4.39	pCi/L	1.00	7.6		07/01/08
Neptunium by AEA											
Neptunium-237	13994-20-2	LA-508-471	U	0.250	pCi/L	+-0.400	pCi/L	1.00	0.66		07/30/08
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	0.100	pCi/L	+-0.0760	pCi/L	1.00	0.11		08/04/08
Pu-239/240 by AEA	PU-239/240	LA-508-471		0.420	pCi/L	+-0.139	pCi/L	1.00	0.013		08/04/08
Pu-242 tracer by AEA	PU242	LA-508-471		16.0	pCi/L			1.00	0.062		08/04/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-4.60	pCi/L	+-4.60	pCi/L	1.00	0.94		07/09/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		97.5	Percent			1.00	0.0		07/09/08
TC99 by ICP-200.8 MS Prep											**07/10/08**
TC99 by ICP-200.8 MS											
Technetium by ICP-MS	14133-76-7	LA-505-412		0.900	ug/L			1.00	1.0e-03		07/14/08
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		2.00e+04	pCi/L	+-4.00e+03	pCi/L	1.00	6.0		07/09/08
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		1.90	pCi/L	+-0.513	pCi/L	1.00	0.031		08/04/08
Uranium-235	15117-96-1	LA-508-471		0.100	pCi/L	+-0.0510	pCi/L	1.00	0.034		08/04/08
Uranium-238	U-238	LA-508-471		1.50	pCi/L	+-0.420	pCi/L	1.00	0.011		08/04/08
U-232 tracer by AEA	U232	LA-508-471		10.0	pCi/L			1.00	0.060		08/04/08

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

B - The analyte < the RDL but > = the IDL/MDL (inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
D - Analyte was identified at a secondary dilution factor(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 #: WSCF20081283
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01854	B1TTV1	TRENT	Gamma Energy Analysis-grd H2O	BI-214				1.6e+02	pCi/L
W08GR01854	B1TTV1	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error				27	%
W08GR01854	B1TTV1	TRENT	Gamma Energy Analysis-grd H2O	RA-226				1.2e+02	pCi/L
W08GR01854	B1TTV1	TRENT	Gamma Energy Analysis-grd H2O	RA-226 Count Error				22	%

RQ=Result Qualifier

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081283
Matrix: WATER
Test: Gamma Energy Analysis-grd H2O

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
Lab ID: W08GR01854											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Cobalt-60	10198-40-0	55.24		RPD			10.659	20.000		07/01/08
DUP	Cesium-137	10045-97-3	U-7.913		RPD			n/a	20.000		07/01/08
BATCH QC											
BLANK	Cobalt-60	10198-40-0	U2.485	n/a	pCi/L	-10.000	1000.000				07/02/08
BLANK	Cesium-137	10045-97-3	U-2.105	n/a	pCi/L	-10.000	1000.000				07/02/08
LCS	Cobalt-60	10198-40-0	10250	103.119	% Recov	80.000	120.000				07/01/08
LCS	Cesium-137	10045-97-3	6233	103.195	% Recov	80.000	120.000				07/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081283
Matrix: WATER
Test: Americium by AEA

Sample Date: 06/24/08
Receive Date:06/24/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01833											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Americium-241	14596-10-2	U0.1		RPD			n/a	20.000		08/06/08
DUP	Am-243 tracer by AEA	AM243	10.01	77.750	% Recov	30.000	105.000				08/06/08
Lab ID: W08GR01854											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Am-243 tracer by AEA	AM243	10.01	93.610	% Recov	30.000	105.000				08/04/08
BATCH QC											
BLANK	Americium-241	14596-10-2	0.22	0.220	pCi/L	-10.000	1000.000				08/04/08
BLANK	Am-243 tracer by AEA	AM243	10.01	83.990	% Recov	30.000	105.000				08/04/08
LCS	Americium-241	14596-10-2	11.79	99.494	% Recov	80.000	120.000				08/04/08
LCS	Am-243 tracer by AEA	AM243	11.11	86.850	% Recov	30.000	105.000				08/04/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081283
Matrix: WATER
Test: Neptunium by AEA

