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FLUOR

Memorandum

M4W41-SLF-08-578

To: H. Hampt E6-35 Date: June 2, 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 WSCF20080797 – SAF NUMBER F08-066

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 WSCF20080797:

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

SLF/grf

Attachments 5

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ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#:	WSCF20080797	
Data Deliverable Date:	29-may-2008	
Data Deliverable:	Cover Sheet	

SAF#	Sample ID	WSCF#	Matrix
F08-066	B1TFC1	W08GR01030	SOIL
	B1TFC3	W08GR01029	SOIL

M4W41-SLF-08-578

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Introduction

Three S&GRP samples were received at the WSCF Laboratory on April 15, 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 high concentration VOA sample and corresponding Blank B1TFC2 was not required.

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. Additionally, a copy of the sample record sheet is included as Attachment 5.

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

Analytical Methodology for Requested Analyses

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

Inorganic Comments

Anions – Hold time requirements for this analysis were met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per GRP Letter of Instruction. See pages 17 through 18 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 19 through 21 for QC details. Analytical Note(s):

- Matrix Spikes and Matrix Spike Duplicates were analyzed on samples B1V261 (SDG# 20080786, SAF# F08-046) and B1TTM7 (SDG# 20080787, SAF# F07-026).

- B1V261 (Barium) – Spike Relative Percent Difference (RPD) slightly exceeded established laboratory limits. Sample result was X flagged.

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 22 for QC details.

All QC controls are within the established limits.

Organic Comments

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

PCB – 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.

All QC controls are within the established limits.

Semi-VOA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GPP Letter of Instruction. See pages 31 through 34 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 35 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 36 through 38 for QC details. Analytical Note(s):

- Analysis of the high concentration VOA sample and corresponding Blank B1TFC2 was not required.

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 42 through 47 for QC details. Analytical Note(s):

- GEA (Radium-226) – Duplicate RPD exceeded established laboratory limits. No flag issued.
- Americium-241 and 243 (tracer) – Duplicate QC was analyzed on sample# B1TFC6 (SDG# 20080813, SAF# F08-066). Duplicate RPD for Americium-241 exceeded established laboratory limits due to low sample activity. No flag issued.
- Neptunium-237 – Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed on sample B1TNR0 (SDG# 20080683, SAF# F08-070). Additionally, Matrix Spikes were also analyzed on samples B1TDF2 and B1V2L5 (SDG# 20080801, SAF# F08-043); and, B1TFC3 of this SDG.
- Plutonium-238, 239/240 and 242 (tracer) – Duplicate QC was analyzed on sample# B1TFC6 (SDG# 20080813, SAF# F08-066). Duplicate RPD for Plutonium-238 and 239/240 slightly exceeded established laboratory limits. No flag issued.
- 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# B1TFC6 (SDG# 20080813, SAF# F08-066). Duplicate RPD for Uranium-235 slightly exceeded established laboratory limits. No flag issued.

All other QC controls are within the established limits.

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

Scot L. Fitzgerald
WSCF Analytical Laboratory Manager

Pauline D. Mix
WSCF Client Services

M4W41-SLF-08-578

ATTACHMENT 3

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 6/2/08

Client Services: P.D. Mix 6/2/2008

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#: WSCF20080797
Report Date: 29-may-2008
Report WGPP/ver. 5.2
Groundwater Remediation Program

w13qlog v4.2 29-may-2008 07:16:41

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20080797

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
				SAMPLE	W08GR01029	Percent Solids
			40819	DUP	W08GR01029	pH Soil and Waste Measurement
			40819	SAMPLE	W08GR01029	pH Soil and Waste Measurement
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	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
36149	9	36566	40890	SAMPLE	W08GR01029	Anions by Ion Chromatography
36177	1	36594	40927	BLANK		ICP-200.8 MS All possible meta
36177	2	36594	40927	LCS		ICP-200.8 MS All possible meta
36177	4	36594	40927	MS	W08GR01020	ICP-200.8 MS All possible meta
36177	5	36594	40927	MSD	W08GR01020	ICP-200.8 MS All possible meta
36177	5	36594	40927	SPK-RPD	W08GR01020	ICP-200.8 MS All possible meta
36177	7	36594	40927	MS	W08GR01023	ICP-200.8 MS All possible meta
36177	8	36594	40927	MSD	W08GR01023	ICP-200.8 MS All possible meta
36177	8	36594	40927	SPK-RPD	W08GR01023	ICP-200.8 MS All possible meta
36177	10	36594	40927	SAMPLE	W08GR01029	ICP-200.8 MS All possible meta

w13qlog v4.2 29-may-2008 07:16:41

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20080797

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			40815	BLANK		PCBs complete list
			40815	LCS		PCBs complete list
			40815	MS	W08GR01029	PCBs complete list
			40815	MSD	W08GR01029	PCBs complete list
			40815	SAMPLE	W08GR01029	PCBs complete list
			40815	SPK-RPD	W08GR01029	PCBs complete list
			40815	SURR	W08GR01029	PCBs complete list
			40836	BLANK		SW-846 8270C Semi-Vols
			40836	LCS		SW-846 8270C Semi-Vols
			40836	MS	W08GR01029	SW-846 8270C Semi-Vols
			40836	MSD	W08GR01029	SW-846 8270C Semi-Vols
			40836	SAMPLE	W08GR01029	SW-846 8270C Semi-Vols
			40836	SPK-RPD	W08GR01029	SW-846 8270C Semi-Vols
			40836	SURR	W08GR01029	SW-846 8270C Semi-Vols
			40844	BLANK		NWTPH-D TPH Diesel Range (Wa)
			40844	LCS		NWTPH-D TPH Diesel Range (Wa)
			40844	MS	W08GR01029	NWTPH-D TPH Diesel Range (Wa)
			40844	MSD	W08GR01029	NWTPH-D TPH Diesel Range (Wa)
			40844	SAMPLE	W08GR01029	NWTPH-D TPH Diesel Range (Wa)
			40844	SPK-RPD	W08GR01029	NWTPH-D TPH Diesel Range (Wa)
			40844	SURR	W08GR01029	NWTPH-D TPH Diesel Range (Wa)
			41193	BLANK		VOA Ground Water Protection
			41193	LCS		VOA Ground Water Protection
			41193	MS	W08GR01030	VOA Ground Water Protection
			41193	MSD	W08GR01030	VOA Ground Water Protection
			41193	SAMPLE	W08GR01030	VOA Ground Water Protection
			41193	SPK-RPD	W08GR01030	VOA Ground Water Protection
			41193	SURR	W08GR01030	VOA Ground Water Protection

