REV. 1

RECEIVED JULY 18, 2008

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FLUOR

Memorandum

M4W41-SLF-08-710

To: H. Hampt E6-35 Date: July 17, 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: ADDITIONAL SAMPLE ANALYSES (6010) FOR SAMPLE DELIVERY GROUP WSCF20080746 – SAF NUMBER F08-043

Reference:
(1) Memo, SL Fitzgerald to H Hampt, Final Results for SDG WSCF20080746 (M4W41-SLF-08-563), dated May 27, 2008

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

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

Compliant to your request for additional metals, Antimony, Cobalt, Manganese and Thallium data have been included in this submittal for sample delivery group WSCF20080746:

- Analytical Results (Replacement pages 19, 22, 23, 24, 25 and 25a of 59)

If you have any questions, don't hesitate to call on Pauline Mix, telephone 372-1488, for assistance.

SLF/grf

Attachments
As listed

REVISED
7-18-08

M4W41-SLF-08-563

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20080746
Data Deliverable Date: 23-may-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F08-043	B1TDD7	W08GR00957	SOIL
	B1TDD9	W08GR00954	SOIL

M4W41-SLF-08-563

ATTACHMENT 2

NARRATIVE

Consisting of 5 pages
Including cover page

Introduction

Three S&GRP samples were received at the WSCF Laboratory on April 8, 2008. Two of the samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Groundwater Remediation Program – Letter of Instruction*, referenced in the cover letter. Analysis of the Methanol Blank (B1TDD8) and corresponding high-concentration VOA sample were not required.

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A copy of Issue Resolution Form (IRF) #08-069 documenting missed **PCB, Semi-VOA, TPHD-WA** and **VOA** regulatory hold time requirements is included as Attachment 3. A Data Summary Report (Attachment 4) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 5. Additionally, a copy of a sample record sheet is included as Attachment 6.

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

Analytical Methodology for Requested Analyses

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

Inorganic Comments

Anions – Hold time requirements for this analysis was not met. See comment below. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See pages 20 through 21 for QC details. Analytical Note(s):

- Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V261 (SDG# 20080786, SAF# F08-046).
- 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.

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 22 through 25 for QC details. Analytical Note(s):

- Lead and Silver – Laboratory Control Sample recoveries were less than established laboratory limits. Sample results were E flagged.

- Silver – Matrix Spike Duplicate was less than established laboratory limits. Sample result was N flagged.

All other QC controls are within the established limits.

Organic Comments

All results are corrected for moisture and reported on a dry weight basis.

PCB – The hold time requirements for this analysis were not met. See comment below. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See pages 32 through 33 for QC details. Analytical Note(s):

- Missed Hold Time - Sample was collected in the field on March 19, 2008, and delivered to the WSCF Laboratory on April 8, 2008, after the regulatory hold time had expired. Copy of IRF# 08-069 is included as Attachment 3, documenting missed hold time requirement.

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TTD4 (SDG# 20080650, SAF# F08-088).

All QC controls are within the established limits.

Semi-VOA – The hold time requirements for this analysis were not met. See comment below. 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 34 through 37 for QC details. Analytical Note(s):

- Missed Hold Time - Sample was collected in the field on March 19, 2008, and delivered to the WSCF Laboratory on April 8, 2008, after the regulatory hold time had expired. Copy of IRF# 08-069 is included as Attachment 3, documenting missed hold time requirement.

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TNR0 (SDG# 20080683, SAF# F08-070).

All QC controls are within the established limits.

TPHD-WA – The hold time requirements for this analysis were not met. See comment below. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. See page 38 for QC details. Analytical Note(s):

- Missed Hold Time - Sample was collected in the field on March 19, 2008, and delivered to the WSCF Laboratory on April 8, 2008, after the regulatory hold time had expired. Copy of IRF# 08-069 is included as Attachment 3, documenting missed hold time requirement.

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TFC0 (SDG# 20080715, SAF# F08-066).

All QC controls are within the established limits.

VOA – The hold time requirements for this analysis were not met. See comment below. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample, were analyzed with this delivery group per the GRP Letter of Instruction. See pages 39 through 41 for QC details. Analytical Note(s):

- Missed Hold Time - Sample was collected in the field on March 19, 2008, and delivered to the WSCF Laboratory on April 8, 2008, after the regulatory hold time had expired. Copy of IRF# 08-069 is included as Attachment 3, documenting missed hold time requirement.

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1VB28 (SDG# 20080850, SAF# F08-043).

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 46 through 51 for QC details. Analytical Note(s):

- Americium-241 and 243 (tracer) – Duplicate QC was analyzed on sample# B1TFC0 (SDG# 20080715, SAF# F08-066).

- Neptunium-237 – Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TFC0 (SDG# 20080715, SAF# F08-066). Matrix Spikes were also analyzed on samples B1TW36 (SDG# 20080732, SAF# F08-074) and B1TDD9 of this SDG.

- Plutonium-238, 239/240 and 242 (tracer) – Duplicate QC was analyzed on sample# B1TFC0 (SDG# 20080715, SAF# F08-066).

- Strontium-89/90 and 85 (tracer) – Duplicate QC was analyzed on sample# B1TTN1 (SDG# 20080783, SAF# F07-026).

- Uranium-233/234, 235, 238 and 232 (tracer) – Duplicate QC was analyzed on sample# B1TFC0 (SDG# 20080715, SAF# F08-066).

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-08-563

ATTACHMENT 3

ISSUE RESOLUTION FORM

Consisting of 2 pages
Including cover page

ISSUE RESOLUTION FORM

PNNL TRACKING NUMBER: 08-069

Date : **5-27-2008** SAF No. **F08-043**

SDG: **WSCF20080746** LOGIN No.: TEST: see below

Sample No.(s)			
	B1TDD7	**W08GR00957**	**Missed VOA hold time**
	B1TDD9	**W08GR00954**	**Missed PCB hold time**
			Missed Semi-VOA hold time
			Missed TPHD hold time

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

ISSUE	PROPOSED RESOLUTION
Missed holding time requirements on organic analyses for S&GRP samples. Samples were collected on March 19, 2008; however, were not delivered to the WSCF Laboratory until April 8, 2008, after the regulatory hold time requirements had expired. Samples were successfully analyzed per the chain of custody and all QC controls were within established limits.	Accept results (accept as-is) and document missed hold time requirements in the case narrative.

GRP COMMENTS

Accept proposed resolution.

Heidi Hampt 5/27/08

Signature and Date

M4W41-SLF-08-563

ATTACHMENT 4

ANALYTICAL RESULTS

Consisting of 41 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: S. Fitzgerald 5/27/08

Client Services: P.D. Mix 5/27/2008

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

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Contract#: FH-EIS-2003-MEM-001
Report#: WSCF20080746
Report Date: 23-may-2008
Report WGPP/ver. 5.2

w13qlog v4.2 23-may-2008 14:18:52

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20080746

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
				SAMPLE	W08GR00954	Percent Solids
35995	1	36411	40675	BLANK		ICP-200.8 MS All possible meta
35995	2	36411	40675	LCS		ICP-200.8 MS All possible meta
35995	4	36411	40675	MS	W08GR00836	ICP-200.8 MS All possible meta
35995	5	36411	40675	MSD	W08GR00836	ICP-200.8 MS All possible meta
35995	5	36411	40675	SPK-RPD	W08GR00836	ICP-200.8 MS All possible meta
35995	7	36411	40675	MS	W08GR00954	ICP-200.8 MS All possible meta
35995	8	36411	40675	MSD	W08GR00954	ICP-200.8 MS All possible meta
35995	6	36411	40675	SAMPLE	W08GR00954	ICP-200.8 MS All possible meta
35995	8	36411	40675	SPK-RPD	W08GR00954	ICP-200.8 MS All possible meta
36149	2	36566	40890	BLANK		Anions by Ion Chromatography
36149	17	36566	40890	BLANK		Anions by Ion Chromatography
36149	3	36566	40890	LCS		Anions by Ion Chromatography
36149	8	36566	40890	SAMPLE	W08GR00954	Anions by Ion Chromatography
36149	5	36566	40890	DUP	W08GR01020	Anions by Ion Chromatography
36149	6	36566	40890	MS	W08GR01020	Anions by Ion Chromatography
36149	7	36566	40890	MSD	W08GR01020	Anions by Ion Chromatography
36149	7	36566	40890	SPK-RPD	W08GR01020	Anions by Ion Chromatography

w13qlog v4.2 23-may-2008 14:18:52

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20080746

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			40705	BLANK		PCBs complete list
			40705	LCS		PCBs complete list
			40705	MS	W08GR00781	PCBs complete list
			40705	MSD	W08GR00781	PCBs complete list
			40705	SPK-RPD	W08GR00781	PCBs complete list
			40705	SAMPLE	W08GR00954	PCBs complete list
			40705	SURR	W08GR00954	PCBs complete list
			40713	BLANK		NWTPH-D TPH Diesel Range (Wa)
			40713	LCS		NWTPH-D TPH Diesel Range (Wa)
			40713	MS	W08GR00913	NWTPH-D TPH Diesel Range (Wa)
			40713	MSD	W08GR00913	NWTPH-D TPH Diesel Range (Wa)
			40713	SPK-RPD	W08GR00913	NWTPH-D TPH Diesel Range (Wa)
			40713	SAMPLE	W08GR00954	NWTPH-D TPH Diesel Range (Wa)
			40713	SURR	W08GR00954	NWTPH-D TPH Diesel Range (Wa)
			40725	BLANK		SW-846 8270C Semi-Vols
			40725	LCS		SW-846 8270C Semi-Vols
			40725	MS	W08GR00836	SW-846 8270C Semi-Vols
			40725	MSD	W08GR00836	SW-846 8270C Semi-Vols
			40725	SPK-RPD	W08GR00836	SW-846 8270C Semi-Vols
			40725	SAMPLE	W08GR00954	SW-846 8270C Semi-Vols
			40725	SURR	W08GR00954	SW-846 8270C Semi-Vols
			41165	BLANK		VOA Ground Water Protection
			41165	LCS		VOA Ground Water Protection
			41165	SAMPLE	W08GR00957	VOA Ground Water Protection
			41165	SURR	W08GR00957	VOA Ground Water Protection
			41165	MS	W08GR01098	VOA Ground Water Protection
			41165	MSD	W08GR01098	VOA Ground Water Protection
			41165	SPK-RPD	W08GR01098	VOA Ground Water Protection