Sample Date: 06/24/08
Receive Date:06/24/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01833											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Neptunium-237	13994-20-2	U6e-2		RPD			n/a	20.000		07/30/08
MS	Neptunium-237	13994-20-2	72.4	72.400	% Recov	75.000	125.000			*	07/30/08
MSD	Neptunium-237	13994-20-2	71	71.000	% Recov	75.000	125.000			*	07/30/08
SPK-RPD	Neptunium-237	13994-20-2	71.000		% RPD			1.953	20.000		07/30/08
Lab ID: W08GR01840											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	75.3	75.300	% Recov	75.000	125.000				07/30/08
Lab ID: W08GR01854											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	85.2	85.200	% Recov	75.000	125.000				07/30/08
Lab ID: W08P002697											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	101.6	101.600	% Recov	75.000	125.000				07/30/08
BATCH QC											
BLANK	Neptunium-237	13994-20-2	0.12	0.120	pCi/L	-10.000	1000.000				07/30/08
LCS	Neptunium-237	13994-20-2	13.198	103.554	% Recov	80.000	120.000				07/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081283
Matrix: WATER
Test: Plutonium Isotopics by AEA

Sample Date: 06/24/08
Receive Date:06/24/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01833											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Plutonium-238	13981-16-3	U3.2e-2		RPD			n/a	20.000		08/06/08
DUP	Pu-239/240 by AEA	PU-239/240	U3.2e-2		RPD			n/a	20.000		08/06/08
DUP	Pu-242 tracer by AEA	PU242	15.59	95.300	% Recov	30.000	105.000				08/06/08
Lab ID: W08GR01854											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Pu-242 tracer by AEA	PU242	15.59	90.070	% Recov	30.000	105.000				08/04/08
BATCH QC											
BLANK	Plutonium-238	13981-16-3	U-5e-3	n/a	pCi/L	-10.000	1000.000				08/04/08
BLANK	Pu-239/240 by AEA	PU-239/240	U3e-2	n/a	pCi/L	-10.000	1000.000				08/04/08
BLANK	Pu-242 tracer by AEA	PU242	15.59	77.760	% Recov	30.000	105.000				08/04/08
LCS	Pu-239/240 by AEA	PU-239/240	11.5	89.529	% Recov	80.000	120.000				08/04/08
LCS	Pu-242 tracer by AEA	PU242	17.3	80.290	% Recov	30.000	105.000				08/04/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081283
Matrix: WATER
Test: Strontium 89/90

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
Lab ID: W08GR01854											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	80.1	80.100	% Recov	30.000	105.000				07/09/08
DUP	Strontium-89/90	SR-RAD	U-1.1		RPD			n/a	20.000		07/09/08
SURR	Sr-85 Tracer by Beta Counting	SR85	97.5	97.500	% Recov	30.000	105.000				07/09/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	100.9	100.900	% Recov	30.000	105.000				07/09/08
BLANK	Strontium-89/90	10098-97-2	U-3.3	n/a	pCi/L	-10.000	100.000				07/09/08
LCS	Sr-85 Tracer by Beta Counting	SR85	95.3	95.300	% Recov	30.000	105.000				07/09/08
LCS	Strontium-89/90	10098-97-2	116.0	83.573	% Recov	80.000	120.000				07/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081283
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	07/14/08
LCS	Technetium by ICP-MS	14133-76-7	.137	95.804	% Recov	49.000	125.000				07/14/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20081283
Matrix: WATER
Test: TC99 by Liquid Scin.

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01411											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tc-99 by Liquid Scin.	14133-76-7	2.6E+04		RPD			12.245	20.000		07/09/08
MS	Tc-99 by Liquid Scin.	14133-76-7	293.3	38.990	% Recov	75.000	125.000			*	07/09/08
BATCH QC											
BLANK	Tc-99 by Liquid Scin.	14133-76-7	U-1.8	n/a	pCi/L	-10.000	10.000				07/09/08
LCS	Tc-99 by Liquid Scin.	14133-76-7	198	105.263	% Recov	80.000	120.000				07/09/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20081283
Matrix: WATER
Test: Uranium Isotopics by AEA

