RECEIVED JUNE 6, 2008

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Memorandum

M4W41-SLF-08-612

To: H. Hampt E6-35 Date: June 6, 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 WSCF20080771 – SAF NUMBER F08-076

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

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

This letter contains the following information for sample delivery group WSCF20080771:

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

SLF/grf

Attachments 4

M4W41-SLF-08-612

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20080771
Data Deliverable Date: 23-may-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F08-076	B1TNV4	W08GR00998	WATER

M4W41-SLF-08-612

ATTACHMENT 2

NARRATIVE

Consisting of 5 pages
Including cover page

Introduction

One S&GRP sample was received at the WSCF Laboratory on April 10, 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 Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

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

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report,* pages 15 through 18, for a complete listing of approved analytical methods.

Inorganic Comments

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

- Sample result was D flagged.

All QC controls are within the established limits.

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See pages 22 through 23 for QC details. Analytical Note(s):

- Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V4Y8 (SDG# 20080769, SAF# F08-039).
- 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):

- Sample result exceeded spiking levels by a factor of 4. Spike recoveries are not valid. Sample result was X flagged.

All other QC controls are within the established limits.

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

- Matrix Spike and Matrix Spike Duplicate recoveries were slightly less than established limits due to possible reducing nature of sample. Sample result was N flagged.

All other QC controls are within the established limits.

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

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TPF7 (SDG# 20080717, SAF# F08-087).

- Sample results were D flagged if dilution(s) were required.

- Aluminum, Calcium, Iron, Magnesium and Sodium contamination detected in the Blank was evaluated and affected sample results were C flagged.

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

- Iron – Matrix Spike and Matrix Spike Duplicate recoveries exceeded established laboratory limits. Sample result was N flagged.

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 30 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TVK4 (SDG# 20080841, SAF# F08-052).

All QC controls are within the established limits.

pH – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See page 31 for QC details.

All QC controls are within the established limits.

Total Alkalinity – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See page 32 for QC details.

All QC controls are within the established limits.

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 40 through 44 for QC details.

All QC controls are within the established limits.

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See page 45 for QC details.

All QC controls are within the established limits.

VOA – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample, were analyzed with this delivery group per the GRP Letter of Instruction. See pages 46 through 48 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TFK6 (SDG# 20080773, SAF# F08-067).

All QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – There are no hold times associated with WSCF's radiochemical methods. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 51 through 58 for QC details. Analytical Note(s):

- Neptunium-237 – Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TNR1 (SDG# 20080637, SAF# F08-073). Matrix Spikes were also analyzed on samples B1TVK4 (SDG# 20080841, SAF# F08-052) and B1TNV4 of this SDG.

All QC controls are within the established limits.

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

Scot L. Fitzgerald
WSCF Analytical Laboratory Manager

Pauline D. Mix
WSCF Client Services

M4W41-SLF-08-612

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 50 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: S. Fitzgerald 6/6/08

Client Services: P.O. Min 6/6/2008

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

Contract#: FH-EIS-2003-MEM-001
Report#: WSCF20080771
Report Date: 6-jun-2008
Report WGPP/ver. 5.2
Groundwater Remediation Program

w13qlog v4.2 06-jun-2008 07:58:10

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20080771

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
35947	4	36362	40622	LCS		pH Direct Measurement
35947	6	36362	40622	DUP	W08GR00998	pH Direct Measurement
35947	5	36362	40622	SAMPLE	W08GR00998	pH Direct Measurement
35968	2	36383	40647	BLANK		Anions by Ion Chromatography
35968	9	36383	40647	BLANK		Anions by Ion Chromatography
35968	3	36383	40647	LCS		Anions by Ion Chromatography
35968	5	36383	40647	DUP	W08GR00995	Anions by Ion Chromatography
35968	6	36383	40647	MS	W08GR00995	Anions by Ion Chromatography
35968	7	36383	40647	MSD	W08GR00995	Anions by Ion Chromatography
35968	7	36383	40647	SPK-RPD	W08GR00995	Anions by Ion Chromatography
35968	8	36383	40647	SAMPLE	W08GR00998	Anions by Ion Chromatography
36033	2	36446	40716	BLANK		Hexavalent chromium
36033	3	36446	40716	LCS		Hexavalent chromium
36033	5	36446	40716	DUP	W08GR00998	Hexavalent chromium
36033	6	36446	40716	MS	W08GR00998	Hexavalent chromium
36033	7	36446	40716	MSD	W08GR00998	Hexavalent chromium
36033	4	36446	40716	SAMPLE	W08GR00998	Hexavalent chromium
36033	7	36446	40716	SPK-RPD	W08GR00998	Hexavalent chromium
35960	1	36375	40749	BLANK		ICP Metals Analysis, Grd H20 P
35960	2	36375	40749	LCS		ICP Metals Analysis, Grd H20 P
35960	19	36375	40749	MS	W08GR00750	ICP Metals Analysis, Grd H20 P
35960	20	36375	40749	MSD	W08GR00750	ICP Metals Analysis, Grd H20 P
35960	20	36375	40749	SPK-RPD	W08GR00750	ICP Metals Analysis, Grd H20 P
35960	4	36375	40749	MS	W08GR00916	ICP Metals Analysis, Grd H20 P
35960	5	36375	40749	MSD	W08GR00916	ICP Metals Analysis, Grd H20 P
35960	5	36375	40749	SPK-RPD	W08GR00916	ICP Metals Analysis, Grd H20 P
35960	21	36375	40749	SAMPLE	W08GR00998	ICP Metals Analysis, Grd H20 P
36046	1	36461	40750	LCS		Total Alkalinity as mg/L CaCO3
36046	14	36461	40750	LCS		Total Alkalinity as mg/L CaCO3
36046	25	36461	40750	LCS		Total Alkalinity as mg/L CaCO3
36046	3	36461	40750	DUP	W08GR00998	Total Alkalinity as mg/L CaCO3
36046	2	36461	40750	SAMPLE	W08GR00998	Total Alkalinity as mg/L CaCO3
36046	5	36461	40750	DUP	W08P002029	Total Alkalinity as mg/L CaCO3
36081	1	36496	40817	BLANK		Cyanide by Midi/Spectrophotom
36081	2	36496	40817	LCS		Cyanide by Midi/Spectrophotom
36081	5	36496	40817	MS	W08GR00998	Cyanide by Midi/Spectrophotom
36081	6	36496	40817	MSD	W08GR00998	Cyanide by Midi/Spectrophotom
36081	4	36496	40817	SAMPLE	W08GR00998	Cyanide by Midi/Spectrophotom
36081	6	36496	40817	SPK-RPD	W08GR00998	Cyanide by Midi/Spectrophotom
36100	3	36516	40824	BLANK		Ammonia (N) by IC
36100	8	36516	40824	BLANK		Ammonia (N) by IC
36100	1	36516	40824	LCS		Ammonia (N) by IC
36100	5	36516	40824	DUP	W08GR00998	Ammonia (N) by IC
36100	6	36516	40824	MS	W08GR00998	Ammonia (N) by IC
36100	7	36516	40824	MSD	W08GR00998	Ammonia (N) by IC
36100	4	36516	40824	SAMPLE	W08GR00998	Ammonia (N) by IC

36100	7	36516	40824	SPK-RPD	W08GR00998	Ammonia (N) by IC
36229	1	36645	40980	BLANK		ICP-200.8 MS All possible meta
36229	2	36645	40980	LCS		ICP-200.8 MS All possible meta
36229	6	36645	40980	SAMPLE	W08GR00998	ICP-200.8 MS All possible meta
36229	4	36645	40980	MS	W08GR01072	ICP-200.8 MS All possible meta
36229	5	36645	40980	MSD	W08GR01072	ICP-200.8 MS All possible meta
36229	5	36645	40980	SPK-RPD	W08GR01072	ICP-200.8 MS All possible meta

w13qlog v4.2 06-jun-2008 07:58:10

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20080771

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			40834	BLANK		SW-846 8270C Semi-Vols
			40834	LCS		SW-846 8270C Semi-Vols
			40834	MS	W08GR00998	SW-846 8270C Semi-Vols
			40834	MSD	W08GR00998	SW-846 8270C Semi-Vols
			40834	SAMPLE	W08GR00998	SW-846 8270C Semi-Vols
			40834	SPK-RPD	W08GR00998	SW-846 8270C Semi-Vols
			40834	SURR	W08GR00998	SW-846 8270C Semi-Vols
			40839	BLANK		NWTPH-D TPH Diesel Range (Wa)
			40839	LCS		NWTPH-D TPH Diesel Range (Wa)
			40839	MS	W08GR00998	NWTPH-D TPH Diesel Range (Wa)
			40839	MSD	W08GR00998	NWTPH-D TPH Diesel Range (Wa)
			40839	SAMPLE	W08GR00998	NWTPH-D TPH Diesel Range (Wa)
			40839	SPK-RPD	W08GR00998	NWTPH-D TPH Diesel Range (Wa)
			40839	SURR	W08GR00998	NWTPH-D TPH Diesel Range (Wa)
			41169	BLANK		VOA Ground Water Protection
			41169	LCS		VOA Ground Water Protection
			41169	MS	W08GR00997	VOA Ground Water Protection
			41169	MSD	W08GR00997	VOA Ground Water Protection
			41169	SPK-RPD	W08GR00997	VOA Ground Water Protection
			41169	SAMPLE	W08GR00998	VOA Ground Water Protection
			41169	SURR	W08GR00998	VOA Ground Water Protection