w13qlog v4.2 23-may-2008 14:18:52

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20080746

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
35915	1	36330	40665	BLANK		Gamma Energy Analysis-grd H2O
35915	2	36330	40665	LCS		Gamma Energy Analysis-grd H2O
35915	3	36330	40665	DUP	W08GR00954	Gamma Energy Analysis-grd H2O
35915	4	36330	40665	SAMPLE	W08GR00954	Gamma Energy Analysis-grd H2O
36065	1	36480	40781	BLANK		Plutonium Isotopics by AEA
36065	2	36480	40781	LCS		Plutonium Isotopics by AEA
36065	3	36480	40781	DUP	W08GR00913	Plutonium Isotopics by AEA
36065	8	36480	40781	SAMPLE	W08GR00954	Plutonium Isotopics by AEA
36065	9	36480	40781	SURR	W08GR00954	Plutonium Isotopics by AEA
36066	1	36481	40783	BLANK		Americium by AEA
36066	2	36481	40783	LCS		Americium by AEA
36066	3	36481	40783	DUP	W08GR00913	Americium by AEA
36066	8	36481	40783	SAMPLE	W08GR00954	Americium by AEA
36066	9	36481	40783	SURR	W08GR00954	Americium by AEA
36064	1	36479	40784	BLANK		Uranium Isotopics by AEA
36064	2	36479	40784	LCS		Uranium Isotopics by AEA
36064	3	36479	40784	DUP	W08GR00913	Uranium Isotopics by AEA
36064	8	36479	40784	SAMPLE	W08GR00954	Uranium Isotopics by AEA
36064	9	36479	40784	SURR	W08GR00954	Uranium Isotopics by AEA
36109	1	36525	40931	BLANK		Strontium 89/90
36109	2	36525	40931	LCS		Strontium 89/90
36109	10	36525	40931	SAMPLE	W08GR00954	Strontium 89/90
36109	11	36525	40931	SURR	W08GR00954	Strontium 89/90
36109	3	36525	40931	DUP	W08GR01017	Strontium 89/90
36275	1	36691	41030	BLANK		Neptunium by AEA
36275	2	36691	41030	LCS		Neptunium by AEA
36275	3	36691	41030	DUP	W08GR00913	Neptunium by AEA
36275	5	36691	41030	MS	W08GR00913	Neptunium by AEA
36275	6	36691	41030	MSD	W08GR00913	Neptunium by AEA
36275	6	36691	41030	SPK-RPD	W08GR00913	Neptunium by AEA
36275	8	36691	41030	MS	W08GR00937	Neptunium by AEA
36275	10	36691	41030	MS	W08GR00954	Neptunium by AEA
36275	9	36691	41030	SAMPLE	W08GR00954	Neptunium by AEA

WSCF
METHOD REFERENCES REPORT

Department: Inorganic

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

LA-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-519-412 LA-519-412: TOTAL RESIDUE/% SOLIDS DRIED AT 103 - 105 C

EPA-600/4-79-020 160.1	Resisual, Filterable
EPA-600/4-79-020 160.3	RESIDUE, TOTAL
HEIS 160.1_TDS	Residual, Filterable
Standard Methods 2540B	Total Solids Dried at 103-105 C

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

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

WSCF
METHOD REFERENCES REPORT

Department: Organic

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

LA-523-427	LA-523-427: POLYCHLORINATED BIPHENYLS (PCBs) BY GAS CHROMATOGRAPHY	
	EPA SW-846 3510C	SEPARATORY FUNNEL LIQUID-LIQUID EXTRACTION
	EPA SW-846 3545	PRESSURIZED FLUID EXTRACTION (PFE)
	EPA SW-846 3665A	SULFURIC ACID/PERMANGANATE CLEANUP
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8082A	POLYCHLORINATED BIPHENYLS (PCBs) BY GAS CHROMATOGRAPHY
	HEIS 8082_PCB_GC	Polychlorinated Biphenyls (PCBs) by Gas Chromatography
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-508-471 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: F08-043
Sample # W08GR00954
Client ID: B1TDD9 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080746
Department: Inorganic
Sampled: 03/19/08
Received: 04/08/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography Prep											**04/07/08**
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	DU	< 0.300	mg/kg			50.00	0.30		04/30/08
Chloride	16887-00-6	LA-533-410	BD	0.610	mg/kg			50.00	0.030		04/30/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.500	mg/kg			50.00	0.50		04/30/08
Nitrogen in Nitrate	NO3-N	LA-533-410	BD	0.737	mg/kg			50.00	0.25		04/30/08
Sulfate	14808-79-8	LA-533-410	DU	< 3.50	mg/kg			50.00	3.5		04/30/08
ICP-200.8 MS All possible meta Prep											**04/09/08**
ICP-200.8 MS All possible meta											
Manganese	7439-96-5	LA-505-412		350	mg/kg			0.99	0.100		04/11/08
Nickel	7440-02-0	LA-505-412		6.22	mg/kg			0.99	0.199		04/11/08
Silver	7440-22-4	LA-505-412	EN	0.110	mg/kg			0.99	0.0993		04/11/08
Antimony	7440-36-0	LA-505-412	U	< 0.300	mg/kg			0.99	0.300		04/11/08
Barium	7440-39-3	LA-505-412		80.6	mg/kg			0.99	0.199		04/11/08
Beryllium	7440-41-7	LA-505-412		0.250	mg/kg			0.99	0.0497		04/11/08
Cadmium	7440-43-9	LA-505-412	U	< 0.0993	mg/kg			0.99	0.0993		04/11/08
Chromium	7440-47-3	LA-505-412		4.40	mg/kg			0.99	0.497		04/11/08
Cobalt	7440-48-4	LA-505-412		7.83	mg/kg			0.99	0.0500		04/11/08
Copper	7440-50-8	LA-505-412		10.7	mg/kg			0.99	0.0993		04/11/08
Zinc	7440-66-6	LA-505-412		29.6	mg/kg			0.99	0.795		04/11/08
Lead	7439-92-1	LA-505-412	E	2.59	mg/kg			0.99	0.0993		04/11/08
Mercury	7439-97-6	LA-505-412	U	< 0.0497	mg/kg			0.99	0.0497		04/11/08
Arsenic	7440-38-2	LA-505-412		1.60	mg/kg			0.99	0.397		04/11/08
Selenium	7782-49-2	LA-505-412	U	< 0.298	mg/kg			0.99	0.298		04/11/08
Thallium	7440-28-0	LA-505-412	U	< 1.10	mg/kg			0.99	1.10		04/11/08

PRG: P.D. Mix 7/17/2008

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)
E - Analyte is an estimate, has potentially larger errors(inorg)
U - Analyzed for but not detected above limiting criteria(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.(org)

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

REVISED 7-18-08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080746
Matrix: SOLID
Test: Anions by Ion Chromatography

Sample Date: 04/11/08
Receive Date:04/11/08

Lab ID: W08GR01020

BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
DUP	Fluoride	16984-48-8	<0.294		RPD			n/a	20.000	U	04/30/08
DUP	Nitrogen in Nitrite	NO2-N	<0.49		RPD			n/a	20.000	U	04/30/08
DUP	Nitrogen in Nitrate	NO3-N	0.8625		RPD			14.964	20.000		04/30/08
DUP	Sulfate	14808-79-8	74.0417		RPD			0.233	20.000		04/30/08
MS	Fluoride	16984-48-8	0.45807	91.982	% Recov	75.000	125.000				04/30/08
MS	Nitrogen in Nitrite	NO2-N	0.451126	90.770	% Recov	75.000	125.000				04/30/08
MS	Nitrogen in Nitrate	NO3-N	0.447867	99.526	% Recov	75.000	125.000				04/30/08
MS	Sulfate	14808-79-8	1.64835	83.250	% Recov	75.000	125.000				04/30/08
MSD	Fluoride	16984-48-8	0.454836	91.333	% Recov	75.000	125.000				04/30/08
MSD	Nitrogen in Nitrite	NO2-N	0.45113	90.771	% Recov	75.000	125.000				04/30/08
MSD	Nitrogen in Nitrate	NO3-N	0.450613	100.136	% Recov	75.000	125.000				04/30/08
MSD	Sulfate	14808-79-8	1.64534	83.098	% Recov	75.000	125.000				04/30/08
SPK-RPD	Fluoride	16984-48-8	91.333		RPD			0.708	20.000		04/30/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	90.771		RPD			0.001	20.000		04/30/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	100.136		RPD			0.611	20.000		04/30/08
SPK-RPD	Sulfate	14808-79-8	83.098		RPD			0.183	20.000		04/30/08