w13qlog v4.2 29-may-2008 07:16:41

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20080797

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36024	1	36439	40779	BLANK		Gamma Energy Analysis-grd H2O
36024	2	36439	40779	LCS		Gamma Energy Analysis-grd H2O
36024	3	36439	40779	DUP	W08GR01029	Gamma Energy Analysis-grd H2O
36024	4	36439	40779	SAMPLE	W08GR01029	Gamma Energy Analysis-grd H2O
36109	1	36525	40931	BLANK		Strontium 89/90
36109	2	36525	40931	LCS		Strontium 89/90
36109	3	36525	40931	DUP	W08GR01017	Strontium 89/90
36109	12	36525	40931	SAMPLE	W08GR01029	Strontium 89/90
36109	13	36525	40931	SURR	W08GR01029	Strontium 89/90
36240	1	36655	41014	BLANK		Neptunium by AEA
36240	2	36655	41014	LCS		Neptunium by AEA
36240	3	36655	41014	DUP	W08GR00836	Neptunium by AEA
36240	5	36655	41014	MS	W08GR00836	Neptunium by AEA
36240	6	36655	41014	MSD	W08GR00836	Neptunium by AEA
36240	6	36655	41014	SPK-RPD	W08GR00836	Neptunium by AEA
36240	8	36655	41014	MS	W08GR01029	Neptunium by AEA
36240	7	36655	41014	SAMPLE	W08GR01029	Neptunium by AEA
36240	10	36655	41014	MS	W08GR01033	Neptunium by AEA
36240	12	36655	41014	MS	W08GR01038	Neptunium by AEA
36198	1	36614	41178	BLANK		Uranium Isotopics by AEA
36198	2	36614	41178	LCS		Uranium Isotopics by AEA
36198	4	36614	41178	SAMPLE	W08GR01029	Uranium Isotopics by AEA
36198	5	36614	41178	SURR	W08GR01029	Uranium Isotopics by AEA
36198	3	36614	41178	DUP	W08GR01053	Uranium Isotopics by AEA
36316	1	36732	41180	BLANK		Plutonium Isotopics by AEA
36316	2	36732	41180	LCS		Plutonium Isotopics by AEA
36316	4	36732	41180	SAMPLE	W08GR01029	Plutonium Isotopics by AEA
36316	5	36732	41180	SURR	W08GR01029	Plutonium Isotopics by AEA
36316	3	36732	41180	DUP	W08GR01053	Plutonium Isotopics by AEA
36317	1	36733	41206	BLANK		Americium by AEA
36317	2	36733	41206	LCS		Americium by AEA
36317	4	36733	41206	SAMPLE	W08GR01029	Americium by AEA
36317	5	36733	41206	SURR	W08GR01029	Americium by AEA
36317	3	36733	41206	DUP	W08GR01053	Americium by AEA

WSCF
METHOD REFERENCES REPORT

Department: Inorganic

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

LA-212-411	Determination of Soil pH Measurement	
	EPA SW-846 9045D	SOIL AND WASTE pH
	HEIS 150.1_PH	pH
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: F08-066
Sample # W08GR01029
Client ID: B1TFC3 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080797
Department: Inorganic
Sampled: 04/03/08
Received: 04/15/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography Prep											**04/30/08**
Anions by Ion Chromatography											
Fluoride	16984-48-8	LA-533-410	DU	< 0.300	mg/kg			50.00	0.30		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	3.21	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											**04/30/08**
ICP-200.8 MS All possible meta											
Nickel	7440-02-0	LA-505-412		8.81	mg/kg			1.01	0.202		05/01/08
Silver	7440-22-4	LA-505-412	U	< 0.101	mg/kg			1.01	0.101		05/01/08
Barium	7440-39-3	LA-505-412	X	81.1	mg/kg			1.01	0.202		05/01/08
Beryllium	7440-41-7	LA-505-412		0.270	mg/kg			1.01	0.0504		05/01/08
Cadmium	7440-43-9	LA-505-412	U	< 0.101	mg/kg			1.01	0.101		05/01/08
Chromium	7440-47-3	LA-505-412		7.54	mg/kg			1.01	0.504		05/01/08
Copper	7440-50-8	LA-505-412		11.4	mg/kg			1.01	0.101		05/01/08
Zinc	7440-66-6	LA-505-412		34.4	mg/kg			1.01	0.807		05/01/08
Lead	7439-92-1	LA-505-412		4.76	mg/kg			1.01	0.101		05/01/08
Mercury	7439-97-6	LA-505-412	U	< 0.0504	mg/kg			1.01	0.0504		05/01/08
Arsenic	7440-38-2	LA-505-412		2.47	mg/kg			1.01	0.404		05/01/08
Selenium	7782-49-2	LA-505-412		0.320	mg/kg			1.01	0.303		05/01/08
Total solids											
Total solids	TS	LA-519-412		88.2	Percent			1.00	0.0		04/24/08
pH Measurement											
pH Measurement	PH	LA-212-411		8.94	unitless			1.00	0.010		04/25/08

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

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

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

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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080797
Matrix: SOLID
Test: Anions by Ion Chromatography

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01020											
BATCH QC ASSOCIATED WITH SAMPLE											
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: WSCF20080797
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: WSCF20080797
Matrix: SOLID
Test: ICP-200.8 MS All possible meta

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
MS	Silver	7440-22-4	190.8	95.400	% Recov	70.000	130.000				05/01/08
MS	Arsenic	7440-38-2	193.78	96.890	% Recov	70.000	130.000				05/01/08
MS	Barium	7440-39-3	233.79	116.895	% Recov	70.000	130.000				05/01/08
MS	Beryllium	7440-41-7	187.88	93.940	% Recov	70.000	130.000				05/01/08
MS	Cadmium	7440-43-9	191.4	95.700	% Recov	70.000	130.000				05/01/08
MS	Chromium	7440-47-3	190.9	95.450	% Recov	70.000	130.000				05/01/08
MS	Copper	7440-50-8	185.06	92.530	% Recov	70.000	130.000				05/01/08
MS	Mercury	7439-97-6	1.98	99.000	% Recov	70.000	130.000				05/01/08
MS	Nickel	7440-02-0	184.94	92.470	% Recov	70.000	130.000				05/01/08
MS	Lead	7439-92-1	195.21	97.605	% Recov	70.000	130.000				05/01/08
MS	Selenium	7782-49-2	190.3	95.150	% Recov	70.000	130.000				05/01/08
MS	Zinc	7440-66-6	185.26	92.630	% Recov	70.000	130.000				05/01/08
MSD	Silver	7440-22-4	184.4	92.200	% Recov	70.000	130.000				05/01/08
MSD	Arsenic	7440-38-2	186.58	93.290	% Recov	70.000	130.000				05/01/08
MSD	Barium	7440-39-3	180.09	90.045	% Recov	70.000	130.000				05/01/08
MSD	Beryllium	7440-41-7	181.78	90.890	% Recov	70.000	130.000				05/01/08
MSD	Cadmium	7440-43-9	185.4	92.700	% Recov	70.000	130.000				05/01/08
MSD	Chromium	7440-47-3	181.3	90.650	% Recov	70.000	130.000				05/01/08
MSD	Copper	7440-50-8	178.56	89.280	% Recov	70.000	130.000				05/01/08
MSD	Mercury	7439-97-6	1.91	95.500	% Recov	70.000	130.000				05/01/08
MSD	Nickel	7440-02-0	181.94	90.970	% Recov	70.000	130.000				05/01/08
MSD	Lead	7439-92-1	188.81	94.405	% Recov	70.000	130.000				05/01/08
MSD	Selenium	7782-49-2	184.6	92.300	% Recov	70.000	130.000				05/01/08
MSD	Zinc	7440-66-6	177.96	88.980	% Recov	70.000	130.000				05/01/08
SPK-RPD	Silver	7440-22-4	92.200		RPD			3.412	20.000		05/01/08
SPK-RPD	Arsenic	7440-38-2	93.290		RPD			3.786	20.000		05/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080797
Matrix: SOLID
Test: ICP-200.8 MS All possible meta

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SPK-RPD	Barium	7440-39-3	90.045		RPD			25.950	20.000 *		05/01/08
SPK-RPD	Beryllium	7440-41-7	90.890		RPD			3.300	20.000		05/01/08
SPK-RPD	Cadmium	7440-43-9	92.700		RPD			3.185	20.000		05/01/08
SPK-RPD	Chromium	7440-47-3	90.650		RPD			5.159	20.000		05/01/08
SPK-RPD	Copper	7440-50-8	89.280		RPD			3.575	20.000		05/01/08
SPK-RPD	Mercury	7439-97-6	95.500		RPD			3.599	20.000		05/01/08
SPK-RPD	Nickel	7440-02-0	90.970		RPD			1.635	20.000		05/01/08
SPK-RPD	Lead	7439-92-1	94.405		RPD			3.333	20.000		05/01/08
SPK-RPD	Selenium	7782-49-2	92.300		RPD			3.041	20.000		05/01/08
SPK-RPD	Zinc	7440-66-6	88.980		RPD			4.020	20.000		05/01/08