w13qlog v4.2 06-jun-2008 07:58:10

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20080771

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
35953	1	36372	40627	BLANK		TC99 by ICP-200.8 MS
35953	2	36372	40627	LCS		TC99 by ICP-200.8 MS
35953	4	36372	40627	SAMPLE	W08GR00998	TC99 by ICP-200.8 MS
36059	1	36474	40791	BLANK		Plutonium Isotopics by AEA
36059	2	36474	40791	LCS		Plutonium Isotopics by AEA
36059	3	36474	40791	DUP	W08GR00998	Plutonium Isotopics by AEA
36059	4	36474	40791	SAMPLE	W08GR00998	Plutonium Isotopics by AEA
36059	5	36474	40791	SURR	W08GR00998	Plutonium Isotopics by AEA
36060	1	36475	40792	BLANK		Americium by AEA
36060	2	36475	40792	LCS		Americium by AEA
36060	3	36475	40792	DUP	W08GR00998	Americium by AEA
36060	4	36475	40792	SAMPLE	W08GR00998	Americium by AEA
36060	5	36475	40792	SURR	W08GR00998	Americium by AEA
36058	1	36473	40793	BLANK		Uranium Isotopics by AEA
36058	2	36473	40793	LCS		Uranium Isotopics by AEA
36058	3	36473	40793	DUP	W08GR00998	Uranium Isotopics by AEA
36058	4	36473	40793	SAMPLE	W08GR00998	Uranium Isotopics by AEA
36058	5	36473	40793	SURR	W08GR00998	Uranium Isotopics by AEA
36128	1	36543	40906	BLANK		Strontium 89/90
36128	2	36543	40906	LCS		Strontium 89/90
36128	3	36543	40906	DUP	W08GR00998	Strontium 89/90
36128	4	36543	40906	SAMPLE	W08GR00998	Strontium 89/90
36128	5	36543	40906	SURR	W08GR00998	Strontium 89/90
36241	1	36656	41009	BLANK		Neptunium by AEA
36241	2	36656	41009	LCS		Neptunium by AEA
36241	3	36656	41009	DUP	W08GR00750	Neptunium by AEA
36241	8	36656	41009	MS	W08GR00750	Neptunium by AEA
36241	6	36656	41009	MSD	W08GR00750	Neptunium by AEA
36241	8	36656	41009	SPK-RPD	W08GR00750	Neptunium by AEA
36241	5	36656	41009	MS	W08GR00998	Neptunium by AEA
36241	4	36656	41009	SAMPLE	W08GR00998	Neptunium by AEA
36241	10	36656	41009	MS	W08GR01072	Neptunium by AEA
36408	1	36821	41171	BLANK		Gamma Energy Analysis-grd H2O
36408	2	36821	41171	LCS		Gamma Energy Analysis-grd H2O
36408	3	36821	41171	DUP	W08GR00998	Gamma Energy Analysis-grd H2O
36408	4	36821	41171	SAMPLE	W08GR00998	Gamma Energy Analysis-grd H2O
36507	1	36921	41284	BLANK		TC99 by Liquid Scin.
36507	4	36921	41284	LCS		TC99 by Liquid Scin.
36507	5	36921	41284	SAMPLE	W08GR00998	TC99 by Liquid Scin.
36507	3	36921	41284	DUP	W08GR01318	TC99 by Liquid Scin.
36507	2	36921	41284	MS	W08GR01318	TC99 by Liquid Scin.

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-212-402	Determination of pH Direct Measurement	
	EPA SW-846 9040B	pH ELECTROMETRIC MEASUREMENT
	EPA-600/4-79-020 150.1	pH
	HEIS 150.1_PH	pH
	Standard Methods 4500	Determination of pH Direct Measurement - WSCF
LA-265-403	LA-265-403: Hexavalent Chromium analysis by Spectrophotometer	
	EPA SW-846 7196A	HEXAVALENT CHROMIUM
	HEIS 7196_CR6	Hexavalent Chromium
LA-503-401	LA-503-401: ANALYSIS OF CATIONS BY ION CHROMATOGRAPHY	
	EPA-600/4-86-024 300.7	Dissolved Sodium, Ammonium, Potassium, and Calcium in Wet Deposition by Chemical
	HEIS 300.7_CATIONS_IC	Determination of Ammonium by Ion Chromatography
LA-505-411	LA-505-411: ELEMENTAL ANALYSIS BY INDUCTIVELY COUPLED PLASMA ATOMIC EMISSION SPE	
	HEIS 6010_METALS_ICP	Inductively Coupled Plasma-Atomic Emmision Spectrometry
LA-505-412	LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY	
	EPA-600/R-94-111 200.8	DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS
	HEIS 200.8_METALS_ICPMS	Inductively Coupled Plasma - Mass Spectrometry
	HEIS RADISOTOPES_ICPMS	Radioisotopes by ICP/MS
LA-531-411	LA-531-411: ALKALINITY (TITRIMETRIC)	
	HEIS 2320B	Alkalinity
	Standard Methods 2320B	Alkalinity

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

WSCF

METHOD REFERENCES REPORT

Department: Inorganic

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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

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LA-523-455	LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846	
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8260B	VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
	HEIS 8260_VOA_GCMS	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
LA-523-456	LA-523-456: SEMIVOLATILE SAMPLE ANALYSIS BY SW-846, METHOD 8270C	
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
	HEIS 8270_SVOA_GCMS	Semivolatile Orgamoc Compounds By Gas Chromatography/Mass Spectrometry (GC/MS)
LA-523-493	NWTPH-Diesel and/or Gasoline	
	HEIS WTPH_DIESEL (HEIS)	Total Petroleum Hydrocarbons in Diesel
	WDOE TPHD	Total Petroleum Hydrocarbons in Diesel

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: F08-076
Sample # W08GR00998
Client ID: B1TNV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20080771
Department: Inorganic
Sampled: 04/10/08
Received: 04/10/08

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	0.258	mg/L			5.00	0.030		04/10/08
Chloride	16887-00-6	LA-533-410	D	44.3	mg/L			5.00	0.15		04/10/08
Nitrogen in Nitrite	NO2-N	LA-533-410	D	0.852	mg/L			5.00	0.050		04/10/08
Nitrogen in Nitrate	NO3-N	LA-533-410	D	287	mg/L			1.01e+002	0.50		04/10/08
Phosphate (P) by IC	PO4-P	LA-533-410	DU	< 0.200	mg/L			5.00	0.20		04/10/08
Sulfate	14808-79-8	LA-533-410	D	220	mg/L			10.00	0.70		04/10/08
Cyanide											
Cyanide	57-12-5	LA-695-402	X	518	ug/L			1.00	4.0		04/24/08
Hexavalent Chromium											
Hexavalent Chromium	18540-29-9	LA-265-403	NU	< 2.00e-03	mg/L			1.00	2.0e-03		04/10/08
ICP Metals Analysis, Grd H20 P Prep											**04/11/08**
ICP Metals Analysis, Grd H20 P											
Aluminum	7429-90-5	LA-505-411	C	190	ug/L			1.00	30		04/16/08
Iron	7439-89-6	LA-505-411	N	268	ug/L			1.00	9.0		04/16/08
Magnesium	7439-95-4	LA-505-411		6.49e+04	ug/L			1.00	6.0		04/16/08
Manganese	7439-96-5	LA-505-411		752	ug/L			1.00	4.0		04/16/08
Potassium	7440-09-7	LA-505-411		1.76e+04	ug/L			1.00	45		04/16/08
Sodium	7440-23-5	LA-505-411	D	2.48e+05	ug/L			10.00	2.7e+02		04/17/08
Barium	7440-39-3	LA-505-411		144	ug/L			1.00	4.0		04/16/08
Calcium	7440-70-2	LA-505-411		2.11e+05	ug/L			1.00	34		04/16/08
Lithium	7439-93-2	LA-505-411		18.8	ug/L			1.00	4.0		04/16/08
Strontium	7440-24-6	LA-505-411		1.19e+03	ug/L			1.00	4.0		04/16/08
Silicon	7440-21-3	LA-505-411	D	1.02e+04	ug/L			10.00	3.8e+02		04/30/08
Phosphorus	7723-14-0	LA-505-411	U	< 79.0	ug/L			1.00	79		04/16/08

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

B - The analyte < the RDL but > = the IDL/MDL (inorg)
C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
U - Analyzed for but not detected above limiting criteria.(org)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-076
Sample # W08GR00998
Client ID: B1TNV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20080771
Department: Inorganic
Sampled: 04/10/08
Received: 04/10/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta Prep											**05/07/08**
ICP-200.8 MS All possible meta											
Antimony	7440-36-0	LA-505-412		0.350	ug/L			1.00	0.300		05/07/08
Cadmium	7440-43-9	LA-505-412	U	< 0.100	ug/L			1.00	0.100		05/07/08
Chromium	7440-47-3	LA-505-412		0.950	ug/L			1.00	0.500		05/07/08
Mercury	7439-97-6	LA-505-412		0.0900	ug/L			1.00	0.0500		05/07/08
Uranium	7440-61-1	LA-505-412		91.5	ug/L			1.00	0.0500		05/07/08
Arsenic	7440-38-2	LA-505-412		0.410	ug/L			1.00	0.400		05/07/08
Thallium	7440-28-0	LA-505-412	U	< 0.100	ug/L			1.00	0.100		05/07/08
Nitrogen in ammonium											
Nitrogen in ammonium	NH4-N	LA-503-401	D	1.19	mg/L			10.00	0.093		04/25/08
Total Alkalinity as mg/L CaCO3											
Total Alkalinity as mg/L CaCO3	ALKALINITY	LA-531-411		91.0	mg/L			1.00	1.0		04/16/08
pH Measurement											
pH Measurement	PH	LA-212-402		7.55	unitless			1.00	0.010		04/10/08

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

B - The analyte < the RDL but > = the IDL/MDL (inorg)
C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
U - Analyzed for but not detected above limiting criteria.(org)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080771
Matrix: WATER
Test: Ammonia (N) by IC

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Ammonia (N) by IC	7664-41-7	1.3279		RPD			11.348	20.000		04/25/08
MS	Ammonia (N) by IC	7664-41-7	0.556	111.647	% Recov	75.000	125.000				04/25/08
MSD	Ammonia (N) by IC	7664-41-7	0.55476	111.398	% Recov	75.000	125.000				04/25/08
SPK-RPD	Ammonia (N) by IC	7664-41-7	111.398		RPD			0.223	20.000		04/25/08
BATCH QC											
BLANK	Ammonia (N) by IC	7664-41-7	<9.32e-3	n/a	mg/L	0.000	0.002			U	04/25/08
BLANK	Ammonia (N) by IC	7664-41-7	<9.32e-3	n/a	mg/L	0.000	0.002			U	04/25/08
LCS	Ammonia (N) by IC	7664-41-7	96.4065	96.406	% Recov	80.000	120.000				04/25/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080771
Matrix: WATER
Test: Anions by Ion Chromatography