Sample Date: 06/24/08
Receive Date:06/24/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01833											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	U-232 tracer by AEA	U232	10.23	95.710	% Recov	30.000	105.000				08/04/08
DUP	Uranium-233/234	U-233/234	U3.9e-2		RPD			n/a	20.000		08/04/08
DUP	Uranium-235	15117-96-1	2.4e-2		RPD			n/a	20.000		08/04/08
DUP	Uranium-238	U-238	2.2e-2		RPD			19.672	20.000		08/04/08
Lab ID: W08GR01854											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	U-232 tracer by AEA	U232	10.23	99.200	% Recov	30.000	105.000				08/04/08
BATCH QC											
BLANK	U-232 tracer by AEA	U232	10.23	89.780	% Recov	30.000	105.000				08/04/08
BLANK	Uranium-233/234	13966-29-5	7.2e-2	0.072	pCi/L	-10.000	1000.000				08/04/08
BLANK	Uranium-235	15117-96-1	4.4e-2	0.044	pCi/L	-10.000	1000.000				08/04/08
BLANK	Uranium-238	24678-82-8	2.7e-2	0.027	pCi/L	-10.000	1000.000				08/04/08
LCS	U-232 tracer by AEA	U232	11.36	94.570	% Recov	30.000	105.000				08/04/08
LCS	Uranium-233/234	13966-29-5	n/a	n/a	% Recov	75.000	125.000				08/04/08
LCS	Uranium-238	24678-82-8	19.04	100.448	% Recov	80.000	120.000				08/04/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-051

Group #: WSCF20081283
Department: Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Tc-99 matrix spike failed due to the high sample concentration. Spike criterion does not apply. lmh SVOA: The spike relative percent difference (precision) for the surrogate, 2-Fluorophenol, exceeded the 20% control limit. cgc 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 tha calibration standard.

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

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M4W41-SLF-08-979

ATTACHMENT 5

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
08/11/08

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 123516/ES10
Group#: 20081283
Project#: F08-051
Proj Mgr: Steve Trent E6-35
Phone: 373-5869

The following samples were received from you on 06/26/08. 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
W08GR01854	B1TTV1	TRENT	Water				06/26/08
		@2008	@AEA-30	@AEA-31	@AEA-32	@AEA-33	
		@GEA-GPP	@GPP6010	@IC-30	@SR89_90	@SVOCGPP	@TC99
		@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

Fluor Hanford Inc. 08/11/08	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	F08-051-001	PAGE 1 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 7N	DATA TURNAROUND
NCO SAMPLER Fulton	TRENT, SJ	373-5869	WIDRIG, DL	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5853, I-011	200-BP-5 OU Characterization for 299-E33-340 - Groundwater		F08-051		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
	HNF-N-498-1	305'	123516ES10	GOVERNMENT VEHICLE	
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**		
Waste Sampling & Characterization 20081283	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
Radioactive Tie To: B1TVJ8

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	Semi-VOA - 8270B (TCL);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	Cyanide (Total) - 335.2;	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	Gamma Spectroscopy (Cesium-137, Cobalt-60)	Strontium-89,90 -- Total Sr;	Technetium-99;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	[redacted]									
B1TTV1 W08GR01854	WATER	6-26-08	0815	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
				029038	803901	029911	029038	028941	024690	029038		028689	028688

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CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Chris Fulton [signature]	6-26-08 1500	TA Pilzman [signature]	6-26-08 1000
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

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}
Note - VOA's were not Filtered everything else was Filtered

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	F08-051-001	PAGE 2 OF 2

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 7N	DATA TURNAROUND
NCO SAMPLER Fulton	TRENT, SJ	373-5869	WIDRIG, DL	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C5853, I-011	200-BP-5 OU Characterization for 299-E33-340 - Groundwater		F08-051		
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
	HNF-N-498-1	305'	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
Radioactive Tie To: B1TVJ8

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	1000mL	1000mL	1000mL						
SAMPLE ANALYSIS	Isotopic Plutonium; ✓	Isotopic Uranium; ✓	Neptunium-237; ✓	Americium-241; ✓						

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	[redacted]									
B1TTV1	WATER	6-26-08	0815	✓	✓	✓	✓						
				02.26.08									

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Christy Fulton	6-26-08 1000	JA Finzer	6-26-08 1000
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

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.

Note - Filtered

ICED

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

A-6003-618(01/06)