Lab ID: W08GR01023
BATCH QC ASSOCIATED WITH SAMPLE

MS	Silver	7440-22-4	185	92.500	% Recov	70.000	130.000				05/01/08
MS	Arsenic	7440-38-2	183	91.500	% Recov	70.000	130.000				05/01/08
MS	Cadmium	7440-43-9	185.5	92.750	% Recov	70.000	130.000				05/01/08
MS	Chromium	7440-47-3	172.37	86.185	% Recov	70.000	130.000				05/01/08
MS	Lead	7439-92-1	188.94	94.470	% Recov	70.000	130.000				05/01/08
MSD	Silver	7440-22-4	187.5	93.750	% Recov	70.000	130.000				05/01/08
MSD	Arsenic	7440-38-2	185.9	92.950	% Recov	70.000	130.000				05/01/08
MSD	Cadmium	7440-43-9	188.1	94.050	% Recov	70.000	130.000				05/01/08
MSD	Chromium	7440-47-3	179.47	89.735	% Recov	70.000	130.000				05/01/08
MSD	Lead	7439-92-1	191.84	95.920	% Recov	70.000	130.000				05/01/08
SPK-RPD	Silver	7440-22-4	93.750		RPD			1.342	20.000		05/01/08
SPK-RPD	Arsenic	7440-38-2	92.950		RPD			1.572	20.000		05/01/08
SPK-RPD	Cadmium	7440-43-9	94.050		RPD			1.392	20.000		05/01/08
SPK-RPD	Chromium	7440-47-3	89.735		RPD			4.036	20.000		05/01/08
SPK-RPD	Lead	7439-92-1	95.920		RPD			1.523	20.000		05/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080797
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
BATCH QC											
BLANK	Silver	7440-22-4	<0.1	n/a	ug/L					U	05/01/08
BLANK	Arsenic	7440-38-2	<0.4	n/a	ug/L					U	05/01/08
BLANK	Barium	7440-39-3	<0.2	n/a	ug/L					U	05/01/08
BLANK	Beryllium	7440-41-7	<5e-2	n/a	ug/L					U	05/01/08
BLANK	Cadmium	7440-43-9	<0.1	n/a	ug/L					U	05/01/08
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L					U	05/01/08
BLANK	Copper	7440-50-8	<0.1	n/a	ug/L					U	05/01/08
BLANK	Mercury	7439-97-6	<5e-2	n/a	ug/L					U	05/01/08
BLANK	Nickel	7440-02-0	<0.2	n/a	ug/L					U	05/01/08
BLANK	Lead	7439-92-1	<0.1	n/a	ug/L					U	05/01/08
BLANK	Selenium	7782-49-2	<0.3	n/a	ug/L					U	05/01/08
BLANK	Zinc	7440-66-6	<0.8	n/a	ug/L					U	05/01/08
LCS	Silver	7440-22-4	109.2	108.119	% Recov	98.000	134.000				05/01/08
LCS	Arsenic	7440-38-2	134.4	101.818	% Recov	75.000	134.000				05/01/08
LCS	Barium	7440-39-3	318.1	99.718	% Recov	87.000	121.000				05/01/08
LCS	Beryllium	7440-41-7	87.87	98.179	% Recov	70.000	153.000				05/01/08
LCS	Cadmium	7440-43-9	66.13	99.444	% Recov	95.000	124.000				05/01/08
LCS	Chromium	7440-47-3	68.72	94.266	% Recov	77.000	125.000				05/01/08
LCS	Copper	7440-50-8	67.33	98.292	% Recov	84.000	122.000				05/01/08
LCS	Mercury	7439-97-6	7.73	93.357	% Recov	71.000	132.000				05/01/08
LCS	Nickel	7440-02-0	55.74	100.252	% Recov	90.000	121.000				05/01/08
LCS	Lead	7439-92-1	133.7	102.846	% Recov	92.000	123.000				05/01/08
LCS	Selenium	7782-49-2	172.5	107.143	% Recov	52.000	157.000				05/01/08
LCS	Zinc	7440-66-6	184.5	104.237	% Recov	85.000	130.000				05/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Inorganic**

SDG Number: WSCF20080797
Matrix: SOLID
Test: pH Soil and Waste Measurement

Sample Date: 04/03/08
Receive Date:04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01029											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	pH Soil and Waste Measurement	PH	8.99		RPD			0.558	3.000		04/25/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-066

Group #: WSCF20080797
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		W08GR01029/Ra226 duplicate is flagged for poor RPD due to the inhomogeneity of the sample. lmh ORGANICS: All results are corrected for moisture and reported on a dry weight basis. cgc ICP-MS: Barium spike RPD over 20% but still pass. X-flag U-235 duplicate is flagged for poor RPD due to the low countrate and high counting uncertainty. RPD does not apply. Pu238 duplicate is flagged for poor RPD but the sample activity is low level. RPD doesn't apply to low level samples. lmh Pu239 duplicate is flagged for poor PRD due to the inhomogeneity of the sample. lmh Am241 batch dup is flagged for poor RPD but the sample activity is low level. RPD does not apply to low level samples. lmh

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: F08-066
Sample # W08GR01029
Client ID: B1TFC3 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080797
Department: Organic
Sampled: 04/03/08
Received: 04/15/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
NWTPH-D TPH Diesel Range (Wa) Prep											**04/16/08**
NWTPH-D TPH Diesel Range (Wa)											
Total Pet. Hydrocarbons Diesel	TPHDIESEL	LA-523-493	U	< 3.40e+03	ug/kg			1.00	3.4e+03		04/28/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 3.40e+03	ug/kg			1.00	3.4e+03		04/28/08
PCBs complete list Prep											**04/16/08**
PCBs complete list											
Aroclor-1016	12674-11-2	LA-523-427	U	< 11.0	ug/kg			1.00	11		04/24/08
Aroclor-1221	11104-28-2	LA-523-427	U	< 23.0	ug/kg			1.00	23		04/24/08
Aroclor-1232	11141-16-5	LA-523-427	U	< 11.0	ug/kg			1.00	11		04/24/08
Aroclor-1242	53469-21-9	LA-523-427	U	< 11.0	ug/kg			1.00	11		04/24/08
Aroclor-1248	12672-29-6	LA-523-427	U	< 11.0	ug/kg			1.00	11		04/24/08
Aroclor-1254	11097-69-1	LA-523-427	U	< 11.0	ug/kg			1.00	11		04/24/08
Aroclor-1260	11096-82-5	LA-523-427	U	< 11.0	ug/kg			1.00	11		04/24/08
Aroclor-1262	37324-23-5	LA-523-427	U	< 11.0	ug/kg			1.00	11		04/24/08
Aroclor-1268	11100-14-4	LA-523-427	U	< 11.0	ug/kg			1.00	11		04/24/08
SW-846 8270C Semi-Vols Prep											**04/16/08**
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 230	ug/kg			1.00	2.3e+02		04/28/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 270	ug/kg			1.00	2.7e+02		04/28/08
Phenol	108-95-2	LA-523-456	U	< 160	ug/kg			1.00	1.6e+02		04/28/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 160	ug/kg			1.00	1.6e+02		04/28/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 160	ug/kg			1.00	1.6e+02		04/28/08
Pyrene	129-00-0	LA-523-456	U	< 160	ug/kg			1.00	1.6e+02		04/28/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 160	ug/kg			1.00	1.6e+02		04/28/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 160	ug/kg			1.00	1.6e+02		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)
U - Analyzed for but not detected above limiting criteria(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-066
Sample # W08GR01029
Client ID: B1TFC3 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080797
Department: Organic
Sampled: 04/03/08
Received: 04/15/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Acenaphthene	83-32-9	LA-523-456	U	< 160	ug/kg			1.00	1.6e+02		04/28/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 230	ug/kg			1.00	2.3e+02		04/28/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 160	ug/kg			1.00	1.6e+02		04/28/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 160	ug/kg			1.00	1.6e+02		04/28/08
1,2,4-Trimethylbenzene	95-63-6	LA-523-456	U	< 200	ug/kg			1.00	2.0e+02		04/28/08