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00995											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Chloride	16887-00-6	6650.0873		RPD			0.475	20.000		04/10/08
DUP	Fluoride	16984-48-8	<1.206		RPD			n/a	20.000	U	04/10/08
DUP	Nitrogen in Nitrite	NO2-N	<2.01		RPD			n/a	20.000	U	04/10/08
DUP	Nitrogen in Nitrate	NO3-N	111.4227		RPD			0.240	20.000		04/10/08
DUP	Phosphate (P) by IC	PO4-P	431.8287		RPD			0.534	20.000		04/10/08
DUP	Sulfate	14808-79-8	4354.6105		RPD			0.194	20.000		04/10/08
MS	Chloride	16887-00-6	0.953357	95.815	% Recov	75.000	125.000				04/10/08
MS	Fluoride	16984-48-8	0.448348	90.943	% Recov	75.000	125.000				04/10/08
MS	Nitrogen in Nitrite	NO2-N	0.562841	114.399	% Recov	75.000	125.000				04/10/08
MS	Nitrogen in Nitrate	NO3-N	0.447526	100.342	% Recov	75.000	125.000				04/10/08
MS	Phosphate (P) by IC	PO4-P	0.915008	95.612	% Recov	75.000	125.000				04/10/08
MS	Sulfate	14808-79-8	1.908547	97.375	% Recov	75.000	125.000				04/10/08
MSD	Chloride	16887-00-6	0.984199	98.914	% Recov	75.000	125.000				04/10/08
MSD	Fluoride	16984-48-8	0.45044	91.367	% Recov	75.000	125.000				04/10/08
MSD	Nitrogen in Nitrite	NO2-N	0.561765	114.180	% Recov	75.000	125.000				04/10/08
MSD	Nitrogen in Nitrate	NO3-N	0.450247	100.952	% Recov	75.000	125.000				04/10/08
MSD	Phosphate (P) by IC	PO4-P	0.945203	98.767	% Recov	75.000	125.000				04/10/08
MSD	Sulfate	14808-79-8	1.935096	98.729	% Recov	75.000	125.000				04/10/08
SPK-RPD	Chloride	16887-00-6	98.914		RPD			3.183	20.000		04/10/08
SPK-RPD	Fluoride	16984-48-8	91.367		RPD			0.465	20.000		04/10/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	114.180		RPD			0.192	20.000		04/10/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	100.952		RPD			0.606	20.000		04/10/08
SPK-RPD	Phosphate (P) by IC	PO4-P	98.767		RPD			3.246	20.000		04/10/08
SPK-RPD	Sulfate	14808-79-8	98.729		RPD			1.381	20.000		04/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080771
Matrix: WATER
Test: Anions by Ion Chromatography

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	04/10/08
BLANK	Chloride	16887-00-6	<3e-2	n/a	mg/L	0.000	0.030			U	04/10/08
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	04/10/08
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	04/10/08
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	04/10/08
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	04/10/08
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	04/10/08
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	04/10/08
BLANK	Phosphate (P) by IC	PO4-P	<4e-2	n/a	mg/L	0.000	0.200			U	04/10/08
BLANK	Phosphate (P) by IC	PO4-P	<4e-2	n/a	mg/L	0.000	0.200			U	04/10/08
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	04/10/08
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	04/10/08
LCS	Chloride	16887-00-6	189.8047	94.430	% Recov	80.000	120.000				04/10/08
LCS	Fluoride	16984-48-8	101.033	101.439	% Recov	80.000	120.000				04/10/08
LCS	Nitrogen in Nitrite	NO2-N	99.6883	100.290	% Recov	80.000	120.000				04/10/08
LCS	Nitrogen in Nitrate	NO3-N	90.2794	100.199	% Recov	80.000	120.000				04/10/08
LCS	Phosphate (P) by IC	PO4-P	186.77	96.572	% Recov	80.000	120.000				04/10/08
LCS	Sulfate	14808-79-8	369.7989	93.384	% Recov	80.000	120.000				04/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080771
Matrix: WATER
Test: Cyanide by Midi/Spectrophotom

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Cyanide by Midi/Spectrophotom	57-12-5	30.1	75.250	% Recov	75.000	125.000				04/24/08
MSD	Cyanide by Midi/Spectrophotom	57-12-5	27	67.500	% Recov	75.000	125.000		*		04/24/08
SPK-RPD	Cyanide by Midi/Spectrophotom	57-12-5	67.500		RPD			10.858	20.000		04/24/08
BATCH QC											
BLANK	Cyanide by Midi/Spectrophotom	57-12-5	< 4	n/a	ug/L	-4.000	4.000			U	04/24/08
LCS	Cyanide by Midi/Spectrophotom	57-12-5	47.7	95.400	% Recov	85.000	115.000				04/24/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080771
Matrix: WATER
Test: Hexavalent chromium

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Hexavalent chromium	18540-29-9	0.0024		RPD			n/a	15.000		04/10/08
MS	Hexavalent chromium	18540-29-9	0.0438	81.716	% Recov	85.000	115.000		•		04/10/08
MSD	Hexavalent chromium	18540-29-9	0.0451	84.142	% Recov	85.000	115.000		•		04/10/08
SPK-RPD	Hexavalent chromium	18540-29-9	84.142		RPD			2.925	20.000		04/10/08
BATCH QC											
BLANK	Hexavalent chromium	18540-29-9	<0.002	n/a	mg/L	0.000	2.000			U	04/10/08
LCS	Hexavalent chromium	18540-29-9	0.0544	107.937	% Recov	80.000	120.000				04/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080771
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00750											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Aluminum	7429-90-5	993.7	99.370	% Recov	75.000	125.000				04/16/08
MS	Calcium	7440-70-2	1017.4	101.740	% Recov	75.000	125.000				04/16/08
MS	Iron	7439-89-6	1018.1	101.810	% Recov	75.000	125.000				04/16/08
MS	Potassium	7440-09-7	10658.5	106.585	% Recov	75.000	125.000				04/16/08
MS	Lithium	7439-93-2	501.9	100.380	% Recov	70.000	130.000				04/16/08
MS	Magnesium	7439-95-4	1001.4	100.140	% Recov	75.000	125.000				04/16/08
MS	Sodium	7440-23-5	1029.8	102.980	% Recov	75.000	125.000				04/16/08
MS	Phosphorus	7723-14-0	990.8	99.080	% Recov	70.000	130.000				04/16/08
MS	Silicon	7440-21-3	977.7	97.770	% Recov	70.000	130.000				04/16/08
MSD	Aluminum	7429-90-5	1022	102.200	% Recov	75.000	125.000				04/16/08
MSD	Calcium	7440-70-2	1029.4	102.940	% Recov	75.000	125.000				04/16/08
MSD	Iron	7439-89-6	1039.1	103.910	% Recov	75.000	125.000				04/16/08
MSD	Potassium	7440-09-7	10828.5	108.285	% Recov	75.000	125.000				04/16/08
MSD	Lithium	7439-93-2	514.3	102.860	% Recov	75.000	125.000				04/16/08
MSD	Magnesium	7439-95-4	1012.4	101.240	% Recov	75.000	125.000				04/16/08
MSD	Sodium	7440-23-5	1058.8	105.880	% Recov	75.000	125.000				04/16/08
MSD	Phosphorus	7723-14-0	1017	101.700	% Recov	75.000	125.000				04/16/08
MSD	Silicon	7440-21-3	1048.7	104.870	% Recov	75.000	125.000				04/16/08
SPK-RPD	Aluminum	7429-90-5	102.200		RPD			2.808	20.000		04/16/08
SPK-RPD	Calcium	7440-70-2	102.940		RPD			1.173	20.000		04/16/08
SPK-RPD	Iron	7439-89-6	103.910		RPD			2.042	20.000		04/16/08
SPK-RPD	Potassium	7440-09-7	108.285		RPD			1.582	20.000		04/16/08
SPK-RPD	Lithium	7439-93-2	102.860		RPD			2.440	20.000		04/16/08
SPK-RPD	Magnesium	7439-95-4	101.240		RPD			1.092	20.000		04/16/08
SPK-RPD	Sodium	7440-23-5	105.880		RPD			2.777	20.000		04/16/08
SPK-RPD	Phosphorus	7723-14-0	101.700		RPD			2.610	20.000		04/16/08

SDG Number: WSCF20080771
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Silicon	7440-21-3	104.870		RPD			7.008	20.000		04/16/08
Lab ID: W08GR00916											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Barium	7440-39-3	513	102.600	% Recov	75.000	125.000				04/16/08
MS	Calcium	7440-70-2	1510	151.000	% Recov	75.000	125.000			•	04/16/08
MS	Iron	7439-89-6	1877	187.700	% Recov	75.000	125.000			•	04/16/08
MS	Potassium	7440-09-7	10795	107.950	% Recov	75.000	125.000				04/16/08
MS	Lithium	7439-93-2	529.7	105.940	% Recov	70.000	130.000				04/16/08
MS	Magnesium	7439-95-4	1250	125.000	% Recov	75.000	125.000				04/16/08
MS	Manganese	7439-96-5	1053.5	105.350	% Recov	75.000	125.000				04/16/08
MS	Sodium	7440-23-5	1080	108.000	% Recov	75.000	125.000				04/16/08
MS	Strontium	7440-24-6	519.5	103.900	% Recov	75.000	125.000				04/16/08
MSD	Barium	7440-39-3	511.2	102.240	% Recov	75.000	125.000				04/16/08
MSD	Calcium	7440-70-2	120	12.000	% Recov	75.000	125.000			•	04/16/08
MSD	Iron	7439-89-6	2317	231.700	% Recov	75.000	125.000			•	04/16/08
MSD	Potassium	7440-09-7	10735	107.350	% Recov	75.000	125.000				04/16/08
MSD	Lithium	7439-93-2	523.5	104.700	% Recov	75.000	125.000				04/16/08
MSD	Magnesium	7439-95-4	1170	117.000	% Recov	75.000	125.000				04/16/08
MSD	Manganese	7439-96-5	1037.5	103.750	% Recov	75.000	125.000				04/16/08
MSD	Sodium	7440-23-5	930	93.000	% Recov	75.000	125.000				04/16/08
MSD	Strontium	7440-24-6	516.1	103.220	% Recov	75.000	125.000				04/16/08
SPK-RPD	Barium	7440-39-3	102.240		RPD			0.351	20.000		04/16/08
SPK-RPD	Calcium	7440-70-2	12.000		RPD			170.552	20.000	•	04/16/08
SPK-RPD	Iron	7439-89-6	231.700		RPD			20.982	20.000	•	04/16/08
SPK-RPD	Potassium	7440-09-7	107.350		RPD			0.557	20.000		04/16/08
SPK-RPD	Lithium	7439-93-2	104.700		RPD			1.177	20.000		04/16/08
SPK-RPD	Magnesium	7439-95-4	117.000		RPD			6.612	20.000		04/16/08
SPK-RPD	Manganese	7439-96-5	103.750		RPD			1.530	20.000		04/16/08
SPK-RPD	Sodium	7440-23-5	93.000		RPD			14.925	20.000		04/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080771
Matrix: WATER
Test: ICP Metals Analysis, Grd H20 P