BATCH QC

BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	04/30/08
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	04/30/08
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	04/30/08
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	04/30/08
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	04/30/08
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	04/30/08
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	04/30/08
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	04/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20080746
Matrix: SOLID
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
LCS	Fluoride	16984-48-8	105.3073	105.730	% Recov	80.000	120.000				04/30/08
LCS	Nitrogen in Nitrite	NO2-N	98.4199	99.014	% Recov	80.000	120.000				04/30/08
LCS	Nitrogen in Nitrate	NO3-N	92.8608	103.064	% Recov	80.000	120.000				04/30/08
LCS	Sulfate	14808-79-8	380.1465	95.997	% Recov	80.000	120.000				04/30/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080746
Matrix: SOLID
Test: ICP-200.8 MS All possible meta

Sample Date: 04/01/08
Receive Date:04/01/08

Lab ID: W08GR00836
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Arsenic	7440-38-2	183.51	91.755	% Recov	70.000	130.000				04/11/08
MS	Barium	7440-39-3	147	73.500	% Recov	70.000	130.000				04/11/08
MS	Beryllium	7440-41-7	178.98	89.490	% Recov	70.000	130.000				04/11/08
MS	Cadmium	7440-43-9	188.3	94.150	% Recov	70.000	130.000				04/11/08
MS	Cobalt	7440-48-4	178.12	89.060	% Recov	70.000	130.000				04/11/08
MS	Chromium	7440-47-3	190.83	95.415	% Recov	70.000	130.000				04/11/08
MS	Mercury	7439-97-6	1.91	95.500	% Recov	70.000	130.000				04/11/08
MS	Manganese	7439-96-5	187.8	93.900	% Recov	70.000	130.000				04/11/08
MS	Lead	7439-92-1	182.75	91.375	% Recov	70.000	130.000				04/11/08
MS	Antimony	7440-36-0	155.7	77.850	% Recov	70.000	130.000				04/11/08
MS	Selenium	7782-49-2	184.4	92.200	% Recov	70.000	130.000				04/11/08
MS	Thallium	7440-28-0	174.8	87.400	% Recov	70.000	130.000				04/11/08
MS	Zinc	7440-66-6	178.99	89.495	% Recov	70.000	130.000				04/11/08
MSD	Arsenic	7440-38-2	177.81	88.905	% Recov	70.000	130.000				04/11/08
MSD	Barium	7440-39-3	135.4	67.700	% Recov	70.000	130.000			*	04/11/08
MSD	Beryllium	7440-41-7	175.28	87.640	% Recov	70.000	130.000				04/11/08
MSD	Cadmium	7440-43-9	184.2	92.100	% Recov	70.000	130.000				04/11/08
MSD	Cobalt	7440-48-4	172.72	86.360	% Recov	70.000	130.000				04/11/08
MSD	Chromium	7440-47-3	183.23	91.615	% Recov	70.000	130.000				04/11/08
MSD	Mercury	7439-97-6	1.91	95.500	% Recov	70.000	130.000				04/11/08
MSD	Manganese	7439-96-5	128.8	64.400	% Recov	70.000	130.000			*	04/11/08
MSD	Lead	7439-92-1	178.65	89.325	% Recov	70.000	130.000				04/11/08
MSD	Antimony	7440-36-0	159.4	79.700	% Recov	70.000	130.000				04/11/08
MSD	Selenium	7782-49-2	182.3	91.150	% Recov	70.000	130.000				04/11/08
MSD	Thallium	7440-28-0	171.1	85.550	% Recov	70.000	130.000				04/11/08
MSD	Zinc	7440-66-6	171.99	85.995	% Recov	70.000	130.000				04/11/08

REVISED 7-18-08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080746
Matrix: SOLID
Test: ICP-200.8 MS All possible meta

Sample Date: 04/01/08
Receive Date:04/01/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Arsenic	7440-38-2	88.905		RPD			3.155	20.000		04/11/08
SPK-RPD	Barium	7440-39-3	67.700		RPD			8.215	20.000		04/11/08
SPK-RPD	Beryllium	7440-41-7	87.640		RPD			2.089	20.000		04/11/08
SPK-RPD	Cadmium	7440-43-9	92.100		RPD			2.201	20.000		04/11/08
SPK-RPD	Cobalt	7440-48-4	86.360		RPD			3.078	20.000		04/11/08
SPK-RPD	Chromium	7440-47-3	91.615		RPD			4.064	20.000		04/11/08
SPK-RPD	Mercury	7439-97-6	95.500		RPD			0.000	20.000		04/11/08
SPK-RPD	Manganese	7439-96-5	64.400		RPD			37.271	20.000	*	04/11/08
SPK-RPD	Lead	7439-92-1	89.325		RPD			2.269	20.000		04/11/08
SPK-RPD	Antimony	7440-36-0	79.700		RPD			2.348	20.000		04/11/08
SPK-RPD	Selenium	7782-49-2	91.150		RPD			1.145	20.000		04/11/08
SPK-RPD	Thallium	7440-28-0	85.550		RPD			2.139	20.000		04/11/08
SPK-RPD	Zinc	7440-66-6	85.995		RPD			3.989	20.000		04/11/08

Lab ID: W08GR00954
BATCH QC ASSOCIATED WITH SAMPLE

MS	Silver	7440-22-4	104.09	52.045	% Recov	70.000	130.000			*	04/11/08
MS	Arsenic	7440-38-2	174.4	87.200	% Recov	70.000	130.000				04/11/08
MS	Barium	7440-39-3	181.28	90.640	% Recov	70.000	130.000				04/11/08
MS	Beryllium	7440-41-7	175.55	87.775	% Recov	70.000	130.000				04/11/08
MS	Cadmium	7440-43-9	183.4	91.700	% Recov	70.000	130.000				04/11/08
MS	Cobalt	7440-48-4	176	88.000	% Recov	70.000	130.000				04/11/08
MS	Chromium	7440-47-3	184.9	92.450	% Recov	70.000	130.000				04/11/08
MS	Copper	7440-50-8	173.33	86.665	% Recov	70.000	130.000				04/11/08
MS	Mercury	7439-97-6	1.86	93.000	% Recov	70.000	130.000				04/11/08
MS	Manganese	7439-96-5	194	97.000	% Recov	70.000	130.000				04/11/08
MS	Nickel	7440-02-0	176.28	88.140	% Recov	70.000	130.000				04/11/08
MS	Lead	7439-92-1	181.41	90.705	% Recov	70.000	130.000				04/11/08
MS	Antimony	7440-36-0	139	69.500	% Recov	70.000	130.000			*	04/11/08
MS	Selenium	7782-49-2	175.5	87.750	% Recov	70.000	130.000				04/11/08

REVISED
7-18-08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080746
Matrix: SOLID
Test: ICP-200.8 MS All possible meta

Sample Date: 03/19/08
Receive Date:04/08/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	Thallium	7440-28-0	172	86.000	% Recov	70.000	130.000				04/11/08
MS	Zinc	7440-66-6	175.53	87.765	% Recov	70.000	130.000				04/11/08
MSD	Silver	7440-22-4	127.49	63.745	% Recov	70.000	130.000				04/11/08
MSD	Arsenic	7440-38-2	179.2	89.600	% Recov	70.000	130.000				04/11/08
MSD	Barium	7440-39-3	190.08	95.040	% Recov	70.000	130.000				04/11/08
MSD	Beryllium	7440-41-7	178.95	89.475	% Recov	70.000	130.000				04/11/08
MSD	Cadmium	7440-43-9	187.5	93.750	% Recov	70.000	130.000				04/11/08
MSD	Cobalt	7440-48-4	177	88.500	% Recov	70.000	130.000				04/11/08
MSD	Chromium	7440-47-3	187.6	93.800	% Recov	70.000	130.000				04/11/08
MSD	Copper	7440-50-8	173.93	86.965	% Recov	70.000	130.000				04/11/08
MSD	Mercury	7439-97-6	1.98	99.000	% Recov	70.000	130.000				04/11/08
MSD	Manganese	7439-96-5	157	78.500	% Recov	70.000	130.000				04/11/08
MSD	Nickel	7440-02-0	176.48	88.240	% Recov	70.000	130.000				04/11/08
MSD	Lead	7439-92-1	185.11	92.555	% Recov	70.000	130.000				04/11/08
MSD	Antimony	7440-36-0	143.7	71.850	% Recov	70.000	130.000				04/11/08
MSD	Selenium	7782-49-2	179	89.500	% Recov	70.000	130.000				04/11/08
MSD	Thallium	7440-28-0	176	88.000	% Recov	75.000	125.000				04/11/08
MSD	Zinc	7440-66-6	181.23	90.615	% Recov	70.000	130.000				04/11/08
SPK-RPD	Silver	7440-22-4	63.745		RPD			20.209	20.000		04/11/08
SPK-RPD	Arsenic	7440-38-2	89.600		RPD			2.715	20.000		04/11/08
SPK-RPD	Barium	7440-39-3	95.040		RPD			4.739	20.000		04/11/08
SPK-RPD	Beryllium	7440-41-7	89.475		RPD			1.918	20.000		04/11/08
SPK-RPD	Cadmium	7440-43-9	93.750		RPD			2.211	20.000		04/11/08
SPK-RPD	Cobalt	7440-48-4	86.360		RPD			3.078	20.000		04/11/08
SPK-RPD	Chromium	7440-47-3	93.800		RPD			1.450	20.000		04/11/08
SPK-RPD	Copper	7440-50-8	86.965		RPD			0.346	20.000		04/11/08
SPK-RPD	Mercury	7439-97-6	99.000		RPD			6.250	20.000		04/11/08
SPK-RPD	Manganese	7439-96-5	?		RPD			n/a	20.000		04/11/08
SPK-RPD	Nickel	7440-02-0	88.240		RPD			0.113	20.000		04/11/08
SPK-RPD	Lead	7439-92-1	92.555		RPD			2.019	20.000		04/11/08