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

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U - Analyzed for but not detected above limiting criteria(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-066
Sample # W08GR01030
Client ID: B1TFC1 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080797
Department: Organic
Sampled: 04/03/08
Received: 04/15/08

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	< 1.40	ug/kg			1.00	1.4		04/17/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Benzene	71-43-2	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Toluene	108-88-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Styrene	100-42-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
2-Hexanone	591-78-6	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Acetone	67-64-1	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Chloroform	67-66-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Bromomethane	74-83-9	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Chloromethane	74-87-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Chloroethane	75-00-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08

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

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U - Analyzed for but not detected above limiting criteria(inorg)
U - Analyzed for but not detected above limiting criteria.(org)

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-066
Sample # W08GR01030
Client ID: B1TFC1 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080797
Department: Organic
Sampled: 04/03/08
Received: 04/15/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Bromoform	75-25-2	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
2-Butanone	78-93-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Hexane	110-54-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		04/17/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 2.80	ug/kg			1.00	2.8		04/17/08
Acetonitrile	75-05-8	LA-523-455	U	< 2.80	ug/kg			1.00	2.8		04/17/08

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

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

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

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

WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F08-066 :F08-066

Group #: WSCF20080797
Department: Organic

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01029	B1TFC3	TRENT	SW-846 8270C Semi-Vols	SMP 13.548 Di n-butylphthalate	84-74-2	13.548		3.4e+02	ug/kg

RQ=Result Qualifier

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080797
Matrix: SOLID
Test: PCBs complete list

Sample Date: 04/03/08
Receive Date:04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01029											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Aroclor-1254	11097-69-1	196.49	88.300	% Recov	75.000	125.000				04/24/08
MS	Decachlorobiphenyl	2051-24-3	197.78	88.800	% Recov	50.000	150.000				04/24/08
MS	Tetrachloro-m-xylene	877-09-8	193.03	86.700	% Recov	50.000	150.000				04/24/08
MSD	Aroclor-1254	11097-69-1	201.96	90.600	% Recov	75.000	125.000				04/24/08
MSD	Decachlorobiphenyl	2051-24-3	203.77	91.400	% Recov	50.000	150.000				04/24/08
MSD	Tetrachloro-m-xylene	877-09-8	192.84	86.500	% Recov	50.000	150.000				04/24/08
SPK-RPD	Aroclor-1254	11097-69-1	90.600		RPD			2.571	25.000		04/24/08
SPK-RPD	Decachlorobiphenyl	2051-24-3	91.400		RPD			2.886	20.000		04/24/08
SPK-RPD	Tetrachloro-m-xylene	877-09-8	86.500		RPD			0.231	20.000		04/24/08
SURR	Decachlorobiphenyl	2051-24-3	193.63	85.600	% Recov	50.000	150.000				04/24/08
SURR	Tetrachloro-m-xylene	877-09-8	190.96	84.400	% Recov	50.000	150.000				04/24/08
BATCH QC											
BLANK	Aroclor-1016	12674-11-2	< 10	n/a	UGKG					U	04/24/08
BLANK	Aroclor-1221	11104-28-2	< 20	n/a	ug/Kg					U	04/24/08
BLANK	Aroclor-1232	11141-16-5	< 10	n/a	ug/Kg					U	04/24/08
BLANK	Aroclor-1242	53469-21-9	< 10	n/a	ug/Kg					U	04/24/08
BLANK	Aroclor-1248	12672-29-6	< 10	n/a	ug/Kg					U	04/24/08
BLANK	Aroclor-1254	11097-69-1	< 10	n/a	ug/Kg					U	04/24/08
BLANK	Aroclor-1260	11096-82-5	< 10	n/a	ug/Kg					U	04/24/08
BLANK	Aroclor-1262	37324-23-5	< 10	n/a	ug/Kg					U	04/24/08
BLANK	Aroclor-1268	11100-14-4	< 10	n/a	ug/Kg					U	04/24/08
BLANK	Decachlorobiphenyl	2051-24-3	181.46	90.700	% Recov	50.000	150.000				04/24/08
BLANK	Tetrachloro-m-xylene	877-09-8	176.90	88.400	% Recov	50.000	150.000				04/24/08
LCS	Aroclor-1254	11097-69-1	176.50	88.200	% Recov	70.000	130.000				04/24/08
LCS	Decachlorobiphenyl	2051-24-3	184.11	92.100	% Recov	50.000	150.000				04/24/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080797
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
LCS	Tetrachloro-m-xylene	877-09-8	169.52	84.800	% Recov	50.000	150.000				04/24/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080797
Matrix: SOLID
Test: SW-846 8270C Semi-Vols

Sample Date: 04/03/08
Receive Date:04/15/08

Lab ID: W08GR01029
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	4124.0	91.500	% Recov	75.000	121.000				04/28/08
MS	1,4-Dichlorobenzene	106-46-7	4060.5	90.100	% Recov	68.000	121.000				04/28/08
MS	2,4-Dinitrotoluene	121-14-2	3675.8	81.600	% Recov	66.000	113.000				04/28/08
MS	2-Fluorophenol(Surr)	367-12-4	3999.9	88.800	% Recov	72.000	120.000				04/28/08
MS	Acenaphthene	83-32-9	3942.9	87.500	% Recov	69.000	125.000				04/28/08
MS	4-Chloro-3-methylphenol	59-50-7	6115.7	90.500	% Recov	68.000	116.000				04/28/08
MS	2-Chlorophenol	95-57-8	6212.5	91.900	% Recov	65.000	124.000				04/28/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	4139.7	91.900	% Recov	69.000	127.000				04/28/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	3761.7	83.500	% Recov	66.000	122.000				04/28/08
MS	Phenol	108-95-2	6112.9	90.400	% Recov	71.000	122.000				04/28/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	3935.1	87.300	% Recov	63.000	125.000				04/28/08
MS	4-Nitrophenol	100-02-7	5027.0	74.400	% Recov	55.000	113.000				04/28/08
MS	Pentachlorophenol	87-86-5	6481.6	95.900	% Recov	50.000	113.000				04/28/08
MS	Phenol-d5(Surr)	4165-62-2	3872.1	85.900	% Recov	66.000	124.000				04/28/08
MS	Pyrene	129-00-0	4841.2	107.000	% Recov	67.000	125.000				04/28/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	4229.2	93.900	% Recov	49.000	120.000				04/28/08
MS	Terphenyl-d14(Surr)	98904-43-9	4782.9	106.000	% Recov	58.000	128.000				04/28/08
MSD	1,2,4-Trichlorobenzene	120-82-1	4543.7	101.000	% Recov	75.000	121.000				04/28/08
MSD	1,4-Dichlorobenzene	106-46-7	4810.2	107.000	% Recov	68.000	121.000				04/28/08
MSD	2,4-Dinitrotoluene	121-14-2	4290.7	95.300	% Recov	66.000	113.000				04/28/08
MSD	2-Fluorophenol(Surr)	367-12-4	4560.9	101.000	% Recov	72.000	120.000				04/28/08
MSD	Acenaphthene	83-32-9	4498.6	99.900	% Recov	69.000	125.000				04/28/08
MSD	4-Chloro-3-methylphenol	59-50-7	6881.6	102.000	% Recov	68.000	116.000				04/28/08
MSD	2-Chlorophenol	95-57-8	7138.8	106.000	% Recov	65.000	124.000				04/28/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	4979.2	111.000	% Recov	69.000	127.000				04/28/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	4236.1	94.100	% Recov	66.000	122.000				04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080797
Matrix: SOLID
Test: SW-846 8270C Semi-Vols