Sample Date: 04/03/08
Receive Date:04/03/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Strontium	7440-24-6	103.220		RPD			0.657	20.000		04/16/08
BATCH QC											
BLANK	Aluminum	7429-90-5	34.3	34.300	ug/L						04/16/08
BLANK	Barium	7440-39-3	<4	n/a	ug/L					U	04/16/08
BLANK	Calcium	7440-70-2	41.2	41.200	ug/L						04/16/08
BLANK	Iron	7439-89-6	13	13.000	ug/L						04/16/08
BLANK	Potassium	7440-09-7	<45	n/a	ug/L					U	04/16/08
BLANK	Lithium	7439-93-2	<4	n/a	ug/L					U	04/16/08
BLANK	Magnesium	7439-95-4	34.1	34.100	ug/L						04/16/08
BLANK	Manganese	7439-96-5	<4	n/a	ug/L					U	04/16/08
BLANK	Sodium	7440-23-5	45.8	45.800	ug/L						04/16/08
BLANK	Phosphorus	7723-14-0	<79	n/a	ug/L					U	04/16/08
BLANK	Silicon	7440-21-3	<38	n/a	ug/L					U	04/16/08
BLANK	Strontium	7440-24-6	<4	n/a	ug/L					U	04/16/08
LCS	Aluminum	7429-90-5	1038	103.800	% Recov	80.000	120.000				04/16/08
LCS	Barium	7440-39-3	508.3	101.660	% Recov	80.000	120.000				04/16/08
LCS	Calcium	7440-70-2	1118	111.800	% Recov	80.000	120.000				04/16/08
LCS	Iron	7439-89-6	1037	103.700	% Recov	80.000	120.000				04/16/08
LCS	Potassium	7440-09-7	10930	109.300	% Recov	80.000	120.000				04/16/08
LCS	Lithium	7439-93-2	521.9	104.380	% Recov	80.000	120.000				04/16/08
LCS	Magnesium	7439-95-4	1031	103.100	% Recov	80.000	120.000				04/16/08
LCS	Manganese	7439-96-5	1050	105.000	% Recov	80.000	120.000				04/16/08
LCS	Sodium	7440-23-5	1068	106.800	% Recov	80.000	120.000				04/16/08
LCS	Phosphorus	7723-14-0	1034	103.400	% Recov	80.000	120.000				04/16/08
LCS	Silicon	7440-21-3	1016	101.600	% Recov	80.000	120.000				04/16/08
LCS	Strontium	7440-24-6	513.4	102.680	% Recov	80.000	120.000				04/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080771
Matrix: WATER
Test: ICP-200.8 MS All possible meta

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01072											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Arsenic	7440-38-2	35.8	89.500	% Recov	70.000	130.000				05/07/08
MS	Cadmium	7440-43-9	37.59	93.975	% Recov	70.000	130.000				05/07/08
MS	Chromium	7440-47-3	39.62	99.050	% Recov	70.000	130.000				05/07/08
MS	Mercury	7439-97-6	2.06	103.000	% Recov	70.000	130.000				05/07/08
MS	Antimony	7440-36-0	40.15	100.375	% Recov	70.000	130.000				05/07/08
MS	Thallium	7440-28-0	39.66	99.150	% Recov	70.000	130.000				05/07/08
MS	Uranium	7440-61-1	40.06	100.150	% Recov	70.000	130.000				05/07/08
MSD	Arsenic	7440-38-2	35.78	89.450	% Recov	70.000	130.000				05/07/08
MSD	Cadmium	7440-43-9	37.32	93.300	% Recov	70.000	130.000				05/07/08
MSD	Chromium	7440-47-3	38.75	96.875	% Recov	70.000	130.000				05/07/08
MSD	Mercury	7439-97-6	2.04	102.000	% Recov	70.000	130.000				05/07/08
MSD	Antimony	7440-36-0	39.85	99.625	% Recov	70.000	130.000				05/07/08
MSD	Thallium	7440-28-0	39.07	97.675	% Recov	70.000	130.000				05/07/08
MSD	Uranium	7440-61-1	39.36	98.400	% Recov	70.000	130.000				05/07/08
SPK-RPD	Arsenic	7440-38-2	89.450		RPD			0.056	20.000		05/07/08
SPK-RPD	Cadmium	7440-43-9	93.300		RPD			0.721	20.000		05/07/08
SPK-RPD	Chromium	7440-47-3	96.875		RPD			2.220	20.000		05/07/08
SPK-RPD	Mercury	7439-97-6	102.000		RPD			0.976	20.000		05/07/08
SPK-RPD	Antimony	7440-36-0	99.625		RPD			0.750	20.000		05/07/08
SPK-RPD	Thallium	7440-28-0	97.675		RPD			1.499	20.000		05/07/08
SPK-RPD	Uranium	7440-61-1	98.400		RPD			1.763	20.000		05/07/08
BATCH QC											
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	05/07/08
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L					U	05/07/08
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L					U	05/07/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080771
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
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	05/07/08
BLANK	Antimony	7440-36-0	<0.3	n/a	ug/L					U	05/07/08
BLANK	Thallium	7440-28-0	<0.1	n/a	ug/L					U	05/07/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	05/07/08
LCS	Arsenic	7440-38-2	37.48	93.700	% Recov	85.000	115.000				05/07/08
LCS	Cadmium	7440-43-9	37.83	94.575	% Recov	85.000	115.000				05/07/08
LCS	Chromium	7440-47-3	38.69	96.725	% Recov	85.000	115.000				05/07/08
LCS	Mercury	7439-97-6	2.07	103.500	% Recov	85.000	115.000				05/07/08
LCS	Antimony	7440-36-0	40.56	101.400	% Recov	85.000	115.000				05/07/08
LCS	Thallium	7440-28-0	39.77	99.425	% Recov	85.000	115.000				05/07/08
LCS	Uranium	7440-61-1	40.03	100.075	% Recov	85.000	115.000				05/07/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080771
Matrix: WATER
Test: pH Direct Measurement

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	pH Direct Measurement	PH	7.56		RPD			0.132	20.000		04/10/08
BATCH QC											
LCS	pH Direct Measurement	PH	7.96	0.995	Ratio	0.900	1.100				04/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080771
Matrix: WATER
Test: Total Alkalinity as mg/L CaCO3

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	89.35		RPD			2.279	20.000		04/16/08
Lab ID: W08P002029											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Total Alkalinity as mg/L CaCO3	ALKALINITY	121.4		RPD			1.327	20.000		04/16/08
BATCH QC											
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	116.4	101.217	%Recove	80.000	120.000				04/16/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	116.6	101.391	%Recove	80.000	120.000				04/16/08
LCS	Total Alkalinity as mg/L CaCO3	ALKALINITY	114.1	99.217	%Recove	80.000	120.000				04/16/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-076

Group #: WSCF20080771
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Sample is most likely reducing in nature. This contributes to the low recovery on the MS & MSD. ICP-AES: High magnesium, aluminum, iron, sodium, and calcium preparation blank results; "C" flag if applicable. Zirconium is not present in the LCS. High iron spike recoveries; "N" flag. Sodium, calcium, and magnesium sample results exceed spiking level by a factor of 4 (spike recoveries are not valid). Check and high standards used to ensure calcium, magnesium, and sodium linearity because sample results are greater than the calibration standard. Cyanide: Spike sample concentration more than 4X spike concentration. Spike recovery data not reliable. No flag

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-076
Sample # W08GR00998
Client ID: B1TNV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20080771
Department: Organic
Sampled: 04/10/08
Received: 04/10/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
NWTPH-D TPH Diesel Range (Wa) Prep											**04/24/08**
NWTPH-D TPH Diesel Range (Wa)											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 62.0	ug/L			1.00	62		04/28/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 62.0	ug/L			1.00	62		04/28/08
SW-846 8270C Semi-Vols Prep											**04/14/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 0.950	ug/L			1.00	0.95		04/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 1.30	ug/L			1.00	1.3		04/28/08
Phenol	108-95-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 2.10	ug/L			1.00	2.1		04/28/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Pyrene	129-00-0	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 0.570	ug/L			1.00	0.57		04/28/08
Acenaphthene	83-32-9	LA-523-456	U	< 2.50	ug/L			1.00	2.5		04/28/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 1.40	ug/L			1.00	1.4		04/28/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
4-Nitroaniline	100-01-6	LA-523-456	U	< 0.950	ug/L			1.00	0.95		04/28/08
4-Bromophenylphenyl ether	101-55-3	LA-523-456	U	< 0.950	ug/L			1.00	0.95		04/28/08
2,4-Dimethylphenol	105-67-9	LA-523-456	U	< 0.900	ug/L			1.00	0.90		04/28/08
4-Chloroaniline	106-47-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Bis(2-chloro-1-methylethyl)eth	108-60-1	LA-523-456	U	< 0.950	ug/L			1.00	0.95		04/28/08
Bis(2-chloroethyl) ether	111-44-4	LA-523-456	U	< 0.860	ug/L			1.00	0.86		04/28/08
Bis(2-Chloroethoxy)methane	111-91-1	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	< 0.760	ug/L			1.00	0.76		04/28/08