REVISED 7-18-08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080746
Matrix: SOLID
Test: ICP-200.8 MS All possible meta

Sample Date: 03/19/08
Receive Date:04/08/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Antimony	7440-36-0	79.700		RPD			2.348	20.000		04/11/08
SPK-RPD	Selenium	7782-49-2	89.500		RPD			1.975	20.000		04/11/08
SPK-RPD	Thallium	7440-28-0	88		RPD			2.299	20.000		04/11/08
SPK-RPD	Zinc	7440-66-6	90.615		RPD			3.195	20.000		04/11/08
BATCH QC											
BLANK	Silver	7440-22-4	<0.1	n/a	ug/L					U	04/11/08
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	04/11/08
BLANK	Barium	7440-39-3	<0.2	n/a	ug/L					U	04/11/08
BLANK	Beryllium	7440-41-7	<5e-2	n/a	ug/L					U	04/11/08
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L					U	04/11/08
BLANK	Cobalt	7440-48-4	<5e-2	n/a	ug/L					U	04/11/08
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L					U	04/11/08
BLANK	Copper	7440-50-8	<0.1	n/a	ug/L					U	04/11/08
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	04/11/08
BLANK	Manganese	7439-96-5	<0.1	n/a	ug/L					U	04/11/08
BLANK	Nickel	7440-02-0	<0.2	n/a	ug/L					U	04/11/08
BLANK	Lead	7439-92-1	<0.1	n/a	ug/L					U	04/11/08
BLANK	Antimony	7440-36-0	<0.3	n/a	ug/L					U	04/11/08
BLANK	Selenium	7782-49-2	<0.3	n/a	ug/L					U	04/11/08
BLANK	Thallium	7440-28-0	<0.1	n/a	ug/L					U	04/11/08
BLANK	Zinc	7440-66-6	<0.8	n/a	ug/L					U	04/11/08
LCS	Silver	7440-22-4	91.7	90.792	% Recov	98.000	134.000				04/11/08
LCS	Arsenic	7440-38-2	127.9	96.894	% Recov	75.000	134.000				04/11/08
LCS	Barium	7440-39-3	286	89.655	% Recov	87.000	121.000				04/11/08
LCS	Beryllium	7440-41-7	80.88	90.369	% Recov	70.000	153.000				04/11/08
LCS	Cadmium	7440-43-9	63.18	95.008	% Recov	95.000	124.000				04/11/08
LCS	Cobalt	7440-48-4	71.31	97.551	% Recov	88.000	119.000				04/11/08
LCS	Chromium	7440-47-3	66.5	91.221	% Recov	77.000	125.000				04/11/08
LCS	Copper	7440-50-8	66.86	97.606	% Recov	84.000	122.000				04/11/08

REVISED 7-18-08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080746
Matrix: SOLID
Test: ICP-200.8 MS All possible meta

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	Mercury	7439-97-6	7.48	90.338	% Recov	71.000	132.000				04/11/08
LCS	Manganese	7439-96-5	435.3	96.093	% Recov	83.000	118.000				04/11/08
LCS	Nickel	7440-02-0	56.43	101.493	% Recov	90.000	121.000				04/11/08
LCS	Lead	7439-92-1	117.9	90.692	% Recov	92.000	123.000			•	04/11/08
LCS	Antimony	7440-36-0	61.26	67.916	% Recov	114.000	260.000			•	04/11/08
LCS	Selenium	7782-49-2	162.8	101.118	% Recov	52.000	157.000				04/11/08
LCS	Thallium	7440-28-0	119.5	89.850	% Recov	92.000	123.000			•	04/11/08
LCS	Zinc	7440-66-6	183.8	103.842	% Recov	85.000	130.000				04/11/08

REVISED 7-18-08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-043

Group #: WSCF20080746
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS: Silver and Lead LCS below statistical limits but within 10% of assigned value. "E" flags Silver MS and MSD recoveries 52% and 64%. "N" flag ORGANICS: All results are corrected for moisture and reported on a dry weight basis. cgc Samples received after Holding time expired.

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR00954
Client ID: B1TDD9 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080746
Department: Organic
Sampled: 03/19/08
Received: 04/08/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
NWTPH-D TPH Diesel Range (Wa) Prep											**04/14/08**
NWTPH-D TPH Diesel Range (Wa)											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 3.20e+03	ug/kg			1.00	3.2e+03		04/16/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 3.20e+03	ug/kg			1.00	3.2e+03		04/16/08
PCBs complete list Prep											**04/14/08**
PCBs complete list											
Aroclor-1016	12674-11-2	LA-523-427	U	< 10.0	ug/kg			1.00	10		04/16/08
Aroclor-1221	11104-28-2	LA-523-427	U	< 21.0	ug/kg			1.00	21		04/16/08
Aroclor-1232	11141-16-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		04/16/08
Aroclor-1242	53469-21-9	LA-523-427	U	< 10.0	ug/kg			1.00	10		04/16/08
Aroclor-1248	12672-29-6	LA-523-427	U	< 10.0	ug/kg			1.00	10		04/16/08
Aroclor-1254	11097-69-1	LA-523-427	U	< 10.0	ug/kg			1.00	10		04/16/08
Aroclor-1260	11096-82-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		04/16/08
Aroclor-1262	37324-23-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		04/16/08
Aroclor-1268	11100-14-4	LA-523-427	U	< 10.0	ug/kg			1.00	10		04/16/08
SW-846 8270C Semi-Vols Prep											**04/14/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 210	ug/kg			1.00	2.1e+02		04/16/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 250	ug/kg			1.00	2.5e+02		04/16/08
Phenol	108-95-2	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		04/16/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		04/16/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		04/16/08
Pyrene	129-00-0	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		04/16/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		04/16/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		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)
E - Analyte is an estimate, has potentially larger errors(inorg)
U - Analyzed for but not detected above limiting criteria(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.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR00954
Client ID: B1TDD9 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080746
Department: Organic
Sampled: 03/19/08
Received: 04/08/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Acenaphthene	83-32-9	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		04/16/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 210	ug/kg			1.00	2.1e+02		04/16/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		04/16/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		04/16/08
1,2,4-Trimethylbenzene	95-63-6	LA-523-456	U	< 190	ug/kg			1.00	1.9e+02		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)
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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR00957
Client ID: B1TDD7 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080746
Department: Organic
Sampled: 03/19/08
Received: 04/08/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Benzene	71-43-2	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Toluene	108-88-3	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Styrene	100-42-5	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
2-Hexanone	591-78-6	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Acetone	67-64-1	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Chloroform	67-66-3	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Bromomethane	74-83-9	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Chloromethane	74-87-3	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Chloroethane	75-00-3	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08

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RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR00957
Client ID: B1TDD7 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080746
Department: Organic
Sampled: 03/19/08
Received: 04/08/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Bromoform	75-25-2	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
2-Butanone	78-93-3	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Hexane	110-54-3	LA-523-455	U	< 1.10	ug/kg			1.00	1.1		05/02/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.10	ug/kg			1.00	2.1		05/02/08
Acetonitrile	75-05-8	LA-523-455	U	< 2.10	ug/kg			1.00	2.1		05/02/08

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)
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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F08-043 :F08-043

Group #: WSCF20080746
Department: Organic

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR00954	B1TDD9	TRENT	SW-846 8270C Semi-Vols	SMP 13.542 Di-n-butylphthalate	84-74-2	13.54246		1.9e+02	ug/kg

RQ=Result Qualifier

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080746
Matrix: SOLID
Test: PCBs complete list

Sample Date: 03/25/08
Receive Date:03/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00781											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Aroclor-1260	11096-82-5	224.76	109.000	% Recov	75.000	125.000				04/16/08
MS	Decachlorobiphenyl	2051-24-3	393.05	95.700	% Recov	50.000	150.000				04/16/08
MS	Tetrachloro-m-xylene	877-09-8	380.18	92.600	% Recov	50.000	150.000				04/16/08
MSD	Aroclor-1260	11096-82-5	212.25	104.000	% Recov	75.000	125.000				04/16/08
MSD	Decachlorobiphenyl	2051-24-3	380.81	93.400	% Recov	50.000	150.000				04/16/08
MSD	Tetrachloro-m-xylene	877-09-8	369.98	90.800	% Recov	50.000	150.000				04/16/08
SPK-RPD	Aroclor-1260	11096-82-5	104.000		RPD			4.695	25.000		04/16/08
SPK-RPD	Decachlorobiphenyl	2051-24-3	93.400		RPD			2.433	20.000		04/16/08
SPK-RPD	Tetrachloro-m-xylene	877-09-8	90.800		RPD			1.963	20.000		04/16/08
Lab ID: W08GR00954											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Decachlorobiphenyl	2051-24-3	399.96	95.500	% Recov	50.000	150.000				04/16/08
SURR	Tetrachloro-m-xylene	877-09-8	384.47	91.800	% Recov	50.000	150.000				04/16/08
BATCH QC											
BLANK	Aroclor-1016	12674-11-2	< 10	n/a	UGKG					U	04/16/08
BLANK	Aroclor-1221	11104-28-2	< 20	n/a	ug/Kg					U	04/16/08
BLANK	Aroclor-1232	11141-16-5	< 10	n/a	ug/Kg					U	04/16/08
BLANK	Aroclor-1242	53469-21-9	< 10	n/a	ug/Kg					U	04/16/08
BLANK	Aroclor-1248	12672-29-6	< 10	n/a	ug/Kg					U	04/16/08
BLANK	Aroclor-1254	11097-69-1	< 10	n/a	ug/Kg					U	04/16/08
BLANK	Aroclor-1260	11096-82-5	< 10	n/a	ug/Kg					U	04/16/08
BLANK	Aroclor-1262	37324-23-5	< 10	n/a	ug/Kg					U	04/16/08
BLANK	Aroclor-1268	11100-14-4	< 10	n/a	ug/Kg					U	04/16/08
BLANK	Decachlorobiphenyl	2051-24-3	377.31	94.300	% Recov	50.000	150.000				04/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080746
Matrix: SOLID
Test: PCBs complete list