Sample Date: 04/03/08
Receive Date:04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Phenol	108-95-2	7096.6	105.000	% Recov	71.000	122.000				04/28/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	4396.1	97.600	% Recov	63.000	125.000				04/28/08
MSD	4-Nitrophenol	100-02-7	5824.7	86.200	% Recov	55.000	113.000				04/28/08
MSD	Pentachlorophenol	87-86-5	6102.3	90.300	% Recov	50.000	113.000				04/28/08
MSD	Phenol-d5(Surr)	4165-62-2	4599.4	102.000	% Recov	66.000	124.000				04/28/08
MSD	Pyrene	129-00-0	4986.9	111.000	% Recov	67.000	125.000				04/28/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	4152.4	92.200	% Recov	49.000	120.000				04/28/08
MSD	Terphenyl-d14(Surr)	98904-43-9	4671.5	104.000	% Recov	58.000	128.000				04/28/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	101.000		RPD			9.870	20.000		04/28/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	107.000		RPD			17.149	20.000		04/28/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	95.300		RPD			15.489	20.000		04/28/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	101.000		RPD			12.856	20.000		04/28/08
SPK-RPD	Acenaphthene	83-32-9	99.900		RPD			13.234	20.000		04/28/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	102.000		RPD			11.948	20.000		04/28/08
SPK-RPD	2-Chlorophenol	95-57-8	106.000		RPD			14.250	20.000		04/28/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	111.000		RPD			18.827	20.000		04/28/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	94.100		RPD			11.937	20.000		04/28/08
SPK-RPD	Phenol	108-95-2	105.000		RPD			14.944	20.000		04/28/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	97.600		RPD			11.141	20.000		04/28/08
SPK-RPD	4-Nitrophenol	100-02-7	86.200		RPD			14.695	20.000		04/28/08
SPK-RPD	Pentachlorophenol	87-86-5	90.300		RPD			6.015	20.000		04/28/08
SPK-RPD	Phenol-d5(Surr)	4165-62-2	102.000		RPD			17.137	20.000		04/28/08
SPK-RPD	Pyrene	129-00-0	111.000		RPD			3.670	20.000		04/28/08
SPK-RPD	2,4,6 Tribromophenol(Surr)	118-79-6	92.200		RPD			1.827	20.000		04/28/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	104.000		RPD			1.905	20.000		04/28/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	4546.6	101.000	% Recov	66.000	122.000				04/28/08
SURR	Nitrobenzene-d5(Surr)	4165-60-0	4631.3	103.000	% Recov	63.000	125.000				04/28/08
SURR	Phenol-d5(Surr)	4165-62-2	4794.4	106.000	% Recov	66.000	124.000				04/28/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	4364.3	96.800	% Recov	49.000	120.000				04/28/08
SURR	Terphenyl-d14(Surr)	98904-43-9	5692.3	126.000	% Recov	58.000	128.000				04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080797
Matrix: SOLID
Test: SW-846 8270C Semi-Vols

Sample Date: 04/03/08
Receive Date:04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
BATCH QC											
BLANK	1,2,4-Trimethylbenzene	95-63-6	< 180	n/a	ug/Kg					U	04/28/08
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 140	n/a	ug/Kg					U	04/28/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 240	n/a	ug/Kg					U	04/28/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 140	n/a	ug/Kg					U	04/28/08
BLANK	2-Fluorophenol(Surr)	367-12-4	3393.1	84.800	% Recov	72.000	120.000				04/28/08
BLANK	Acenaphthene	83-32-9	< 140	n/a	ug/Kg					U	04/28/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 140	n/a	ug/Kg					U	04/28/08
BLANK	2-Chlorophenol	95-57-8	< 140	n/a	ug/Kg					U	04/28/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 140	n/a	ug/Kg					U	04/28/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	3506.8	87.700	% Recov	66.000	122.000				04/28/08
BLANK	Phenol	108-95-2	< 140	n/a	ug/Kg					U	04/28/08
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	3466.7	86.700	% Recov	63.000	125.000				04/28/08
BLANK	4-Nitrophenol	100-02-7	< 200	n/a	ug/Kg					U	04/28/08
BLANK	Pentachlorophenol	87-86-5	< 200	n/a	ug/Kg					U	04/28/08
BLANK	Phenol-d5(Surr)	4165-62-2	3574.5	89.400	% Recov	66.000	124.000				04/28/08
BLANK	Pyrene	129-00-0	< 140	n/a	ug/Kg					U	04/28/08
BLANK	Tributyl phosphate	126-73-8	< 140	n/a	ug/Kg					U	04/28/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	2872.0	71.800	% Recov	49.000	120.000				04/28/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	4144.8	104.000	% Recov	58.000	128.000				04/28/08
LCS	1,2,4-Trichlorobenzene	120-82-1	3980.2	99.500	% Recov	76.000	118.000				04/28/08
LCS	1,4-Dichlorobenzene	106-46-7	4023.1	101.000	% Recov	68.000	121.000				04/28/08
LCS	2,4-Dinitrotoluene	121-14-2	3695.0	92.400	% Recov	68.000	112.000				04/28/08
LCS	2-Fluorophenol(Surr)	367-12-4	3853.8	96.300	% Recov	50.000	110.000				04/28/08
LCS	Acenaphthene	83-32-9	3927.0	98.200	% Recov	75.000	121.000				04/28/08
LCS	4-Chloro-3-methylphenol	59-50-7	5677.5	94.600	% Recov	68.000	117.000				04/28/08
LCS	2-Chlorophenol	95-57-8	6032.7	101.000	% Recov	84.000	114.000				04/28/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	4252.6	106.000	% Recov	76.000	119.000				04/28/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	3983.4	99.600	% Recov	58.000	109.000				04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080797
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	Phenol	108-95-2	6007.3	100.000	% Recov	80.000	113.000				04/28/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	3826.2	95.700	% Recov	60.000	118.000				04/28/08
LCS	4-Nitrophenol	100-02-7	5282.2	88.000	% Recov	42.000	123.000				04/28/08
LCS	Pentachlorophenol	87-86-5	5809.2	96.800	% Recov	55.000	120.000				04/28/08
LCS	Phenol-d5(Surr)	4165-62-2	4005.7	100.000	% Recov	59.000	116.000				04/28/08
LCS	Pyrene	129-00-0	4073.3	102.000	% Recov	67.000	122.000				04/28/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	3818.9	95.500	% Recov	60.000	120.000				04/28/08
LCS	Terphenyl-d14(Surr)	98904-43-9	3980.8	99.500	% Recov	60.000	120.000				04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080797
Matrix: SOLID
Test: NWTPH-D TPH Diesel Range (Wa)