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)
C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
U - Analyzed for but not detected above limiting criteria.(org)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-076
Sample # W08GR00998
Client ID: B1TNV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20080771
Department: Organic
Sampled: 04/10/08
Received: 04/10/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Di-n-octylphthalate	117-84-0	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Hexachlorobenzene	118-74-1	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Anthracene	120-12-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
2,4-Dichlorophenol	120-83-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Dimethyl phthalate	131-11-3	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Dibenzofuran	132-64-9	LA-523-456	U	< 2.10	ug/L			1.00	2.1		04/28/08
Benzo(ghi)perylene	191-24-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Indeno(1,2,3-cd)pyrene	193-39-5	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Benzo(b)fluoranthene	205-99-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Fluoranthene	206-44-0	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Benzo(k)fluoranthene	207-08-9	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Acenaphthylene	208-96-8	LA-523-456	U	< 2.20	ug/L			1.00	2.2		04/28/08
Chrysene	218-01-9	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Benzo(a)pyrene	50-32-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
2,4-Dinitrophenol	51-28-5	LA-523-456	U	< 1.90	ug/L			1.00	1.9		04/28/08
Dibenz[a,h]anthracene	53-70-3	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
4,6-Dinitro-2-methylphenol	534-52-1	LA-523-456	U	< 0.950	ug/L			1.00	0.95		04/28/08
1,3-Dichlorobenzene	541-73-1	LA-523-456	U	< 1.30	ug/L			1.00	1.3		04/28/08
Benzo(a)anthracene	56-55-3	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
2,6-Dinitrotoluene	606-20-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
4-Chlorophenylphenyl ether	7005-72-3	LA-523-456	U	< 1.60	ug/L			1.00	1.6		04/28/08
Hexachlorocyclopentadiene	77-47-4	LA-523-456	U	< 4.80	ug/L			1.00	4.8		04/28/08
Isophorone	78-59-1	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Diethylphthalate	84-66-2	LA-523-456	U	< 1.80	ug/L			1.00	1.8		04/28/08
Di-n-butylphthalate	84-74-2	LA-523-456	U	< 2.20	ug/L			1.00	2.2		04/28/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-076
Sample # W08GR00998
Client ID: B1TNV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20080771
Department: Organic
Sampled: 04/10/08
Received: 04/10/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Phenanthrene	85-01-8	LA-523-456	U	< 0.520	ug/L			1.00	0.52		04/28/08
Butylbenzylphthalate	85-68-7	LA-523-456	U	< 0.570	ug/L			1.00	0.57		04/28/08
N-Nitrosodiphenylamine	86-30-6	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Fluorene	86-73-7	LA-523-456	U	< 1.30	ug/L			1.00	1.3		04/28/08
Carbazole	86-74-8	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Hexachlorobutadiene	87-68-3	LA-523-456	U	< 1.90	ug/L			1.00	1.9		04/28/08
2-Nitroaniline	88-74-4	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
2-Nitrophenol	88-75-5	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Naphthalene	91-20-3	LA-523-456	U	< 2.00	ug/L			1.00	2.0		04/28/08
2-Methylnaphthalene	91-57-6	LA-523-456	U	< 2.90	ug/L			1.00	2.9		04/28/08
2-Chloronaphthalene	91-58-7	LA-523-456	U	< 3.30	ug/L			1.00	3.3		04/28/08
3,3'-Dichlorobenzidine	91-94-1	LA-523-456	U	< 0.760	ug/L			1.00	0.76		04/28/08
2-Methylphenol (cresol, o-)	95-48-7	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
1,2-Dichlorobenzene	95-50-1	LA-523-456	U	< 1.40	ug/L			1.00	1.4		04/28/08
2,4,5-Trichlorophenol	95-95-4	LA-523-456	U	< 0.620	ug/L			1.00	0.62		04/28/08
Nitrobenzene	98-95-3	LA-523-456	U	< 0.570	ug/L			1.00	0.57		04/28/08
3-Nitroaniline	99-09-2	LA-523-456	U	< 0.570	ug/L			1.00	0.57		04/28/08
3 & 4 Methylphenol Total	65794-96-9	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
Hexachloroethane	67-72-1	LA-523-456	U	< 1.30	ug/L			1.00	1.3		04/28/08
2,4,6-Trichlorophenol	88-06-2	LA-523-456	U	< 0.480	ug/L			1.00	0.48		04/28/08
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Benzene	71-43-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Toluene	108-88-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-076
Sample # W08GR00998
Client ID: B1TNV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20080771
Department: Organic
Sampled: 04/10/08
Received: 04/10/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Chlorobenzene	108-90-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Styrene	100-42-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
2-Hexanone	591-78-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Acetone	67-64-1	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Chloroform	67-66-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Bromomethane	74-83-9	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Chloromethane	74-87-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Chloroethane	75-00-3	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Vinyl chloride	75-01-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
Bromoform	75-25-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08

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

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

C - The Analyte was found in the Associated Blank.(inorg)
N - Spike sample recovery is outside control limits.(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: F08-076
Sample # W08GR00998
Client ID: B1TNV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20080771
Department: Organic
Sampled: 04/10/08
Received: 04/10/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
2-Butanone	78-93-3	LA-523-455		27.0	ug/L			1.00	1.0		04/24/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
1-Butanol	71-36-3	LA-523-455	U	< 100	ug/L			1.00	1.0e+02		04/24/08
Trichloromonofluoromethane	75-69-4	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.00	ug/L			1.00	1.0		04/24/08

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

B - The analyte < the RDL but > = the IDL/MDL (inorg)
C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
U - Analyzed for but not detected above limiting criteria.(org)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F08-076 :F08-076

Group #: WSCF20080771
Department: Organic

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 10.063 Unknown Ester	Unknown	10.06333	J	25	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 10.319 Unknown Ketone	Unknown	10.31986	J	11	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 10.592 Unknown	Unknown	10.59241	J	8.4	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 10.747 Unknown	Unknown	10.74741	J	10	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 10.870 Unknown	Unknown	10.87033	J	7.1	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 10.971 Unknown	Unknown	10.97186	J	8.6	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 11.517 Tributyl Phosphate	126-73-8	11.517		25	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 12.933 Unknown	Unknown	12.93325	J	13	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 13.531 Unknown	Unknown	13.53183	J	11	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 19.100 Unknown	Unknown	19.10066	J	17	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 5.878 1-Hexanol	111-27-3	5.878683	J	12	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 6.087 2-Butoxyethanol	111-76-2	6.087116		13	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 6.482 1-Heptanol	111-70-6	6.4826	J	11	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 6.616 Unknown Ketone	Unknown	6.616216	J	15	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 6.920 Unknown Alcohol	Unknown	6.920833	J	49	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 7.139 Unknown	Unknown	7.139966	J	14	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 7.193 Unknown Organic Acid	Unknown	7.1934	J	16	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 7.524 Unknown Organic Acid	Unknown	7.52475	J	25	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 7.909 Benzoic acid	65-85-0	7.90955		6.6	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 8.540 Unknown Alcohol	Unknown	8.540183	J	19	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 9.507 Unknown	Unknown	9.507516	J	5.9	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 9.737 Unknown	Unknown	9.737316	J	8.2	ug/L
W08GR00998	B1TNV4	TRENT	SW-846 8270C Semi-Vols	SMP 9.993 Unknown Ester	Unknown	9.99385	J	42	ug/L
W08GR00998	B1TNV4	TRENT	VOA Ground Water Protection	SMP 28.126 Unknown	Unknown	28.1265	J	14	ug/L

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080771
Matrix: WATER
Test: SW-846 8270C Semi-Vols

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,2,4-Trichlorobenzene	120-82-1	17.135	90.000	% Recov	50.000	120.000				04/28/08
MS	1,4-Dichlorobenzene	106-46-7	17.260	90.600	% Recov	41.000	113.000				04/28/08
MS	2,4-Dinitrotoluene	121-14-2	15.420	81.000	% Recov	65.000	109.000				04/28/08
MS	2-Fluorophenol(Surr)	367-12-4	16.766	88.000	% Recov	50.000	110.000				04/28/08
MS	Acenaphthene	83-32-9	16.607	87.200	% Recov	62.000	112.000				04/28/08
MS	4-Chloro-3-methylphenol	59-50-7	24.965	87.400	% Recov	59.000	115.000				04/28/08
MS	2-Chlorophenol	95-57-8	25.458	89.100	% Recov	69.000	111.000				04/28/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	17.936	94.200	% Recov	69.000	115.000				04/28/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	16.337	85.800	% Recov	58.000	109.000				04/28/08
MS	Phenol	108-95-2	26.138	91.500	% Recov	59.000	115.000				04/28/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	16.329	85.700	% Recov	60.000	118.000				04/28/08
MS	4-Nitrophenol	100-02-7	21.201	74.200	% Recov	32.000	130.000				04/28/08
MS	Pentachlorophenol	87-86-5	23.054	80.700	% Recov	51.000	121.000				04/28/08
MS	Phenol-d5(Surr)	4165-62-2	16.789	88.100	% Recov	59.000	116.000				04/28/08
MS	Pyrene	129-00-0	16.653	87.400	% Recov	58.000	116.000				04/28/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	16.127	84.700	% Recov	60.000	120.000				04/28/08
MS	Terphenyl-d14(Surr)	98904-43-9	16.811	88.300	% Recov	60.000	120.000				04/28/08
MSD	1,2,4-Trichlorobenzene	120-82-1	16.617	87.200	% Recov	50.000	120.000				04/28/08
MSD	1,4-Dichlorobenzene	106-46-7	17.014	89.300	% Recov	41.000	113.000				04/28/08
MSD	2,4-Dinitrotoluene	121-14-2	15.675	82.300	% Recov	65.000	109.000				04/28/08
MSD	2-Fluorophenol(Surr)	367-12-4	16.376	86.000	% Recov	50.000	110.000				04/28/08
MSD	Acenaphthene	83-32-9	16.894	88.700	% Recov	62.000	112.000				04/28/08
MSD	4-Chloro-3-methylphenol	59-50-7	25.202	88.200	% Recov	59.000	115.000				04/28/08
MSD	2-Chlorophenol	95-57-8	25.450	89.100	% Recov	69.000	111.000				04/28/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	17.566	92.200	% Recov	69.000	115.000				04/28/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	16.817	88.300	% Recov	58.000	109.000				04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080771
Matrix: WATER
Test: SW-846 8270C Semi-Vols

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Phenol	108-95-2	25.615	83.700	% Recov	59.000	115.000				04/28/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	16.171	84.900	% Recov	60.000	118.000				04/28/08
MSD	4-Nitrophenol	100-02-7	20.087	70.300	% Recov	32.000	130.000				04/28/08
MSD	Pentachlorophenol	87-86-5	21.936	76.800	% Recov	51.000	121.000				04/28/08
MSD	Phenol-d5(Surr)	4165-62-2	16.604	87.200	% Recov	59.000	116.000				04/28/08
MSD	Pyrene	129-00-0	17.905	94.000	% Recov	58.000	116.000				04/28/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	16.248	85.300	% Recov	60.000	120.000				04/28/08
MSD	Terphenyl-d14(Surr)	98904-43-9	17.290	90.800	% Recov	60.000	120.000				04/28/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	87.200		RPD			3.160	25.000		04/29/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	89.300		RPD			1.445	25.000		04/29/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	82.300		RPD			1.592	25.000		04/29/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	86.000		RPD			2.299	25.000		04/29/08
SPK-RPD	Acenaphthene	83-32-9	88.700		RPD			1.706	25.000		04/29/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	88.200		RPD			0.911	25.000		04/29/08
SPK-RPD	2-Chlorophenol	95-57-8	89.100		RPD			0.000	25.000		04/29/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	92.200		RPD			2.146	25.000		04/29/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	88.300		RPD			2.872	25.000		04/29/08
SPK-RPD	Phenol	108-95-2	89.700		RPD			1.987	16.000		04/29/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	84.900		RPD			0.938	25.000		04/29/08
SPK-RPD	4-Nitrophenol	100-02-7	70.300		RPD			5.398	25.000		04/29/08
SPK-RPD	Pentachlorophenol	87-86-5	76.800		RPD			4.952	25.000		04/29/08
SPK-RPD	Phenol-d5(Surr)	4165-62-2	87.200		RPD			1.027	25.000		04/29/08
SPK-RPD	Pyrene	129-00-0	94.000		RPD			7.277	25.000		04/29/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	85.300		RPD			0.706	25.000		04/29/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	90.800		RPD			2.792	25.000		04/29/08
SURR	2-Fluorophenol(Surr)	367-12-4	24.547	64.400	% Recov	50.000	110.000				04/28/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	29.563	77.600	% Recov	58.000	109.000				04/28/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	30.093	79.000	% Recov	60.000	118.000				04/28/08
SURR	Phenol-d5(Surr)	4165-62-2	29.066	76.300	% Recov	59.000	116.000				04/28/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	35.760	93.900	% Recov	60.000	120.000				04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080771
Matrix: WATER
Test: SW-846 8270C Semi-Vols