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BLANK	Tetrachloro-m-xylene	877-09-8	366.85	91.700	% Recov	50.000	150.000				04/16/08
LCS	Aroclor-1260	11096-82-5	209.40	105.000	% Recov	70.000	130.000				04/16/08
LCS	Decachlorobiphenyl	2051-24-3	375.54	93.900	% Recov	50.000	150.000				04/16/08
LCS	Tetrachloro-m-xylene	877-09-8	369.73	92.400	% Recov	50.000	150.000				04/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080746
Matrix: SOLID
Test: SW-846 8270C Semi-Vols

Sample Date: 04/01/08
Receive Date:04/01/08

Lab ID: W08GR00836
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	1,2,4-Trichlorobenzene	120-82-1	4158.4	99.700	% Recov	75.000	121.000				04/16/08
MS	1,4-Dichlorobenzene	106-46-7	4128.6	98.900	% Recov	68.000	121.000				04/16/08
MS	2,4-Dinitrotoluene	121-14-2	3682.8	88.300	% Recov	66.000	113.000				04/16/08
MS	2-Fluorophenol(Surr)	367-12-4	4417.8	106.000	% Recov	72.000	120.000				04/16/08
MS	Acenaphthene	83-32-9	4055.9	97.200	% Recov	69.000	125.000				04/16/08
MS	4-Chloro-3-methylphenol	59-50-7	6136.3	98.000	% Recov	68.000	116.000				04/16/08
MS	2-Chlorophenol	95-57-8	6281.0	100.000	% Recov	65.000	124.000				04/16/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	4328.0	104.000	% Recov	69.000	127.000				04/16/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	4446.8	107.000	% Recov	66.000	122.000				04/16/08
MS	Phenol	108-95-2	6353.6	102.000	% Recov	71.000	122.000				04/16/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	4346.6	104.000	% Recov	63.000	125.000				04/16/08
MS	4-Nitrophenol	100-02-7	5404.0	86.300	% Recov	55.000	113.000				04/16/08
MS	Pentachlorophenol	87-86-5	5980.6	95.500	% Recov	50.000	113.000				04/16/08
MS	Phenol-d5(Surr)	4165-62-2	4376.2	105.000	% Recov	66.000	124.000				04/16/08
MS	Pyrene	129-00-0	4275.5	102.000	% Recov	67.000	125.000				04/16/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	4148.3	99.400	% Recov	49.000	120.000				04/16/08
MS	Terphenyl-d14(Surr)	98904-43-9	4433.4	106.000	% Recov	58.000	128.000				04/16/08
MSD	1,2,4-Trichlorobenzene	120-82-1	4318.0	103.000	% Recov	75.000	121.000				04/16/08
MSD	1,4-Dichlorobenzene	106-46-7	4248.8	102.000	% Recov	68.000	121.000				04/16/08
MSD	2,4-Dinitrotoluene	121-14-2	3734.5	89.400	% Recov	66.000	113.000				04/16/08
MSD	2-Fluorophenol(Surr)	367-12-4	4196.6	100.000	% Recov	72.000	120.000				04/16/08
MSD	Acenaphthene	83-32-9	4165.4	99.700	% Recov	69.000	125.000				04/16/08
MSD	4-Chloro-3-methylphenol	59-50-7	6400.3	102.000	% Recov	68.000	116.000				04/16/08
MSD	2-Chlorophenol	95-57-8	6295.5	100.000	% Recov	65.000	124.000				04/16/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	4304.5	103.000	% Recov	69.000	127.000				04/16/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	4166.2	99.700	% Recov	66.000	122.000				04/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080746
Matrix: SOLID
Test: SW-846 8270C Semi-Vols

Sample Date: 04/01/08
Receive Date:04/01/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Phenol	108-95-2	6431.0	103.000	% Recov	71.000	122.000				04/16/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	4080.4	97.700	% Recov	63.000	125.000				04/16/08
MSD	4-Nitrophenol	100-02-7	5418.2	86.500	% Recov	55.000	113.000				04/16/08
MSD	Pentachlorophenol	87-86-5	6235.9	99.500	% Recov	50.000	113.000				04/16/08
MSD	Phenol-d5(Surr)	4165-62-2	4155.4	99.500	% Recov	66.000	124.000				04/16/08
MSD	Pyrene	129-00-0	4514.9	108.000	% Recov	67.000	125.000				04/16/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	3971.3	95.100	% Recov	49.000	120.000				04/16/08
MSD	Terphenyl-d14(Surr)	98904-43-9	4441.6	106.000	% Recov	58.000	128.000				04/16/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	103.000		RPD			3.256	20.000		04/16/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	102.000		RPD			3.086	20.000		04/16/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	89.400		RPD			1.238	20.000		04/16/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	100.000		RPD			5.825	20.000		04/16/08
SPK-RPD	Acenaphthene	83-32-9	99.700		RPD			2.539	20.000		04/16/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	102.000		RPD			4.000	20.000		04/16/08
SPK-RPD	2-Chlorophenol	95-57-8	100.000		RPD			0.000	20.000		04/16/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	103.000		RPD			0.966	20.000		04/16/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	99.700		RPD			7.063	20.000		04/16/08
SPK-RPD	Phenol	108-95-2	103.000		RPD			0.976	20.000		04/16/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	97.700		RPD			6.247	20.000		04/16/08
SPK-RPD	4-Nitrophenol	100-02-7	86.500		RPD			0.231	20.000		04/16/08
SPK-RPD	Pentachlorophenol	87-86-5	99.500		RPD			4.103	20.000		04/16/08
SPK-RPD	Phenol-d5(Surr)	4165-62-2	99.500		RPD			5.379	20.000		04/16/08
SPK-RPD	Pyrene	129-00-0	108.000		RPD			5.714	20.000		04/16/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	95.100		RPD			4.422	20.000		04/16/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	106.000		RPD			0.000	20.000		04/16/08

Lab ID: W08GR00954
BATCH QC ASSOCIATED WITH SAMPLE

SURR	2-Fluorophenol(Surr)	367-12-4	4252.8	101.000	% Recov	72.000	120.000				04/16/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	4346.2	104.000	% Recov	66.000	122.000				04/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080746
Matrix: SOLID
Test: SW-846 8270C Semi-Vols

Sample Date: 03/19/08
Receive Date:04/08/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Nitrobenzene-d5(Surr)	4165-60-0	4307.6	103.000	% Recov	63.000	125.000				04/16/08
SURR	Phenol-d5(Surr)	4165-62-2	4323.7	103.000	% Recov	66.000	124.000				04/16/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	3711.5	88.500	% Recov	49.000	120.000				04/16/08
SURR	Terphenyl-d14(Surr)	98904-43-9	4680.2	112.000	% Recov	58.000	128.000				04/16/08

BATCH QC

BLANK	1,2,4-Trimethylbenzene	95-63-6	< 180	n/a	ug/Kg					U	04/16/08
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 140	n/a	ug/Kg					U	04/16/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 240	n/a	ug/Kg					U	04/16/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 140	n/a	ug/Kg					U	04/16/08
BLANK	2-Fluorophenol(Surr)	367-12-4	3630.6	90.800	% Recov	72.000	120.000				04/16/08
BLANK	Acenaphthene	83-32-9	< 140	n/a	ug/Kg					U	04/16/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 140	n/a	ug/Kg					U	04/16/08
BLANK	2-Chlorophenol	95-57-8	< 140	n/a	ug/Kg					U	04/16/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 140	n/a	ug/Kg					U	04/16/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	3790.0	94.800	% Recov	66.000	122.000				04/16/08
BLANK	Phenol	108-95-2	< 140	n/a	ug/Kg					U	04/16/08
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	3733.6	93.300	% Recov	63.000	125.000				04/16/08
BLANK	4-Nitrophenol	100-02-7	< 200	n/a	ug/Kg					U	04/16/08
BLANK	Pentachlorophenol	87-86-5	< 200	n/a	ug/Kg					U	04/16/08
BLANK	Phenol-d5(Surr)	4165-62-2	3729.0	93.200	% Recov	66.000	124.000				04/16/08
BLANK	Pyrene	129-00-0	< 140	n/a	ug/Kg					U	04/16/08
BLANK	Tributyl phosphate	126-73-8	< 140	n/a	ug/Kg					U	04/16/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	3295.7	82.400	% Recov	49.000	120.000				04/16/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	3702.1	92.600	% Recov	58.000	128.000				04/16/08
LCS	1,2,4-Trichlorobenzene	120-82-1	3765.9	94.100	% Recov	76.000	118.000				04/16/08
LCS	1,4-Dichlorobenzene	106-46-7	3731.4	93.300	% Recov	68.000	121.000				04/16/08
LCS	2,4-Dinitrotoluene	121-14-2	3283.3	82.100	% Recov	68.000	112.000				04/16/08
LCS	2-Fluorophenol(Surr)	367-12-4	3571.8	89.300	% Recov	50.000	110.000				04/16/08
LCS	Acenaphthene	83-32-9	3518.0	88.000	% Recov	75.000	121.000				04/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080746
Matrix: SOLID
Test: SW-846 8270C Semi-Vols