Sample Date: 04/03/08
Receive Date:04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01029											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	ortho-Terphenyl Surr	84-15-1	23196	103.000	% Recov	70.000	130.000				04/28/08
MS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	124500	111.000	% Recov	75.000	125.000				04/28/08
MSD	ortho-Terphenyl Surr	84-15-1	24216	108.000	% Recov	70.000	130.000				04/28/08
MSD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	129280	115.000	% Recov	75.000	125.000				04/28/08
SPK-RPD	ortho-Terphenyl Surr	84-15-1	108.000		RPD			4.739	20.000		04/28/08
SPK-RPD	Total Pet. Hydrocarbons Diesel	TPHDIESEL	115.000		RPD			3.540	20.000		04/28/08
SURR	ortho-Terphenyl Surr	84-15-1	21647	96.500	% Recov	70.000	130.000				04/28/08
BATCH QC											
BLANK	Kerosene	TPHKEROSENE	< 3000	n/a	ug/Kg					U	04/28/08
BLANK	ortho-Terphenyl Surr	84-15-1	19068	95.300	% Recov	70.000	130.000				04/28/08
BLANK	Total Pet. Hydrocarbons Diesel	TPHDIESEL	< 3000	n/a	ug/Kg					U	04/28/08
LCS	ortho-Terphenyl Surr	84-15-1	20096	100.000	% Recov	70.000	130.000				04/28/08
LCS	Total Pet. Hydrocarbons Diesel	TPHDIESEL	107660	108.000	% Recov	80.000	120.000				04/28/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080797
Matrix: SOLID
Test: VOA Ground Water Protection

Sample Date: 04/03/08
Receive Date:04/15/08

Lab ID: W08GR01030
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	1,1-Dichloroethene	75-35-4	34.220	111.000	% Recov	63.000	117.000				04/17/08
MS	Benzene	71-43-2	28.390	92.100	% Recov	75.000	129.000				04/17/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	61.170	99.300	% Recov	75.000	125.000				04/17/08
MS	Chlorobenzene	108-90-7	29.520	95.800	% Recov	79.000	119.000				04/17/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	70.390	114.000	% Recov	75.000	125.000				04/17/08
MS	Toluene-d8(Surr)	2037-26-5	59.120	95.900	% Recov	75.000	125.000				04/17/08
MS	Toluene	108-88-3	28.660	93.000	% Recov	76.000	120.000				04/17/08
MS	Trichloroethene	79-01-6	26.480	85.900	% Recov	73.000	123.000				04/17/08
MSD	1,1-Dichloroethene	75-35-4	22.920	110.000	% Recov	63.000	117.000				04/17/08
MSD	Benzene	71-43-2	19.360	92.900	% Recov	75.000	129.000				04/17/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	40.270	96.600	% Recov	75.000	125.000				04/17/08
MSD	Chlorobenzene	108-90-7	20.360	97.700	% Recov	79.000	119.000				04/17/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	48.290	116.000	% Recov	75.000	125.000				04/17/08
MSD	Toluene-d8(Surr)	2037-26-5	39.540	94.900	% Recov	75.000	125.000				04/17/08
MSD	Toluene	108-88-3	19.790	95.000	% Recov	76.000	120.000				04/17/08
MSD	Trichloroethene	79-01-6	18.050	86.600	% Recov	73.000	123.000				04/17/08
SPK-RPD	1,1-Dichloroethene	75-35-4	110.000		RPD			0.905	20.000		04/17/08
SPK-RPD	Benzene	71-43-2	92.900		RPD			0.865	20.000		04/17/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	96.600		RPD			2.757	20.000		04/17/08
SPK-RPD	Chlorobenzene	108-90-7	97.700		RPD			1.964	20.000		04/17/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	116.000		RPD			1.739	20.000		04/17/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	94.900		RPD			1.048	20.000		04/17/08
SPK-RPD	Toluene	108-88-3	95.000		RPD			2.128	20.000		04/17/08
SPK-RPD	Trichloroethene	79-01-6	86.600		RPD			0.812	20.000		04/17/08
SURR	4-Bromofluorobenzene(Surr)	460-00-4	68.030	98.400	% Recov	75.000	125.000				04/17/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	80.060	116.000	% Recov	75.000	125.000				04/17/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080797
Matrix: SOLID
Test: VOA Ground Water Protection

Sample Date: 04/03/08
Receive Date:04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
SURR	Toluene-d8(Surr)	2037-26-5	65.730	95.100	% Recov	80.000	126.000				04/17/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	50.540	101.000	% Recov	75.000	125.000				04/17/08
BLANK	Bromoform	75-25-2	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Chloroethane	75-00-3	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	58.460	117.000	% Recov	75.000	125.000				04/17/08
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Hexane	110-54-3	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Bromomethane	74-83-9	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Chloromethane	74-87-3	< 1.0	n/a	ug/Kg					U	04/17/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080797
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	2-Butanone	78-93-3	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Tetrahydrofuran	109-99-9	< 2.0	n/a	ug/Kg					U	04/17/08
BLANK	Toluene-d8(Surr)	2037-26-5	48.280	96.600	% Recov	80.000	126.000				04/17/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/Kg					U	04/17/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/Kg					U	04/17/08
LCS	1,1-Dichloroethene	75-35-4	29.020	116.000	% Recov	75.000	125.000				04/17/08
LCS	Benzene	71-43-2	23.790	95.200	% Recov	75.000	125.000				04/17/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	49.710	99.400	% Recov	75.000	125.000				04/17/08
LCS	Chlorobenzene	108-90-7	24.520	98.100	% Recov	75.000	125.000				04/17/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	57.050	114.000	% Recov	75.000	125.000				04/17/08
LCS	Toluene-d8(Surr)	2037-26-5	48.520	97.000	% Recov	80.000	126.000				04/17/08
LCS	Toluene	108-88-3	24.410	97.600	% Recov	75.000	125.000				04/17/08
LCS	Trichloroethene	79-01-6	22.310	89.200	% Recov	75.000	125.000				04/17/08

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-066
Sample # W08GR01029
Client ID: B1TFC3 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080797
Department: Radiochemistry
Sampled: 04/03/08
Received: 04/15/08

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		15.0	pCi/g	+-3.60	pCi/g	1.00	0.48		05/16/08
Am-243 tracer by AEA	AM243	LA-508-471		100	pCi/g			1.00	0.42		05/16/08
Gamma Energy Analysis-grd H2O											
Cobalt-60	10198-40-0	LA-508-481	U	-7.85e-05	pCi/g	+-7.85e-04	pCi/g	1.00	9.2e-03		04/22/08
Cesium-137	10045-97-3	LA-508-481		3.71	pCi/g	+-0.590	pCi/g	1.00	0.012		04/22/08
Europium-152	14683-23-9	LA-508-481	U	-0.0109	pCi/g	+-0.0258	pCi/g	1.00	0.040		04/22/08
Europium-154	15585-10-1	LA-508-481	U	7.83e-04	pCi/g	+-7.83e-03	pCi/g	1.00	0.028		04/22/08
Europium-155	14391-16-3	LA-508-481	U	5.72e-03	pCi/g	+-0.0332	pCi/g	1.00	0.055		04/22/08
Niobium-94	14681-63-1	LA-508-481	U	5.71e-03	pCi/g	+-6.87e-03	pCi/g	1.00	8.6e-03		04/22/08
Radium-226	13982-63-3	LA-508-481		0.616	pCi/g	+-0.0995	pCi/g	1.00	0.022		04/22/08
Radium-228	15262-20-1	LA-508-481		0.522	pCi/g	+-0.0907	pCi/g	1.00	0.031		04/22/08
Neptunium by AEA											
Neptunium-237	13994-20-2	LA-508-471		0.0120	pCi/g	+-0.0144	pCi/g	1.00	0.011		05/08/08
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471		1.40	pCi/g	+-0.952	pCi/g	1.00	1.2		05/16/08
Pu-239/240 by AEA	PU-239/240	LA-508-471		75.0	pCi/g	+-19.5	pCi/g	1.00	0.49		05/16/08
Pu-242 tracer by AEA	PU242	LA-508-471		150	pCi/g			1.00	0.39		05/16/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	0.350	pCi/g	+-0.970	pCi/g	1.00	0.50		05/05/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		74.4	Percent			1.00	0.0		05/05/08
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.190	pCi/g	+-0.0798	pCi/g	1.00	0.036		05/06/08
Uranium-235	15117-96-1	LA-508-471	U	5.40e-03	pCi/g	+-0.0109	pCi/g	1.00	0.015		05/06/08
Uranium-238	U-238	LA-508-471		0.220	pCi/g	+-0.0880	pCi/g	1.00	0.036		05/06/08