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Terphenyl-d14(Surr)	98904-43-9	33.852	88.900	% Recov	60.000	120.000				04/28/08
BATCH QC											
BLANK	1,2-Dichlorobenzene	95-50-1	< 1.5	n/a	ug/L					U	04/28/08
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 2.2	n/a	ug/L					U	04/28/08
BLANK	1,3-Dichlorobenzene	541-73-1	< 1.3	n/a	ug/L					U	04/28/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 1.4	n/a	ug/L					U	04/28/08
BLANK	2,4-Dichlorophenol	120-83-2	< 0.50	n/a	ug/L					U	04/28/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 0.50	n/a	ug/L					U	04/28/08
BLANK	2,4,5-Trichlorophenol	95-95-4	< 0.65	n/a	ug/L					U	04/28/08
BLANK	2,4,6-Trichlorophenol	88-06-2	< 0.50	n/a	ug/L					U	04/28/08
BLANK	2,4-Dimethylphenol	105-67-9	< 0.95	n/a	ug/L					U	04/28/08
BLANK	2,6-Dinitrotoluene	606-20-2	< 0.50	n/a	ug/L					U	04/28/08
BLANK	2-Chloronaphthalene	91-58-7	< 3.5	n/a	ug/L					U	04/28/08
BLANK	2-Fluorophenol(Surr)	367-12-4	14.087	70.400	% Recov	50.000	110.000				04/28/08
BLANK	2-Methylnaphthalene	91-57-6	< 3.0	n/a	ug/L					U	04/28/08
BLANK	2-Methylphenol (cresol, o-)	95-48-7	< 0.50	n/a	ug/L					U	04/28/08
BLANK	2-Nitroaniline	88-74-4	< 0.50	n/a	ug/L					U	04/28/08
BLANK	2-Nitrophenol	88-75-5	< 0.50	n/a	ug/L					U	04/28/08
BLANK	3 & 4 Methylphenol Total	65794-96-9	< 0.50	n/a	ug/L	0.000	5.000			U	04/28/08
BLANK	3-Nitroaniline	99-09-2	< 0.60	n/a	ug/L					U	04/28/08
BLANK	4,6-Dinitro-2-methylphenol	534-52-1	< 1.0	n/a	ug/L					U	04/28/08
BLANK	4-Bromophenylphenyl ether	101-55-3	< 1.0	n/a	ug/L					U	04/28/08
BLANK	4-Chlorophenylphenyl ether	7005-72-3	< 1.7	n/a	ug/L					U	04/28/08
BLANK	Acenaphthene	83-32-9	< 2.6	n/a	ug/L					U	04/28/08
BLANK	Acenaphthylene	208-96-8	< 2.3	n/a	ug/L					U	04/28/08
BLANK	Anthracene	120-12-7	< 0.50	n/a	ug/L					U	04/28/08
BLANK	Bis(2-chloroethyl) ether	111-44-4	< 0.90	n/a	ug/L					U	04/28/08
BLANK	Benzo(a)anthracene	56-55-3	< 0.50	n/a	ug/L					U	04/28/08
BLANK	Benzo(b)fluoranthene	205-99-2	< 0.50	n/a	ug/L					U	04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080771
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	04/28/08
BLANK	Benzo(a)pyrene	50-32-8	< 0.50	n/a	ug/L					U	04/28/08
BLANK	Bis(2-Chloroethoxy)methane	111-91-1	< 0.50	n/a	ug/L					U	04/28/08
BLANK	Bis(2-ethylhexyl) phthalate	117-81-7	< 0.80	n/a	ug/L					U	04/28/08
BLANK	Bis(2-chloro-1-methylethyl)eth	108-60-1	< 1.0	n/a	ug/L	0.000	10.000			U	04/28/08
BLANK	Benzo(k)fluoranthene	207-08-9	< 0.50	n/a	ug/L					U	04/28/08
BLANK	Butylbenzylphthalate	85-68-7	< 0.60	n/a	ug/L					U	04/28/08
BLANK	Carbazole	86-74-8	< 0.50	n/a	ug/L					U	04/28/08
BLANK	4-Chloroaniline	106-47-8	< 0.50	n/a	ug/L					U	04/28/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 0.50	n/a	ug/L					U	04/28/08
BLANK	2-Chlorophenol	95-57-8	< 0.50	n/a	ug/L					U	04/28/08
BLANK	Chrysene	218-01-9	< 0.50	n/a	ug/L					U	04/28/08
BLANK	3,3'-Dichlorobenzidine	91-94-1	< 0.80	n/a	ug/L					U	04/28/08
BLANK	Dibenz[a,h]anthracene	53-70-3	< 0.50	n/a	ug/L					U	04/28/08
BLANK	Dibenzofuran	132-64-9	< 2.2	n/a	ug/L					U	04/28/08
BLANK	Di-n-butylphthalate	84-74-2	< 2.3	n/a	ug/L					U	04/28/08
BLANK	Diethylphthalate	84-66-2	< 1.9	n/a	ug/L					U	04/28/08
BLANK	Dimethyl phthalate	131-11-3	< 0.50	n/a	ug/L					U	04/28/08
BLANK	2,4-Dinitrophenol	51-28-5	< 2.0	n/a	ug/L					U	04/28/08
BLANK	Di-n-octylphthalate	117-84-0	< 0.50	n/a	ug/L					U	04/28/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 0.60	n/a	ug/L					U	04/28/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	17.869	89.300	% Recov	58.000	109.000				04/28/08
BLANK	Fluorene	86-73-7	< 1.4	n/a	ug/L					U	04/28/08
BLANK	Fluoranthene	206-44-0	< 0.50	n/a	ug/L					U	04/28/08
BLANK	Hexachlorobenzene	118-74-1	< 0.50	n/a	ug/L					U	04/28/08
BLANK	Hexachlorobutadiene	87-68-3	< 2.0	n/a	ug/L					U	04/28/08
BLANK	Hexachlorocyclopentadiene	77-47-4	< 5.0	n/a	ug/L					U	04/28/08
BLANK	Hexachloroethane	67-72-1	< 1.4	n/a	ug/L					U	04/28/08
BLANK	Indeno(1,2,3-cd)pyrene	193-39-5	< 0.50	n/a	ug/L					U	04/28/08
BLANK	Isophorone	78-59-1	< 0.50	n/a	ug/L					U	04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080771
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	04/28/08
BLANK	Naphthalene	91-20-3	< 2.1	n/a	ug/L					U	04/28/08
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	17.560	87.800	% Recov	60.000	118.000				04/28/08
BLANK	Nitrobenzene	98-95-3	< 0.60	n/a	ug/L					U	04/28/08
BLANK	4-Nitrophenol	100-02-7	< 1.0	n/a	ug/L					U	04/28/08
BLANK	4-Nitroaniline	100-01-6	< 1.0	n/a	ug/L					U	04/28/08
BLANK	N-Nitrosodiphenylamine	86-30-6	< 0.50	n/a	ug/L					U	04/28/08
BLANK	Pentachlorophenol	87-86-5	< 1.5	n/a	ug/L					U	04/28/08
BLANK	Phenanthrene	85-01-8	< 0.55	n/a	ug/L					U	04/28/08
BLANK	Phenol-d5(Surr)	4165-62-2	16.862	84.300	% Recov	59.000	116.000				04/28/08
BLANK	Pyrene	129-00-0	< 0.50	n/a	ug/L					U	04/28/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	14.833	74.200	% Recov	60.000	120.000				04/28/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	19.214	96.100	% Recov	60.000	120.000				04/28/08
LCS	1,2,4-Trichlorobenzene	120-82-1	18.905	94.500	% Recov	46.000	107.000				04/28/08
LCS	1,4-Dichlorobenzene	106-46-7	18.832	94.200	% Recov	42.000	111.000				04/28/08
LCS	2,4-Dinitrotoluene	121-14-2	17.350	86.800	% Recov	59.000	106.000				04/28/08
LCS	2-Fluorophenol(Surr)	367-12-4	19.117	95.600	% Recov	50.000	110.000				04/28/08
LCS	Acenaphthene	83-32-9	19.050	95.200	% Recov	61.000	116.000				04/28/08
LCS	4-Chloro-3-methylphenol	59-50-7	27.826	92.800	% Recov	61.000	106.000				04/28/08
LCS	2-Chlorophenol	95-57-8	28.350	94.500	% Recov	66.000	106.000				04/28/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	19.195	96.000	% Recov	71.000	114.000				04/28/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	19.003	95.000	% Recov	58.000	109.000				04/28/08
LCS	Phenol	108-95-2	27.669	92.200	% Recov	67.000	105.000				04/28/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	17.918	89.600	% Recov	60.000	118.000				04/28/08
LCS	4-Nitrophenol	100-02-7	26.743	89.100	% Recov	32.000	118.000				04/28/08
LCS	Pentachlorophenol	87-86-5	29.292	97.600	% Recov	62.000	114.000				04/28/08
LCS	Phenol-d5(Surr)	4165-62-2	18.844	94.200	% Recov	59.000	116.000				04/28/08
LCS	Pyrene	129-00-0	19.573	97.900	% Recov	66.000	118.000				04/28/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	18.207	91.000	% Recov	60.000	120.000				04/28/08
LCS	Terphenyl-d14(Surr)	98904-43-9	20.232	101.000	% Recov	60.000	120.000				04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080771
Matrix: WATER
Test: NWTPH-D TPH Diesel Range (Wa)