Sample Date:
Receive Date:

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
LCS	4-Chloro-3-methylphenol	59-50-7	5328.5	88.800	% Recov	68.000	117.000				04/16/08
LCS	2-Chlorophenol	95-57-8	5385.4	89.800	% Recov	84.000	114.000				04/16/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	3746.0	93.700	% Recov	76.000	119.000				04/16/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	3517.3	87.900	% Recov	58.000	109.000				04/16/08
LCS	Phenol	108-95-2	5464.6	91.100	% Recov	80.000	113.000				04/16/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	3550.1	88.800	% Recov	60.000	118.000				04/16/08
LCS	4-Nitrophenol	100-02-7	4859.1	81.000	% Recov	42.000	123.000				04/16/08
LCS	Pentachlorophenol	87-86-5	5128.0	85.500	% Recov	55.000	120.000				04/16/08
LCS	Phenol-d5(Surr)	4165-62-2	3502.9	87.600	% Recov	59.000	116.000				04/16/08
LCS	Pyrene	129-00-0	3719.5	93.000	% Recov	67.000	122.000				04/16/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	3247.9	81.200	% Recov	60.000	120.000				04/16/08
LCS	Terphenyl-d14(Surr)	98904-43-9	3584.1	89.600	% Recov	60.000	120.000				04/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080746
Matrix: SOLID
Test: NWTPH-D TPH Diesel Range (Wa)

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
Lab ID: W08GR00913											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	ortho-Terphenyl Surr	84-15-1	22735	105.000	% Recov	70.000	130.000				04/16/08
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	121940	113.000	% Recov	75.000	125.000				04/16/08
MSD	ortho-Terphenyl Surr	84-15-1	20881	96.200	% Recov	70.000	130.000				04/16/08
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	114370	105.000	% Recov	75.000	125.000				04/16/08
SPK-RPD	ortho-Terphenyl Surr	84-15-1	96.200		RPD			8.748	20.000		04/16/08
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	105.000		RPD			7.339	20.000		04/16/08
Lab ID: W08GR00954											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	ortho-Terphenyl Surr	84-15-1	19519	92.700	% Recov	70.000	130.000				04/16/08
BATCH QC											
BLANK	Kerosene	TPHKEROSENE	< 3000	n/a	ug/Kg					U	04/16/08
BLANK	ortho-Terphenyl Surr	84-15-1	18403	92.000	% Recov	70.000	130.000				04/16/08
BLANK	Total Pet. Hydrocarbons Diesel	TPHDIESEL	< 3000	n/a	ug/Kg					U	04/16/08
LCS	ortho-Terphenyl Surr	84-15-1	20045	100.000	% Recov	70.000	130.000				04/16/08
LCS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	103430	103.000	% Recov	80.000	120.000				04/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080746
Matrix: SOLID
Test: VOA Ground Water Protection

Sample Date: 03/19/08
Receive Date:04/08/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00957											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	4-Bromofluorobenzene(Surr)	460-00-4	54.840	103.000	% Recov	75.000	125.000				05/02/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.140	107.000	% Recov	75.000	125.000				05/02/08
SURR	Toluene-d8(Surr)	2037-26-5	55.860	105.000	% Recov	80.000	126.000				05/02/08
Lab ID: W08GR01098											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,1-Dichloroethene	75-35-4	24.900	95.600	% Recov	63.000	117.000				05/02/08
MS	Benzene	71-43-2	26.320	101.000	% Recov	75.000	129.000				05/02/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	52.690	101.000	% Recov	75.000	125.000				05/02/08
MS	Chlorobenzene	108-90-7	26.740	103.000	% Recov	79.000	119.000				05/02/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	56.690	109.000	% Recov	75.000	125.000				05/02/08
MS	Toluene-d8(Surr)	2037-26-5	54.270	104.000	% Recov	75.000	125.000				05/02/08
MS	Toluene	108-88-3	26.260	101.000	% Recov	76.000	120.000				05/02/08
MS	Trichloroethene	79-01-6	21.190	81.400	% Recov	73.000	123.000				05/02/08
MSD	1,1-Dichloroethene	75-35-4	21.520	86.100	% Recov	63.000	117.000				05/02/08
MSD	Benzene	71-43-2	26.110	104.000	% Recov	75.000	129.000				05/02/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	50.130	100.000	% Recov	75.000	125.000				05/02/08
MSD	Chlorobenzene	108-90-7	26.760	107.000	% Recov	79.000	119.000				05/02/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	53.650	107.000	% Recov	75.000	125.000				05/02/08
MSD	Toluene-d8(Surr)	2037-26-5	52.140	104.000	% Recov	75.000	125.000				05/02/08
MSD	Toluene	108-88-3	26.880	108.000	% Recov	76.000	120.000				05/02/08
MSD	Trichloroethene	79-01-6	20.390	81.600	% Recov	73.000	123.000				05/02/08
SPK-RPD	1,1-Dichloroethene	75-35-4	86.100		RPD			10.457	20.000		05/02/08
SPK-RPD	Benzene	71-43-2	104.000		RPD			2.927	20.000		05/02/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	100.000		RPD			0.995	20.000		05/02/08
SPK-RPD	Chlorobenzene	108-90-7	107.000		RPD			3.810	20.000		05/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080746
Matrix: SOLID
Test: VOA Ground Water Protection

Sample Date: 04/21/08
Receive Date:04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	107.000		RPD			1.852	20.000		05/02/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	104.000		RPD			0.000	20.000		05/02/08
SPK-RPD	Toluene	108-88-3	108.000		RPD			6.699	20.000		05/02/08
SPK-RPD	Trichloroethene	79-01-6	81.600		RPD			0.245	20.000		05/02/08

BATCH QC

BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	51.040	102.000	% Recov	75.000	125.000				05/02/08
BLANK	Bromoform	75-25-2	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Chloroethane	75-00-3	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	51.510	103.000	% Recov	75.000	125.000				05/02/08
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/Kg					U	05/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080746
Matrix: SOLID
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	Hexane	110-54-3	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Bromomethane	74-83-9	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Chloromethane	74-87-3	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Tetrahydrofuran	109-99-9	< 2.0	n/a	ug/Kg					U	05/02/08
BLANK	Toluene-d8(Surr)	2037-26-5	50.940	102.000	% Recov	80.000	126.000				05/02/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/Kg					U	05/02/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/Kg					U	05/02/08
LCS	1,1-Dichloroethene	75-35-4	23.710	94.800	% Recov	75.000	125.000				05/02/08
LCS	Benzene	71-43-2	24.540	98.200	% Recov	75.000	125.000				05/02/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	51.260	103.000	% Recov	75.000	125.000				05/02/08
LCS	Chlorobenzene	108-90-7	25.660	103.000	% Recov	75.000	125.000				05/02/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	52.780	106.000	% Recov	75.000	125.000				05/02/08
LCS	Toluene-d8(Surr)	2037-26-5	51.970	104.000	% Recov	80.000	126.000				05/02/08
LCS	Toluene	108-88-3	24.960	99.800	% Recov	75.000	125.000				05/02/08
LCS	Trichloroethene	79-01-6	20.660	82.600	% Recov	75.000	125.000				05/02/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-043

Group #: WSCF20080746
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS: Silver and Lead LCS below statistical limits but within 10% of assigned value. "E" flags Silver MS and MSD recoveries 52% and 64%. "N" flag ORGANICS: All results are corrected for moisture and reported on a dry weight basis. cgc Samples received after Holding time expired.

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

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WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR00954
Client ID: B1TDD9 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080746
Department: Radiochemistry
Sampled: 03/19/08
Received: 04/08/08

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	-1.90e-03	pCi/g	+-0.0190	pCi/g	1.00	0.050		04/23/08
Am-243 tracer by AEA	AM243	LA-508-471		4.00	pCi/g			1.00	0.026		04/23/08
Gamma Energy Analysis-grd H2O											
Cobalt-60	10198-40-0	LA-508-481	U	6.68e-04	pCi/g	+-5.53e-03	pCi/g	1.00	9.7e-03		04/10/08
Cesium-137	10045-97-3	LA-508-481	U	-5.00e-03	pCi/g	+-5.83e-03	pCi/g	1.00	9.7e-03		04/10/08
Europium-152	14683-23-9	LA-508-481	U	7.48e-03	pCi/g	+-0.0197	pCi/g	1.00	0.030		04/10/08
Europium-154	15585-10-1	LA-508-481	U	-0.0140	pCi/g	+-0.0172	pCi/g	1.00	0.029		04/10/08
Europium-155	14391-16-3	LA-508-481	U	0.0595	pCi/g	+-0.0332	pCi/g	1.00	0.037		04/10/08
Niobium-94	14681-63-1	LA-508-481	U	1.55e-03	pCi/g	+-5.09e-03	pCi/g	1.00	8.8e-03		04/10/08
Radium-226	13982-63-3	LA-508-481		0.305	pCi/g	+-0.0542	pCi/g	1.00	0.019		04/10/08
Radium-228	15262-20-1	LA-508-481		0.484	pCi/g	+-0.0881	pCi/g	1.00	0.030		04/10/08
Neptunium by AEA											
Neptunium-237	13994-20-2	LA-508-471	U	3.60e-03	pCi/g	+-3.60e-03	pCi/g	1.00	9.8e-03		05/12/08
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	-4.20e-03	pCi/g	+-0.0119	pCi/g	1.00	0.027		04/23/08
Pu-239/240 by AEA	PU-239/240	LA-508-471	U	2.10e-03	pCi/g	+-4.24e-03	pCi/g	1.00	5.6e-03		04/23/08
Pu-242 tracer by AEA	PU242	LA-508-471		6.20	pCi/g			1.00	0.019		04/23/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415		1.50	pCi/g	+-1.00	pCi/g	1.00	0.48		05/05/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		77.7	Percent			1.00	0.0		05/05/08
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.240	pCi/g	+-0.0744	pCi/g	1.00	0.014		04/23/08
Uranium-235	15117-96-1	LA-508-471		0.0140	pCi/g	+-0.0112	pCi/g	1.00	5.5e-03		04/23/08
Uranium-238	U-238	LA-508-471		0.210	pCi/g	+-0.0672	pCi/g	1.00	5.1e-03		04/23/08