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

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-066
Sample # W08GR01029
Client ID: B1TFC3 TRENT WSCF

Matrix: SOIL

Group #: WSCF20080797
Department: Radiochemistry
Sampled: 04/03/08
Received: 04/15/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
U-232 tracer by AEA	U232	LA-508-471		10.0	pCi/g			1.00	0.065		05/06/08

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

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

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

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

WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F08-066 :F08-066

Group #: WSCF20080797
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	AC-228				0.53	pCi/g
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	AC-228 Count Error				23	%
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	AM-241				34	pCi/g
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	AM-241 Count Error				14	%
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	BI-212				0.42	pCi/g
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	BI-212 Count Error				20	%
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	BI-214				0.72	pCi/g
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error				11	%
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	CS-134				0.033	pCi/g
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	CS-134 Count Error				35	%
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	K-40				12	pCi/g
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	K-40 Count Error				14	%
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	PB-212				0.65	pCi/g
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error				9.7	%
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	PB-214				0.93	pCi/g
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error				21	%
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	SN-126				0.14	pCi/g
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	SN-126 Count Error				27	%
W08GR01029	B1TFC3	TRENT	Gamma Energy Analysis-grd H2O	TL-208				0.18	pCi/g
W08GR01029	B1TFC3	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: WSCF20080797
Matrix: SOLID
Test: Gamma Energy Analysis-grd H2O

Sample Date: 04/03/08
Receive Date:04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01029											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Cobalt-60	10198-40-0	U3.014e-6		RPD			n/a	20.000		04/22/08
DUP	Cesium-137	10045-97-3	3.75		RPD			1.018	20.000		04/22/08
DUP	Europium-152	14683-23-9	U2.055e-3		RPD			n/a	20.000		04/22/08
DUP	Europium-154	15585-10-1	U-1.344e-2		RPD			n/a	20.000		04/22/08
DUP	Europium-155	14391-16-3	U4.223e-3		RPD			n/a	20.000		04/22/08
DUP	Niobium-94	14681-63-1	U1.324e-3		RPD			n/a	20.000		04/22/08
DUP	Radium-226	13982-63-3	0.3968		RPD			43.224	20.000 •		04/22/08
DUP	Radium-228	15262-20-1	0.5421		RPD			3.682	20.000		04/22/08
BATCH QC											
BLANK	Cobalt-60	10198-40-0	U-7.399e-4	n/a	pCi/g	-10.000	1000.000				04/17/08
BLANK	Cesium-137	10045-97-3	U-8.091e-4	n/a	pCi/g	-10.000	1000.000				04/17/08
BLANK	Europium-152	14683-23-9	U-4.002e-3	n/a	pCi/g	-10.000	1000.000				04/17/08
BLANK	Europium-154	15585-10-1	U2.865e-3	n/a	pCi/g	-10.000	1000.000				04/17/08
BLANK	Europium-155	14391-16-3	U1.598e-3	n/a	pCi/g	-10.000	1000.000				04/17/08
BLANK	Niobium-94	14681-63-1	U6.043e-4	n/a	pCi/g	-10.000	1000.000				04/17/08
BLANK	Radium-226	13982-63-3	4.2e-2	0.042	pCi/g	-10.000	1000.000				04/17/08
BLANK	Radium-228	15262-20-1	4.947e-2	0.049	pCi/g	-10.000	1000.000				04/17/08
LCS	Cobalt-60	10198-40-0	10490	105.533	% Recov	80.000	120.000				04/23/08
LCS	Cesium-137	10045-97-3	6331	104.818	% Recov	80.000	120.000				04/23/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080797
Matrix: SOLID
Test: Americium by AEA

Sample Date: 04/03/08
Receive Date:04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01029											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Am-243 tracer by AEA	AM243	99.81	75.960	% Recov	30.000	105.000				05/16/08
Lab ID: W08GR01053											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Americium-241	14596-10-2	290		RPD			30.616	20.000 *		05/16/08
DUP	Am-243 tracer by AEA	AM243	384	66.020	% Recov	30.000	105.000				05/16/08
BATCH QC											
BLANK	Americium-241	14596-10-2	U0.55	n/a	pCi/g	-10.000	1000.000				05/16/08
BLANK	Am-243 tracer by AEA	AM243	99.81	77.530	% Recov	30.000	105.000				05/16/08
LCS	Americium-241	14596-10-2	12.18	102.785	% Recov	80.000	120.000				05/16/08
LCS	Am-243 tracer by AEA	AM243	11.17	79.030	% Recov	30.000	105.000				05/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080797
Matrix: SOLID
Test: Neptunium by AEA

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
Lab ID: W08GR00836											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Neptunium-237	13994-20-2	U4.8e-3		RPD			n/a	25.000		05/08/08
MS	Neptunium-237	13994-20-2	97.67	97.670	% Recov	75.000	125.000				05/08/08
MSD	Neptunium-237	13994-20-2	88.4	88.400	% Recov	75.000	125.000				05/08/08
SPK-RPD	Neptunium-237	13994-20-2	88.400		% RPD			9.964	20.000		05/08/08
Lab ID: W08GR01029											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	97.388	97.388	% Recov	75.000	125.000				05/08/08
Lab ID: W08GR01033											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	92.3	92.300	% Recov	75.000	125.000				05/08/08
Lab ID: W08GR01038											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	105.1	105.100	% Recov	75.000	125.000				05/08/08
BATCH QC											
BLANK	Neptunium-237	13994-20-2	U8.2e-3	n/a	pCi/G	-10.000	1000.000				05/08/08
LCS	Neptunium-237	13994-20-2	11.96	93.841	% Recov	80.000	120.000				05/08/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080797
Matrix: SOLID
Test: Plutonium Isotopics by AEA

Sample Date: 04/03/08
Receive Date:04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01029											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Pu-242 tracer by AEA	PU242	154.7	81.720	% Recov	30.000	105.000				05/16/08
Lab ID: W08GR01053											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Plutonium-238	13981-16-3	27		RPD			34.783	20.000 *		05/16/08
DUP	Pu-239/240 by AEA	PU-239/240	1200		RPD			31.884	20.000 *		05/16/08
DUP	Pu-242 tracer by AEA	PU242	595	85.390	% Recov	30.000	105.000				05/16/08
BATCH QC											
BLANK	Plutonium-238	13981-16-3	U0.8	n/a	pCi/g	-10.000	1000.000				05/16/08
BLANK	Pu-239/240 by AEA	PU-239/240	U0.21	n/a	pCi/g	-10.000	1000.000				05/16/08
BLANK	Pu-242 tracer by AEA	PU242	154.7	72.970	% Recov	30.000	105.000				05/16/08
LCS	Pu-239/240 by AEA	PU-239/240	13.52	105.255	% Recov	80.000	120.000				05/16/08
LCS	Pu-242 tracer by AEA	PU242	17.3	80.890	% Recov	30.000	105.000				05/16/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080797
Matrix: SOLID
Test: Strontium 89/90