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	ortho-Terphenyl Surr	84-15-1	572.25	99.600	% Recov	70.000	130.000				04/28/08
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2946.1	103.000	% Recov	75.000	125.000				04/28/08
MSD	ortho-Terphenyl Surr	84-15-1	602.32	111.000	% Recov	70.000	130.000				04/28/08
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2911.7	107.000	% Recov	75.000	125.000				04/28/08
SPK-RPD	ortho-Terphenyl Surr	84-15-1	111.000		RPD			10.826	20.000		04/28/08
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	107.000		RPD			3.810	20.000		04/28/08
SURR	ortho-Terphenyl Surr	84-15-1	414.85	99.600	% Recov	70.000	130.000				04/28/08
BATCH QC											
BLANK	Kerosene	TPHKEROSENE	< 75	n/a	ug/L					U	04/28/08
BLANK	ortho-Terphenyl Surr	84-15-1	474.85	95.000	% Recov	70.000	130.000				04/28/08
BLANK	Total Pet. Hydrocarbons Diesel	TPHDIESEL	< 75	n/a	ug/L					U	04/28/08
LCS	ortho-Terphenyl Surr	84-15-1	511.60	102.000	% Recov	70.000	130.000				04/28/08
LCS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	2776.6	111.000	% Recov	80.000	120.000				04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080771
Matrix: WATER
Test: VOA Ground Water Protection

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00997											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,1-Dichloroethene	75-35-4	19.600	78.400	% Recov	63.000	117.000				04/25/08
MS	Benzene	71-43-2	25.210	101.000	% Recov	75.000	129.000				04/25/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	50.000	100.000	% Recov	75.000	125.000				04/25/08
MS	Chlorobenzene	108-90-7	24.550	98.200	% Recov	79.000	119.000				04/25/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	46.080	92.200	% Recov	75.000	125.000				04/25/08
MS	Toluene-d8(Surr)	2037-26-5	50.480	101.000	% Recov	75.000	125.000				04/25/08
MS	Toluene	108-88-3	26.020	104.000	% Recov	76.000	120.000				04/25/08
MS	Trichloroethene	79-01-6	23.220	92.900	% Recov	73.000	123.000				04/25/08
MSD	1,1-Dichloroethene	75-35-4	20.030	80.100	% Recov	63.000	117.000				04/25/08
MSD	Benzene	71-43-2	25.060	100.000	% Recov	75.000	129.000				04/25/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	49.990	100.000	% Recov	75.000	125.000				04/25/08
MSD	Chlorobenzene	108-90-7	23.980	95.900	% Recov	79.000	119.000				04/25/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	46.840	93.700	% Recov	75.000	125.000				04/25/08
MSD	Toluene-d8(Surr)	2037-26-5	50.200	100.000	% Recov	75.000	125.000				04/25/08
MSD	Toluene	108-88-3	25.240	101.000	% Recov	76.000	120.000				04/25/08
MSD	Trichloroethene	79-01-6	22.680	90.700	% Recov	73.000	123.000				04/25/08
SPK-RPD	1,1-Dichloroethene	75-35-4	80.100		RPD			2.145	20.000		04/24/08
SPK-RPD	Benzene	71-43-2	100.000		RPD			0.995	20.000		04/24/08
SPK-RPD	Chlorobenzene	108-90-7	95.900		RPD			2.370	20.000		04/24/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	93.700		RPD			1.614	20.000		04/24/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	100.000		RPD			0.995	20.000		04/24/08
SPK-RPD	Toluene	108-88-3	101.000		RPD			2.927	20.000		04/24/08
SPK-RPD	Trichloroethene	79-01-6	90.700		RPD			2.397	20.000		04/24/08
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080771
Matrix: WATER
Test: VOA Ground Water Protection

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	4-Bromofluorobenzene(Surr)	460-00-4	52.240	104.000	% Recov	75.000	125.000				04/24/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	48.180	96.400	% Recov	75.000	125.000				04/24/08
SURR	Toluene-d8(Surr)	2037-26-5	51.420	103.000	% Recov	75.000	125.000				04/24/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/L					U	04/24/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/L					U	04/24/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/L					U	04/24/08
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	n/a	ug/L	0.000	5.000			U	04/24/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/L					U	04/24/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/L					U	04/24/08
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 1.0	n/a	ug/L					U	04/24/08
BLANK	1-Butanol	71-36-3	< 100	n/a	ug/L					U	04/24/08
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/L					U	04/24/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/L					U	04/24/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	51.170	102.000	% Recov	75.000	125.000				04/24/08
BLANK	Bromoform	75-25-2	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/L					U	04/24/08
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/L					U	04/24/08
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Chloroethane	75-00-3	< 1.0	n/a	ug/L					U	04/24/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	50.060	100.000	% Recov	75.000	125.000				04/24/08
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/L					U	04/24/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080771
Matrix: WATER
Test: VOA Ground Water Protection

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Bromomethane	74-83-9	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Chloromethane	74-87-3	< 1.0	n/a	ug/L					U	04/24/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/L	0.000	5.000			U	04/24/08
BLANK	Toluene-d8(Surr)	2037-26-5	50.420	101.000	% Recov	75.000	125.000				04/24/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/L					U	04/24/08
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Trichloromonofluoromethane	75-69-4	< 1.0	n/a	ug/L	0.000	5.000			U	04/24/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/L					U	04/24/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/L					U	04/24/08
LCS	1,1-Dichloroethene	75-35-4	19.810	79.200	% Recov	75.000	125.000				04/25/08
LCS	Benzene	71-43-2	24.760	99.000	% Recov	75.000	125.000				04/25/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	49.250	98.500	% Recov	75.000	125.000				04/25/08
LCS	Chlorobenzene	108-90-7	24.200	96.800	% Recov	75.000	125.000				04/25/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	42.960	85.900	% Recov	75.000	125.000				04/25/08
LCS	Toluene-d8(Surr)	2037-26-5	50.210	100.000	% Recov	75.000	125.000				04/25/08
LCS	Toluene	108-88-3	26.800	107.000	% Recov	75.000	125.000				04/25/08
LCS	Trichloroethene	79-01-6	23.360	93.400	% Recov	75.000	125.000				04/25/08

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-076
Sample # W08GR00998
Client ID: B1TNV4 TRENT WSCF
Matrix: WATER

Group #: WSCF20080771
Department: Radiochemistry
Sampled: 04/10/08
Received: 04/10/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Americium by AEA											
Americium-241	14596-10-2	LA-508-471	U	-0.0290	pCi/L	+-0.0687	pCi/L	1.00	0.13		04/22/08
Am-243 tracer by AEA	AM243	LA-508-471		10.0	pCi/L			1.00	0.088		04/22/08
Gamma Energy Analysis-grd H2O											
Cobalt-60	10198-40-0	LA-508-481		63.6	pCi/L	+-9.09	pCi/L	1.00	7.8		05/21/08
Cesium-137	10045-97-3	LA-508-481	U	1.72	pCi/L	+-4.58	pCi/L	1.00	8.2		05/21/08
Neptunium by AEA											
Neptunium-237	13994-20-2	LA-508-471		0.610	pCi/L	+-0.378	pCi/L	1.00	0.41		05/08/08
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	-0.0330	pCi/L	+-0.0898	pCi/L	1.00	0.17		04/22/08
Pu-239/240 by AEA	PU-239/240	LA-508-471	U	-5.50e-03	pCi/L	+-0.0246	pCi/L	1.00	0.059		04/22/08
Pu-242 tracer by AEA	PU242	LA-508-471		16.0	pCi/L			1.00	0.040		04/22/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.560	pCi/L	+-2.34	pCi/L	1.00	1.1		04/29/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		89.6	Percent			1.00	0.0		04/29/08
TC99 by ICP-200.8 MS Prep											**04/11/08**
TC99 by ICP-200.8 MS											
Technetium by ICP-MS	14133-76-7	LA-505-412		0.540	ug/L			1.00	1.0e-03		04/11/08
TC99 by Liquid Scin.											
Tc-99 by Liquid Scin.	14133-76-7	LA-508-421		1.00e+04	pCi/L	+-2.00e+03	pCi/L	1.00	5.9		05/29/08
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		27.0	pCi/L	+-7.02	pCi/L	1.00	0.058		04/22/08
Uranium-235	15117-96-1	LA-508-471		1.60	pCi/L	+-0.464	pCi/L	1.00	0.016		04/22/08
Uranium-238	U-238	LA-508-471		29.0	pCi/L	+-7.54	pCi/L	1.00	0.050		04/22/08
U-232 tracer by AEA	U232	LA-508-471		10.0	pCi/L			1.00	0.058		04/22/08

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)
C - The Analyte was found in the Associated Blank.(inorg)
D - Analyte was identified at a secondary dilution factor(inorg)
N - Spike sample recovery is outside control limits.(inorg)
U - Analyzed for but not detected above limiting criteria(inorg)
U - Analyzed for but not detected above limiting criteria.(org)
X - Other flags/notes described in the comments/narrative(inorg)

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

WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F08-076 :F08-076

Group #: WSCF20080771
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR00998	B1TNV4	TRENT	Gamma Energy Analysis-grd H2O	BI-214				98	pCi/L
W08GR00998	B1TNV4	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error				43	%
W08GR00998	B1TNV4	TRENT	Gamma Energy Analysis-grd H2O	PB-214				69	pCi/L
W08GR00998	B1TNV4	TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error				31	%
W08GR00998	B1TNV4	TRENT	Gamma Energy Analysis-grd H2O	RA-226				1.0e+02	pCi/L
W08GR00998	B1TNV4	TRENT	Gamma Energy Analysis-grd H2O	RA-226 Count Error				27	%

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080771
Matrix: WATER
Test: Gamma Energy Analysis-grd H2O

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Cobalt-60	10198-40-0	63.24		RPD			0.646	20.000		05/22/08
DUP	Cesium-137	10045-97-3	U-3.863		RPD			n/a	20.000		05/22/08
BATCH QC											
BLANK	Cobalt-60	10198-40-0	U-2.556	n/a	pCi/L	-10.000	1000.000				05/21/08
BLANK	Cesium-137	10045-97-3	U4.204	n/a	pCi/L	-10.000	1000.000				05/21/08
LCS	Cobalt-60	10198-40-0	10620	106.841	% Recov	80.000	120.000				05/22/08
LCS	Cesium-137	10045-97-3	6123	101.374	% Recov	80.000	120.000				05/22/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080771
Matrix: WATER
Test: Americium by AEA