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)
E - Analyte is an estimate, has potentially larger errors(inorg)
U - Analyzed for but not detected above limiting criteria(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.(org)

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR00954
Client ID: B1TDD9 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080746
Department: Radiochemistry
Sampled: 03/19/08
Received: 04/08/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
U-232 tracer by AEA	U232	LA-508-471		4.10	pCi/g			1.00	0.024		04/23/08

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)
E - Analyte is an estimate, has potentially larger errors(inorg)
U - Analyzed for but not detected above limiting criteria(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.(org)

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

WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F08-043 :F08-043

Group #: WSCF20080746
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	AC-228				0.45	pCi/g
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	AC-228 Count Error				20	%
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	BI-212				0.29	pCi/g
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	BI-212 Count Error				32	%
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	BI-214				0.40	pCi/g
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error				15	%
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	CS-134				0.029	pCi/g
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	CS-134 Count Error				40	%
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	K-40				13	pCi/g
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	K-40 Count Error				14	%
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	PB-212				0.56	pCi/g
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error				9.6	%
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	PB-214				0.64	pCi/g
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error				24	%
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	SN-126				0.085	pCi/g
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	SN-126 Count Error				36	%
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	TH-234				0.79	pCi/g
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	TH-234 Count Error				26	%
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	TL-208				0.16	pCi/g
W08GR00954	B1TDD9	TRENT	Gamma Energy Analysis-grd H2O	TL-208 Count Error				16	%

RQ=Result Qualifier

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080746
Matrix: SOLID
Test: Gamma Energy Analysis-grd H2O

Sample Date: 03/19/08
Receive Date:04/08/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00954											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Cobalt-60	10198-40-0	U-1.158e-4		RPD			n/a	20.000		04/10/08
DUP	Cesium-137	10045-97-3	U-9.418e-4		RPD			n/a	20.000		04/10/08
DUP	Europium-152	14683-23-9	U8.124e-3		RPD			n/a	20.000		04/10/08
DUP	Europium-154	15585-10-1	U-1.965e-2		RPD			n/a	20.000		04/10/08
DUP	Europium-155	14391-16-3	U3.541e-2		RPD			n/a	20.000		04/10/08
DUP	Niobium-94	14681-63-1	U2.264e-3		RPD			n/a	20.000		04/10/08
DUP	Radium-226	13982-63-3	0.3261		RPD			6.556	20.000		04/10/08
DUP	Radium-228	15262-20-1	0.4551		RPD			6.237	20.000		04/10/08
BATCH QC											
BLANK	Cobalt-60	10198-40-0	U-4.239e-3	n/a	pCi/g	-10.000	1000.000				04/15/08
BLANK	Cesium-137	10045-97-3	U-4.103e-3	n/a	pCi/g	-10.000	1000.000				04/15/08
BLANK	Europium-152	14683-23-9	U-1.566e-2	n/a	pCi/g	-10.000	1000.000				04/15/08
BLANK	Europium-154	15585-10-1	U-1.913e-3	n/a	pCi/g	-10.000	1000.000				04/15/08
BLANK	Europium-155	14391-16-3	U-5.672e-3	n/a	pCi/g	-10.000	1000.000				04/15/08
BLANK	Niobium-94	14681-63-1	U8.803e-5	n/a	pCi/g	-10.000	1000.000				04/15/08
BLANK	Radium-226	13982-63-3	9.309e-2	0.093	pCi/g	-10.000	1000.000				04/15/08
BLANK	Radium-228	15262-20-1	8.688e-2	0.087	pCi/g	-10.000	1000.000				04/15/08
LCS	Cobalt-60	10198-40-0	10200	102.616	% Recov	80.000	120.000				04/11/08
LCS	Cesium-137	10045-97-3	6361	105.315	% Recov	80.000	120.000				04/11/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20080746
Matrix: SOLID
Test: Americium by AEA

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
Lab ID: W08GR00913											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Americium-241	14596-10-2	U1e-2		RPD			n/a	20.000		04/23/08
DUP	Am-243 tracer by AEA	AM243	3.938	89.380	% Recov	30.000	105.000				04/23/08
Lab ID: W08GR00954											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Am-243 tracer by AEA	AM243	3.992	83.900	% Recov	30.000	105.000				04/23/08
BATCH QC											
BLANK	Americium-241	14596-10-2	U-1.1e-2	n/a	pCi/g	-10.000	1000.000				04/23/08
BLANK	Am-243 tracer by AEA	AM243	4.024	73.110	% Recov	30.000	105.000				04/23/08
LCS	Americium-241	14596-10-2	11.2	94.515	% Recov	80.000	120.000				04/23/08
LCS	Am-243 tracer by AEA	AM243	11.17	81.690	% Recov	30.000	105.000				04/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20080746
Matrix: SOLID
Test: Neptunium by AEA

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
Lab ID: W08GR00913											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Neptunium-237	13994-20-2	U4.1e-3		RPD			n/a	25.000		05/12/08
MS	Neptunium-237	13994-20-2	102.3	102.300	% Recov	75.000	125.000				05/12/08
MSD	Neptunium-237	13994-20-2	100.2	100.200	% Recov	75.000	125.000				05/12/08
SPK-RPD	Neptunium-237	13994-20-2	100.200		% RPD			2.074	20.000		05/12/08
Lab ID: W08GR00937											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	97.9	97.900	% Recov	75.000	125.000				05/12/08
Lab ID: W08GR00954											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	93.4	93.400	% Recov	75.000	125.000				05/12/08
BATCH QC											
BLANK	Neptunium-237	13994-20-2	U-1.3e-2	n/a	pCi/G	-10.000	1000.000				05/12/08
LCS	Neptunium-237	13994-20-2	13.02	102.158	% Recov	80.000	120.000				05/12/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080746
Matrix: SOLID
Test: Plutonium Isotopics by AEA

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
Lab ID: W08GR00913											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Plutonium-238	13981-16-3	U1.1e-2		RPD			n/a	20.000		04/23/08
DUP	Pu-239/240 by AEA	PU-239/240	U1.9e-3		RPD			n/a	20.000		04/23/08
DUP	Pu-242 tracer by AEA	PU242	6.102	84.770	% Recov	30.000	105.000				04/23/08
Lab ID: W08GR00954											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Pu-242 tracer by AEA	PU242	6.186	84.370	% Recov	30.000	105.000				04/23/08
BATCH QC											
BLANK	Plutonium-238	13981-16-3	U2.2e-3	n/a	pCi/g	-10.000	1000.000				04/23/08
BLANK	Pu-239/240 by AEA	PU-239/240	U6.6e-3	n/a	pCi/g	-10.000	1000.000				04/23/08
BLANK	Pu-242 tracer by AEA	PU242	6.236	77.080	% Recov	30.000	105.000				04/23/08
LCS	Pu-239/240 by AEA	PU-239/240	12.87	100.195	% Recov	80.000	120.000				04/23/08
LCS	Pu-242 tracer by AEA	PU242	17.3	87.020	% Recov	30.000	105.000				04/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Radiochemistry**

SDG Number: WSCF20080746
Matrix: SOLID
Test: Strontium 89/90

Sample Date: 03/19/08
Receive Date:04/08/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR00954											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	77.7	77.700	% Recov	30.000	105.000				05/05/08
Lab ID: W08GR01017											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	81.5	81.500	% Recov	30.000	105.000				05/05/08
DUP	Strontium-89/90	SR-RAD	1.0		RPD			n/a	20.000		05/05/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	98.6	98.600	% Recov	30.000	105.000				05/05/08
BLANK	Strontium-89/90	10098-97-2	U-7.4E-01	n/a	pCi/g	-10.000	300.000				05/05/08
LCS	Sr-85 Tracer by Beta Counting	SR85	92.6	92.600	% Recov	30.000	105.000				05/05/08
LCS	Strontium-89/90	10098-97-2	70.0	101.244	% Recov	80.000	120.000				05/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080746
Matrix: SOLID
Test: Uranium Isotopics by AEA