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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
Lab ID: W08GR01029											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	74.4	74.400	% Recov	30.000	105.000				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: WSCF20080797
Matrix: SOLID
Test: Uranium Isotopics by AEA

Sample Date: 04/03/08
Receive Date:04/15/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01029											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	U-232 tracer by AEA	U232	10.27	82.070	% Recov	30.000	105.000				05/06/08
Lab ID: W08GR01053											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	U-232 tracer by AEA	U232	9.874	101.520	% Recov	30.000	105.000				05/06/08
DUP	Uranium-233/234	U-233/234	1.7		RPD			6.061	20.000		05/06/08
DUP	Uranium-235	15117-96-1	0.13		RPD			20.690	20.000 *		05/06/08
DUP	Uranium-238	U-238	1.2		RPD			8.696	20.000		05/06/08
BATCH QC											
BLANK	U-232 tracer by AEA	U232	10.35	79.410	% Recov	30.000	105.000				05/06/08
BLANK	Uranium-233/234	13966-29-5	U3.6e-2	n/a	pCi/g	-10.000	1000.000				05/06/08
BLANK	Uranium-235	15117-96-1	2.2e-2	0.022	pCi/g	-10.000	1000.000				05/06/08
BLANK	Uranium-238	24678-82-8	5.1e-2	0.051	pCi/g	-10.000	1000.000				05/06/08
LCS	U-232 tracer by AEA	U232	11.49	84.860	% Recov	30.000	105.000				05/06/08
LCS	Uranium-233/234	13966-29-5	N/A	n/a	% Recov	75.000	125.000				05/06/08
LCS	Uranium-235	15117-96-1	N/A	n/a	% Recov	75.000	125.000				05/06/08
LCS	Uranium-238	24678-82-8	19.2	101.293	% Recov	80.000	120.000				05/06/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-066

Group #: WSCF20080797
Department: Radiochemistry

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		W08GR01029/Ra226 duplicate is flagged for poor RPD due to the inhomogeneity of the sample. lmh ORGANICS: All results are corrected for moisture and reported on a dry weight basis. cgc ICP-MS: Barium spike RPD over 20% but still pass. X-flag U-235 duplicate is flagged for poor RPD due to the low countrate and high counting uncertainty. RPD does not apply. Pu238 duplicate is flagged for poor RPD but the sample activity is low level. RPD doesn't apply to low level samples. lmh Pu239 duplicate is flagged for poor PRD due to the inhomogeneity of the sample. lmh Am241 batch dup is flagged for poor RPD but the sample activity is low level. RPD does not apply to low level samples. lmh

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

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M4W41-SLF-08-578

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION

Consisting of 7 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

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program
Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 123210/ES20
Group#: 20080797
Project#: F08-066
Proj Mgr: Steve Trent E6-35
Phone: 373-5869

The following samples were received from you on 04/15/08. 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
W08GR01029	B1TFC3	TRENT @2008 @AEA-30 @AEA-31 @AEA-32 @AEA-33 @GEA-GPP @IC-30 @PCBGPP @SR89_90 @SVOCGPP @TPHD PERSOLID PH-30	Solid, or handle as if solid	04/03/08
W08GR01030	B1TFC1	TRENT @VOA-GPP	Solid, or handle as if solid	04/03/08
W08GR01031	B1TFC2	TRENT	Solid, or handle as if solid	04/03/08

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
PH-30	pH Soil and Waste Measurement

05/01/08

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	8N	DATA TURNAROUND
NCO Sampler D Connolly	TRENT, SJ	373-5869	WIDRIG, DL			
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY**	☐	45 Days / 45 Days
C6174, I-002	216-S-6 Crib Sampling - Soil		F08-066			
ICE CHEST NO.	**FIELD LOGBOOK NO.**	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-585-5 p923	7'-9'	123210ES20	GOVERNMENT VEHICLE		
SHIPPED TO	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**			
Waste Sampling & Characterization 20080797	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 B1TFB0

| | | |

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**
C6174, I-002	216-S-6 Crib Sampling - Soil		F08-066		
ICE CHEST NO.	**FIELD LOGBOOK NO.** Pg 23	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
	HNF-N-585-5	7'-9'	123210ES20	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.

** Analytical batch QC must be run on a sample associated with this SAF.
(1)Conductivity - 9050 {Specific Conductance} pH (Soil) - 9045 {pH Measurement}
(2)Semi-VOA - 8270B (Add-On) {1,2,4-Trimethylbenzene, Tributyl phosphate}
(3)TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range}
(4)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;
(5)IC Anions - 300.0 {Fluoride, Nitrogen in Nitrate, Nitrogen in Nitrite, Sulfate}
(6)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 D Connolly	TRENT, SJ	373-5869	WIDRIG, DL	AIR QUALITY ☐	45 Days / 45 Days
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**		
C6174, I-002	216-S-6 Crib Sampling - Soil		F08-066		
ICE CHEST NO.	**FIELD LOGBOOK NO.** pg 23	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**	
	HNF-N-585-5	7'-9'	123210ES20	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 B1TFB0

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

ICED

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1TFC1 1030	SOIL	4-3-8	1305	✓	✓

Lot# 6215060

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
D Connolly	4-3-8 1330	ON SITE STORAGE Ref	4-3-8 1330
ON Site Storage Ref	4-15-08/1330	L.J. Rosane Larry Rosane	4-15-08/1330
L.J. Rosane Larry Rosane	4-15-08/1415	Victor Sims	4/15/08 1415

SPECIAL INSTRUCTIONS
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

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

A-6003-618(01/06)

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
C6174, I-002	216-S-6 Crib Sampling - Soil		F08-066			
ICE CHEST NO.	**FIELD LOGBOOK NO.** Pg 23	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-585-5	7'-9"	123210ES20	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.

** Analytical batch QC must be run on a sample associated with 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}

COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	8N	DATA TURNAROUND
NCO Sampler D Connolly	TRENT, SJ	373-5869	WIDRIG, DL			
SAMPLING LOCATION	**PROJECT DESIGNATION**		**SAF NO.**	**AIR QUALITY**	☐	**45 Days / 45 Days**
C6174, I-002	216-S-6 Crib Sampling - Soil		F08-066			
ICE CHEST NO.	**FIELD LOGBOOK NO.** pg 23	**ACTUAL SAMPLE DEPTH**	**COA**	**METHOD OF SHIPMENT**		
	HNF-N-585-5	7'-9'	123210ES20	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 B1TFB0

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

ICED

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1TFC2 1031	SOIL	4-3-8	1305	✓

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
D Connolly [signature]	4-3-8 1330	ON SITE STORAGE Ref	4-3-8 1330
ON Site Storage REF	4-15-08/1330	L. J. Rosane [signature]	4-15-08/1330
L. J. Rosane [signature]	4-15-08/1415	[signature]	4/15/08 1415

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.
** 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)

M4W41-SLF-08-578

ATTACHMENT 5

SAMPLE RECORD SHEET

Consisting of 2 pages
Including cover page

I-002
Well # C6174
Depth: 7.0'-9.5' Bgs.

Sample Time 1305

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
B1TFC1	K	31.4	35.5	4.1	—	—	—
	L	31.2	35.8	4.6	—	—	—
	M	31.1	37.9	6.8	—	—	—
	N	31.1	38.0	6.9	—	—	—
	P	31.0	36.9	5.9	—	—	—
B1TFC2		29.5	29.5	0	3.8	5.0	33.3
B1TFC1	W	30.3	36.8	6.5	4.8	6.5	41.6
	X	30.2	35.3	5.1	3.7	5.0	39.0
	Y	30.0	35.9	5.9	2.3	6.0	38.1

[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