

RECEIVED JUNE 30, 2008

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FLUOR**Memorandum**

M4W41-SLF-08-645

To: H. Hampt E6-35 Date: June 26, 2008

From:  *for SLF*
 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. Mezmarich	S3-30	File/LB	
P. D. Mix	S3-30		

Subject: FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20080850 - SAF NUMBER F08-043

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 WSCF20080850:

- Cover Sheet (Attachment 1)
- Narrative (Attachment 2)
- Issue Resolution Form (Attachment 3)
- Analytical Results (Attachment 4)
- Sample Receipt Information (Attachment 5)
- Sample Record Sheet (Attachment 6)

SLF/grf

Attachments 6

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EDMC

M4W41-SLF-08-645

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20080850
Data Deliverable Date: 12-jun-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F08-043	B1VB28	W08GR01098	SOIL
	B1VB30	W08GR01097	SOIL

M4W41-SLF-08-645

ATTACHMENT 2

NARRATIVE

Consisting of 5 pages
Including cover page

Introduction

Three S&GRP samples were received at the WSCF Laboratory on April 28, 2008. With the exception of conductivity testing, 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. VOA analysis of the Methanol Blank (B1VB29) and associated high VOA concentration sample was 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 #08-048, documenting cancellation of conductivity testing (specific conductance) 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, copies of the sample record sheets are 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 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 20 through 21 for QC details. Analytical Note(s):

- Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TFP4 (SDG# 20080882, SAF# F08-031).
- Samples 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.
- Nitrate-N – Duplicate Relative Percent Difference (RPD) exceeded established laboratory limits. No flags issued.

All other QC controls are within the established limits.

Conductivity – Copy of IRF # 08-048, documenting cancellation of analysis is included as Attachment 3.

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 24 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). Barium (B1V261) Spike RPD slightly exceeded established laboratory limits. Sample result was X flagged.

All other QC controls are within the established limits.

pH – Duplicate QC was analyzed with this delivery group per the GRP Letter of Instruction. See page 25 for QC details. Analytical Note(s):

- Duplicate QC was analyzed on sample# B1TFF2 (SDG# 20080847, SAF# F08-066).

All QC controls are within the established limits.

Organic Comments

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

PCB – 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 34 through 35 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TDF2 (SDG# 20080801, SAF# F08-043).

All QC controls are within the established limits.

Semi-VOA – The hold time requirement for this analysis was met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group per the GRP Letter of Instruction. See pages 36 through 39 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1V2L5 (SDG# 20080801, SAF# F08-043).

All QC controls are within the established limits.

TPHD-WA – 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. See page 33 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TFC6 (SDG# 20080813, SAF# F08-066).

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

- VOA analysis of the Methanol Blank (B1VB29) and associated high VOA concentration sample was not required.

All QC controls are within the established limits.

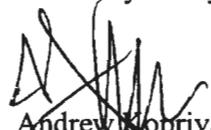
Radiochemistry Comments

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

- GEA – Duplicate QC was analyzed on sample# B1TFH1 (SDG# 20080847, SAF# F08-066).
- Americium-241 and 243 (tracer) – Duplicate QC was analyzed on sample# B1TFF8 (SDG# 20080847, SAF# F08-066).
- Neptunium-237 – Duplicate, Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1TFF8 (SDG# 20080847, SAF# F08-066). In addition, Matrix Spikes were also analyzed on samples B1TFF8 (SDG# 20080847, SAF# F08-066) and B1VB30 of this SDG.
- Plutonium-238, 239/240 and 242 (tracer) – Duplicate QC was analyzed on sample# B1TFF8 (SDG# 20080847, SAF# F08-066).
- Strontium-89/90 and 85 (tracer) – Duplicate QC was analyzed on sample# B1TFF2 (SDG# 20080847, SAF# F08-066).
- Uranium-233/234, 235 and 232 (tracer) – Duplicate QC was analyzed on sample# B1TFF8 (SDG# 20080847, 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


Andrew Kopriva
WSCF Client Services

M4W41-SLF-08-645

ATTACHMENT 3

ISSUE RESOLUTION FORM

Consisting of 2 pages
Including cover page

ISSUE RESOLUTION FORM

PNNL TRACKING NUMBER: 08-048

Date : SAF No. **see below (soil matrix)**

SDG: **see below**

LOGIN No.:

TEST: Conductivity (COND)

Sample No.(s)	B1V2L5 (W08GR01038)	WSCF20080801	F08-043
	B1TFD2 (W08GR01066)	WSCF20080830	F08-066
	B1TFF2 (W08GR01075)	WSCF20080847	F08-066
	B1TFF5 (W08GR01078)	WSCF20080847	F08-066
	B1TFD9 (W08GR01079)	WSCF20080847	F08-066
	B1TFF8 (W08GR01080)	WSCF20080847	F08-066
	B1TFH1 (W08GR01082)	WSCF20080847	F08-066
	B1VB30 (W08GR01097)	WSCF20080850	F08-043

Submitted By: PD Mix

Submitted To: H Hampt

Phone No. 372-1488

Phone No. 376-4319

Fax No. 372-0456

Fax No

ISSUE

Although conductivity has been requested for the GRP samples identified above; the WSCF Laboratory is not able to perform Conductivity testing on soil samples at this time.

PROPOSED RESOLUTION

Proposed resolution is to cancel requests for conductivity on GRP soil samples submitted to the WSCF Laboratory.

GRP COMMENTS

Accept proposed resolution.

Heidi Hampt 4/29/08

Signature and Date

M4W41-SLF-08-645

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:

 Du ADRIOS 6.26.08

Client Services:

 Andrew Kopsiva 6-26-08

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#: WSCF20080850

Report Date: 25-jun-2008

Report WGPP/ver. 5.2

Groundwater Remediation Program

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20080850

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			40959	BLANK		NWTPH-D TPH Diesel Range (Wa)
			40959	LCS		NWTPH-D TPH Diesel Range (Wa)
			40959	MS	W08GR01053	NWTPH-D TPH Diesel Range (Wa)
			40959	MSD	W08GR01053	NWTPH-D TPH Diesel Range (Wa)
			40959	SPK-RPD	W08GR01053	NWTPH-D TPH Diesel Range (Wa)
			40959	SAMPLE	W08GR01097	NWTPH-D TPH Diesel Range (Wa)
			40959	SURR	W08GR01097	NWTPH-D TPH Diesel Range (Wa)
			40961	BLANK		PCBs complete list
			40961	LCS		PCBs complete list
			40961	MS	W08GR01033	PCBs complete list
			40961	MSD	W08GR01033	PCBs complete list
			40961	SPK-RPD	W08GR01033	PCBs complete list
			40961	SAMPLE	W08GR01097	PCBs complete list
			40961	SURR	W08GR01097	PCBs complete list
			40965	BLANK		SW-846 8270C Semi-Vols
			40965	LCS		SW-846 8270C Semi-Vols
			40965	MS	W08GR01038	SW-846 8270C Semi-Vols
			40965	MSD	W08GR01038	SW-846 8270C Semi-Vols
			40965	SPK-RPD	W08GR01038	SW-846 8270C Semi-Vols
			40965	SAMPLE	W08GR01097	SW-846 8270C Semi-Vols
			40965	SURR	W08GR01097	SW-846 8270C Semi-Vols
			41165	BLANK		VOA Ground Water Protection
			41165	LCS		VOA Ground Water Protection
			41165	MS	W08GR01098	VOA Ground Water Protection
			41165	MSD	W08GR01098	VOA Ground Water Protection
			41165	SAMPLE	W08GR01098	VOA Ground Water Protection
			41165	SPK-RPD	W08GR01098	VOA Ground Water Protection
			41165	SURR	W08GR01098	VOA Ground Water Protection