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
Lab ID: W08GR00913											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	U-232 tracer by AEA	U232	4.052	92.190	% Recov	30.000	105.000				04/23/08
DUP	Uranium-233/234	U-233/234	0.13		RPD			0.000	20.000		04/23/08
DUP	Uranium-235	15117-96-1	1.2e-2		RPD			8.696	20.000		04/23/08
DUP	Uranium-238	U-238	0.12		RPD			0.000	20.000		04/23/08
Lab ID: W08GR00954											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	U-232 tracer by AEA	U232	4.108	89.000	% Recov	30.000	105.000				04/23/08
BATCH QC											
BLANK	U-232 tracer by AEA	U232	4.141	70.020	% Recov	30.000	105.000				04/23/08
BLANK	Uranium-233/234	13966-29-5	3.3e-2	0.033	pCi/g	-10.000	1000.000				04/23/08
BLANK	Uranium-235	15117-96-1	U1e-2	n/a	pCi/g	-10.000	1000.000				04/23/08
BLANK	Uranium-238	24678-82-8	9.3e-3	0.009	pCi/g	-10.000	1000.000				04/23/08
LCS	U-232 tracer by AEA	U232	11.49	78.890	% Recov	30.000	105.000				04/23/08
LCS	Uranium-233/234	13966-29-5	n/a	n/a	% Recov	75.000	125.000				04/23/08
LCS	Uranium-235	15117-96-1	n/a	n/a	% Recov	75.000	125.000				04/23/08
LCS	Uranium-238	24678-82-8	21	110.789	% Recov	80.000	120.000				04/23/08

M4W41-SLF-08-563

ATTACHMENT 5

SAMPLE RECEIPT INFORMATION

Consisting of 6 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
File KB

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program
Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 123215/ES20
Group#: 20080746
Project#: F08-043
Proj Mgr: Steve Trent E6-35
Phone: 373-5869

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

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
W08GR00954	B1TDD9	TRENT @2008 @AEA-30 @AEA-31 @AEA-32 @AEA-33 @GEA-GPP @IC-30 @PCBGPP @SR89_90 @SVOCGPP @TPHD PERSOLID	Solid, or handle as if solid	03/19/08
W08GR00956	B1TDD8	TRENT @VOA-GPP	Solid, or handle as if solid	03/19/08
W08GR00957	B1TDD7	TRENT @VOA-GPP	Solid, or handle as if solid	03/19/08

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
@IC-30	Anions by Ion Chromatography
@PCBGPP	PCBs complete list
@SR89_90	Strontium 89/90
@SVOCGPP	SW-846 8270C Semi-Vols
@TPHD-WA	NWTPH-D TPH Diesel Range (Wa)
@VOA-GPP	VOA Ground Water Protection
PERSOLID	Percent Solids

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	8N	DATA TURNAROUND
NCO Sampler Webb, Kaller, Herrick	TRENT, SJ	373-5869	WIDRIG, DL			
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY**	☐	**45 Days / 45 Days**
C5941, I-033	216-A-30 Crib Sampling		F08-043			
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-5852	85-87.5	123215ES20	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**			
Waste Sampling & Characterization	N/A		N/A			

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

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

SPECIAL HANDLING AND/OR STORAGE
Radioactive tie to B1TDB7

20080746

PRESERVATION	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None							
TYPE OF CONTAINER	aG	aG	aG	G/P	G/P	Square Bottle - Poly							
NO. OF CONTAINER(S)	1	1	1	1	1	1							
VOLUME	120mL	120mL	120mL	120mL	120mL	500mL							
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	PCBs - 8082;	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS							

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B1TDD9	SOIL	3-19-08	0850	X	X	X	X	X	X				
W08GR00954													
			Lot #	024875					619150				

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Dw Webb/Dlu Webb	3-19-08/1052	MO 509 FRIDGE	3-19-08/1052
MO509 Fridge	4-8-8 0900	D Connolly	4-8-8 0900
D Connolly	4-8-8 1020	[illegible]	4-8-8 1020

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ICED

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

A-6003-618(01/06)

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	8N	DATA TURNAROUND
NCO Sampler	TRENT, SJ	373-5869	WIDRIG, DL			
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY**	☐	**45 Days / 45 Days**
C5941, I-033	216-A-30 Crib Sampling		F08-043			
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**		
			123215ES20	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**			
Waste Sampling & Characterization	N/A		N/A			

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.** All VOA samples will be collected using EPA Method 5035A.
(1)Semi-VOA - 8270B (Add-On) {1,2,4-Trimethylbenzene, Tributyl phosphate}
(2)TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(3)ICP/MS - 200.8 (TAL) {Barium, Cadmium, Chromium, Copper, Nickel, Silver, Zinc} ICP/MS - 200.8 (Add-on) {Arsenic, Beryllium, Lead, Selenium} 200.8_HG - ICPMS;
(4)IC Anions - 300.0 {Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}
(5)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152, Europium-154, Europium-155, Radium-226} Gamma Spec - Add-on {Niobium-94, Radium-228} Isotopic Uranium; Neptunium-237; Strontium-89,90 -- Total Sr; Isotopic Plutonium; Americium-241 {Americium-241}

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
NCO Sampler WEBB	TRENT, SJ	373-5869	WIDRIG, DL		
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.	AIR QUALITY ☐	45 Days / 45 Days
C5941, I-033	216-A-30 Crib Sampling		F08-043		
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT	
	HNF-N-5852	85'-87.5'	123215ES20	GOVERNMENT VEHICLE	
SHIPPED TO	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		
Waste Sampling & Characterization	N/A		N/A		

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

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

SPECIAL HANDLING AND/OR STORAGE
Radioactive tie to B1TDB7

PRESERVATION	Cool~4C
TYPE OF CONTAINER	aGs*
NO. OF CONTAINER(S)	1
VOLUME	40mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1TDD8	SOIL	3-19-08	0852	X
956				

ICED

LOT# 7039150

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DW WEBB / [illegible]	3-19-08 / 1052	MO 509 FRIDGE	3-19-08 / 1052
MO 509 Fridge	4-8-8 0900	D Connolly [signature]	4-8-8 0900
D Connolly [signature]	4-8-8 1020	[signature]	4-8-8 1020

SPECIAL INSTRUCTIONS
** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.** All VOA samples will be collected using EPA Method 5035A. (1)VOA - 5035/8260 (TCL); VOA - 5035/8260 - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

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

A-6003-618(01/06)

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE 8N	DATA TURNAROUND
NCO Sampler WEBB, KAUER, HERRICK	TRENT, SJ	373-5869	WIDRIG, DL		
SAMPLING LOCATION: C5941, I-033	PROJECT DESIGNATION: 216-A-30 Crib Sampling		SAF NO.: F08-043	AIR QUALITY ☐	45 Days / 45 Days
ICE CHEST NO.	FIELD LOGBOOK NO.: HNF-N-5852	ACTUAL SAMPLE DEPTH: 85' - ~~88~~ 87.5'	COA: 123215ES20	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 B1TDB7

PRESERVATION	Cool <-7C and >-20C	MEOH/Cool~4 C
TYPE OF CONTAINER	aGs*	aGs*
NO. OF CONTAINER(S)	5	3
VOLUME	40mL	40mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TDD7	SOIL	3-19-08	0850	X	X

ICED

LOT# 7039150

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
DW WEBB/DWWeb	3-19-08 / 1052	MO 509 FRIDGE	3-19-08 / 1052
MO 509 Fridge	4-8-8 0900	DConnally	4-8-8 0900
DConnally	4-8-8 1020	KBeebe	4-8-8 1020

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.** All VOA samples will be collected using EPA Method 5035A.** VOA sample bottle sets will include 3 bottles for high level analysis, 5 bottles for low level analysis, and 1 methanol process control sample. ** The laboratory is to use one of the low level VOA bottles for moisture content determination.** VOA bottles will be labeled with an appended suffix of K, L, M, N, or P for low level and W, X, or Y for high level. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be include as part of the sample ID reported in the final data packages.
(1)VOA - 5035/8260 (LOW LEVEL); VOA - 5035/8260 (LOW LEVEL) - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}
(2)VOA - 5035/8260 (HIGH LEVEL); VOA - 5035/8260 (HIGH LEVEL) - (Add-On) {Acetonitrile, Hexane, Tetrahydrofuran}

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

A-6003-618(01/06)

M4W41-SLF-08-563

ATTACHMENT 6

SAMPLE RECORD SHEET

Consisting of 2 pages
Including cover page

SAMPLE RECORD SHEET

Sample Number	Sample Suffix[1]	Empty Weight[2] (g)	Weight with Sample[3] (g)	Weight of Sample[4] (g)	Methanol Added (g)	Methanol Added (mL)	Weight of Methanol and Sample
B1TDD7	K	30.9	35.8	4.9	---	---	---
B1TDD7	L	30.8	35.6	4.8	---	---	---
B1TDD7	M	30.8	35.6	4.8	---	---	---
B1TDD7	N	30.8	35.6	4.8	---	---	---
B1TDD7	P	30.8	35.5	4.7	---	---	---
* B1TDD8		29.7	29.7	—	4.1 g	5.0 mL	33.8
B1TDD7	W	29.7	34.5	4.8	3.9 g	5.0 mL	38.4
B1TDD7	X	29.8	34.5	4.7	4.0 g	5.0 mL	38.5
B1TDD7	Y	29.8	34.8	5.0	4.0 g	5.0 mL	38.8

[1]Sample suffix of L, K, M, N and P relate to low-level concentration samples and will not have any preservation beyond freezing between -7C and -20C.
Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.

[2]Empty weight is to include all labels, stickers, bags, and anything else that will be associated with the bottle when it is weighed with the sample.
[3]Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.
[4]Sample weight is the vial with sample minus the vial empty

- Used Fischer MeOH.
- Sample interval ~~84.0~~ → 85.0 → 87.5' bgs JB 3/19/08

Date: 3/19/08
Time: @ 0950