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Americium-241	14596-10-2	8.4e-2		RPD			n/a	20.000		04/22/08
DUP	Am-243 tracer by AEA	AM243	10.06	83.470	% Recov	30.000	105.000				04/22/08
SURR	Am-243 tracer by AEA	AM243	10.06	89.830	% Recov	30.000	105.000				04/22/08
BATCH QC											
BLANK	Americium-241	14596-10-2	U2.9e-2	n/a	pCi/L	-10.000	1000.000				04/22/08
BLANK	Am-243 tracer by AEA	AM243	10.06	87.760	% Recov	30.000	105.000				04/22/08
LCS	Americium-241	14596-10-2	11.25	94.937	% Recov	80.000	120.000				04/22/08
LCS	Am-243 tracer by AEA	AM243	11.17	96.610	% Recov	30.000	105.000				04/22/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080771
Matrix: WATER
Test: Neptunium by AEA

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

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080771
Matrix: WATER
Test: Plutonium Isotopics by AEA

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Plutonium-238	13981-16-3	U6.3e-2		RPD			n/a	20.000		04/22/08
DUP	Pu-239/240 by AEA	PU-239/240	U5.3e-3		RPD			n/a	20.000		04/22/08
DUP	Pu-242 tracer by AEA	PU242	15.59	74.480	% Recov	30.000	105.000				04/22/08
SURR	Pu-242 tracer by AEA	PU242	15.59	77.880	% Recov	30.000	105.000				04/22/08
BATCH QC											
BLANK	Plutonium-238	13981-16-3	U5e-2	n/a	pCi/L	-10.000	1000.000				04/22/08
BLANK	Pu-239/240 by AEA	PU-239/240	U3.5e-2	n/a	pCi/L	-10.000	1000.000				04/22/08
BLANK	Pu-242 tracer by AEA	PU242	15.59	83.310	% Recov	30.000	105.000				04/22/08
LCS	Pu-239/240 by AEA	PU-239/240	12	101.266	% Recov	80.000	120.000				04/22/08
LCS	Pu-242 tracer by AEA	PU242	17.3	83.220	% Recov	30.000	105.000				04/22/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080771
Matrix: WATER
Test: Strontium 89/90

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	95.7	95.700	% Recov	30.000	105.000				04/29/08
DUP	Strontium-89/90	SR-RAD	U-1.5		RPD			n/a	20.000		04/29/08
SURR	Sr-85 Tracer by Beta Counting	SR85	89.6	89.600	% Recov	30.000	105.000				04/29/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	101.4	101.400	% Recov	30.000	105.000				04/29/08
BLANK	Strontium-89/90	10098-97-2	U-3.2	n/a	pCi/L	-10.000	100.000				04/29/08
LCS	Sr-85 Tracer by Beta Counting	SR85	101.2	101.200	% Recov	30.000	105.000				04/29/08
LCS	Strontium-89/90	10098-97-2	130.0	92.593	% Recov	80.000	120.000				04/29/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080771
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	04/11/08
LCS	Technetium by ICP-MS	14133-76-7	0.144	98.630	% Recov	49.000	125.000				04/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080771
Matrix: WATER
Test: TC99 by Liquid Scin.

Sample Date: 11/15/07
Receive Date: 11/15/07

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01318											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Tc-99 by Liquid Scin.	14133-76-7	2.8E+03		RPD			0.000	20.000		05/29/08
MS	Tc-99 by Liquid Scin.	14133-76-7	727.4	96.697	% Recov	75.000	125.000				05/29/08
BATCH QC											
BLANK	Tc-99 by Liquid Scin.	14133-76-7	U-0.6	n/a	pCi/L	-10.000	10.000				05/29/08
LCS	Tc-99 by Liquid Scin.	14133-76-7	201.5	107.124	% Recov	80.000	120.000				05/29/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080771
Matrix: WATER
Test: Uranium Isotopics by AEA

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00998											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	U-232 tracer by AEA	U232	10.35	79.000	% Recov	30.000	105.000				04/22/08
DUP	Uranium-233/234	U-233/234	28		RPD			3.636	20.000		04/22/08
DUP	Uranium-235	15117-96-1	1.6		RPD			0.000	20.000		04/22/08
DUP	Uranium-238	U-238	29		RPD			0.000	20.000		04/22/08
SURR	U-232 tracer by AEA	U232	10.35	77.840	% Recov	30.000	105.000				04/22/08
BATCH QC											
BLANK	U-232 tracer by AEA	U232	10.35	98.080	% Recov	30.000	105.000				04/22/08
BLANK	Uranium-233/234	13966-29-5	5.4e-2	0.054	pCi/L	-10.000	1000.000				04/22/08
BLANK	Uranium-235	15117-96-1	U2.4e-2	n/a	pCi/L	-10.000	1000.000				04/22/08
BLANK	Uranium-238	24678-82-8	U2.7e-2	n/a	pCi/L	-10.000	1000.000				04/22/08
LCS	U-232 tracer by AEA	U232	11.49	92.890	% Recov	30.000	105.000				04/22/08
LCS	Uranium-233/234	13966-29-5	n/a	n/a	% Recov	75.000	125.000				04/22/08
LCS	Uranium-238	24678-82-8	19.68	103.825	% Recov	80.000	120.000				04/22/08

M4W41-SLF-08-612

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 4 pages
Including cover page

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

5/23/08
F1 E Kb

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program
Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 123515/ES10
Group#: 20080771
Project#: F08-076
Proj Mgr: Steve Trent E6-35
Phone: 373-5869

The following samples were received from you on 04/10/08. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample#	Sample Id	Matrix / Tests Scheduled					Sample Date
W08GR00998	B1TNV4	TRENT	Water				04/10/0
		@2008	@AEA-30	@AEA-31	@AEA-32	@AEA-33	
		@GEA-GPP	@GPP6010	@IC-30	@SR89_90	@SVOCGPP	@TC9
		@TC99-MS	@TPHD-WA	@VOA-GPP	ALKALI	CN-02	CR+6
		NH4-IC	PH-30				

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
@TPHD-WA	NWTPH-D TPH Diesel Range (Wa)
@VOA-GPP	VOA Ground Water Protection
ALKALI	Total Alkalinity as mg/L CaCO3
CN-02	Cyanide by Midi/Spectrophotom
CR+6	Hexavalent chromium
NH4-IC	Ammonia (N) by IC
PH-30	pH Direct Measurement

2

COLLECTOR NCO SAMPLER Mueller/Chacon	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 7N	**DATA TURNAROUND** 45 Days / 45 Days
SAMPLING LOCATION C5857, I-135	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for Wells 299-E33-341 and 299-E33-342		**SAF NO.** F08-076	**AIR QUALITY** ☐	
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH** 242'.4	**COA** 123515ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A		

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

POSSIBLE SAMPLE HAZARDS/ REMARKS
Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE
Radioactive Tie to: B1TNV1

PRESERVATION	HNO3 to pH <2(ULTREX)	HCl or H2SO4 to pH <2/Cool~4C	Cool~4C	HCl to pH <2/Cool~4C	HNO3 to pH <2	Cool~4C	NaOH to pH >= 12/Cool~4C	Cool~4C	H2SO4 to pH <2	Cool~4C
TYPE OF CONTAINER	Nalgene	aGs*	aG	aG	G/P	aG	G/P	P	G/P	G/P
NO. OF CONTAINER(S)	1	3	4	2	1	1	1	1	1	1
VOLUME	500mL	40mL	1000mL	1000mL	500mL	500mL	250mL	500mL	250mL	500mL
SAMPLE ANALYSIS	Tc-99 by ICPMS (Technetium-99)	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	Semi-VOA - 8270B (TCL);	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	Chromium Hex - 7196;	Cyanide (Total) - 335.2;	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	Cations (IC) - 300.7 (Nitrogen in ammonium)	2320_ALKALINITY (Alkalinity)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B1TNV4	WATER	4/10/8	0955	(F)	(F)	(F)	(F)	(F)	(F)	(F)	(F)

030447
=9038 026015 026015 028006 28864 23715 29038 25083 29038

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature] 4/14/8	1400	TA FRAZIER [signature] 4/10/08	1400

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)TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(3)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;
(4)IC Anions - 300.0 {Chloride, Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Phosphorus in phosphate, Sulfate}
*(F) SAMPLE FILTERED

ICED

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

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A-6003-618(01/06)

COLLECTOR NCO SAMPLER - MUELLER/CHASCOM	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL	**PRICE CODE** 7N
SAMPLING LOCATION C5857, I-135	**PROJECT DESIGNATION** 200-BP-5 OU Characterization for Wells 299-E33-341 and 299-E33-342		**SAF NO.** F08-076	**AIR QUALITY** ☐
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH** 292.4	**COA** 123515ES10	**METHOD OF SHIPMENT** GOVERNMENT VEHICLE
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.** N/A		**BILL OF LADING/AIR BILL NO.** N/A	

DATA TURNAROUND 45 Days / 45 Days

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: B1TNV1

20080771

SAMPLE NO.	**MATRIX***	**PRESERVATION**	None	HNO3 to pH <2	HNO3 to pH <2	HCl to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2	HNO3 to pH <2
		TYPE OF CONTAINER	G/P	Square Bottle - Poly	G/P	G/P	P	G/P	G/P	G/P
		NO. OF CONTAINER(S)	1	1	1	2	1	1	1	1
		VOLUME	125mL	500mL	1000mL	1000mL	1000mL	1000mL	1000mL	1000mL
		SAMPLE ANALYSIS	pH - 150 1;	Gamma Spectroscopy (Cesium-137, Cobalt-60)	Strontium-89,90 -- Total Sr;	Technetium-99;	Isotopic Plutonium;	Isotopic Uranium;	Neptunium-237;	Americium-241;
B1TNV4	WATER	**SAMPLE DATE** 4/10/8	**SAMPLE TIME** 0955	Y(F)	Y(F)	Y(F)	Y(F)	Y(F)	Y(F)	Y(F)	Y(F)

W0826C0718

027722 025294 026015 029403 029407 029409 029409

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM	**DATE/TIME**	**RECEIVED BY/STORED IN**	**DATE/TIME**
J. Mueller/CHASCOM	4/10/8 1400	TA FIZAZIER/Texas City	4/10/08 1400

SIGN/ PRINT NAMES

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.

*(F) SAMPLE FILTERED

ICED

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