W13q Worklist/Batch/QC Report for Group# WSCF20080850

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
36189	1	36606	41108	BLANK		Strontium 89/90
36189	2	36606	41108	LCS		Strontium 89/90
36189	3	36606	41108	DUP	W08GR01075	Strontium 89/90
36189	12	36606	41108	SAMPLE	W08GR01097	Strontium 89/90
36189	13	36606	41108	SURR	W08GR01097	Strontium 89/90
36171	1	36588	41160	BLANK		Gamma Energy Analysis-grd H2O
36171	2	36588	41160	LCS		Gamma Energy Analysis-grd H2O
36171	3	36588	41160	DUP	W08GR01082	Gamma Energy Analysis-grd H2O
36171	5	36588	41160	SAMPLE	W08GR01097	Gamma Energy Analysis-grd H2O
36665	1	37081	41442	BLANK		Americium by AEA
36665	2	37081	41442	LCS		Americium by AEA
36665	3	37081	41442	DUP	W08GR01080	Americium by AEA
36665	8	37081	41442	SAMPLE	W08GR01097	Americium by AEA
36665	9	37081	41442	SURR	W08GR01097	Americium by AEA
36664	1	37080	41443	BLANK		Plutonium Isotopics by AEA
36664	2	37080	41443	LCS		Plutonium Isotopics by AEA
36664	3	37080	41443	DUP	W08GR01080	Plutonium Isotopics by AEA
36664	8	37080	41443	SAMPLE	W08GR01097	Plutonium Isotopics by AEA
36664	9	37080	41443	SURR	W08GR01097	Plutonium Isotopics by AEA
36625	1	37044	41491	BLANK		Neptunium by AEA
36625	2	37044	41491	LCS		Neptunium by AEA
36625	3	37044	41491	DUP	W08GR01080	Neptunium by AEA
36625	5	37044	41491	MS	W08GR01080	Neptunium by AEA
36625	6	37044	41491	MSD	W08GR01080	Neptunium by AEA
36625	6	37044	41491	SPK-RPD	W08GR01080	Neptunium by AEA
36625	8	37044	41491	MS	W08GR01082	Neptunium by AEA
36625	10	37044	41491	MS	W08GR01097	Neptunium by AEA
36625	9	37044	41491	SAMPLE	W08GR01097	Neptunium by AEA
36807	1	37226	41589	BLANK		Uranium Isotopics by AEA
36807	2	37226	41589	LCS		Uranium Isotopics by AEA
36807	3	37226	41589	DUP	W08GR01080	Uranium Isotopics by AEA
36807	8	37226	41589	SAMPLE	W08GR01097	Uranium Isotopics by AEA
36807	9	37226	41589	SURR	W08GR01097	Uranium Isotopics by AEA

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20080850

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
				SAMPLE	W08GR01097	Percent Solids
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	21	36594	40927	SAMPLE	W08GR01097	ICP-200.8 MS All possible meta
			40998	DUP	W08GR01075	pH Soil and Waste Measurement
			40998	SAMPLE	W08GR01097	pH Soil and Waste Measurement
36438	2	36852	41194	BLANK		Anions by Ion Chromatography
36438	16	36852	41194	BLANK		Anions by Ion Chromatography
36438	3	36852	41194	LCS		Anions by Ion Chromatography
36438	13	36852	41194	SAMPLE	W08GR01097	Anions by Ion Chromatography
36438	5	36852	41194	DUP	W08GR01134	Anions by Ion Chromatography
36438	6	36852	41194	MS	W08GR01134	Anions by Ion Chromatography
36438	7	36852	41194	MSD	W08GR01134	Anions by Ion Chromatography
36438	7	36852	41194	SPK-RPD	W08GR01134	Anions by Ion Chromatography

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 Organic 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>.

Report Date: 25-jun-2008

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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 Rontium 89/90
LA-508-471	LA-508-471: ALPHA ENERGY ANALYZER DATA ACQUISITION AND SYSTEM CHECKOUT USING ALP HEIS PUIISO_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>.

Report Date: 25-jun-2008

Report#: WSCF20080850

Report WGPPM/5.2

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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 Residual, 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>.

Report Date: 25-jun-2008

Report#: WSCF20080850

Report WGPPM/5.2

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WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR01097
Client ID: B1VB30

GPP TRENT
WSCF

Matrix: SOIL

Group #: WSCF20080850
Department: Inorganic
Sampled: 04/21/08
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Anions by Ion Chromatography Prep											
Anions by Ion Chromatography											
Fluoride	18984-48-8	LA-533-410	DU	< 0.300	mg/kg			50.00	0.30		05/22/08
Nitrogen in Nitrite	NO2-N	LA-533-410	DU	< 0.500	mg/kg			50.00	0.50		05/22/08
Nitrogen in Nitrate	NO3-N	LA-533-410	BD	0.804	mg/kg			50.00	0.25		05/22/08
Sulfate	14808-79-8	LA-533-410	BD	5.66	mg/kg			50.00	3.5		05/22/08
ICP-200.8 MS All possible meta Prep											
ICP-200.8 MS All possible meta											
Nickel	7440-02-0	LA-505-412		9.32	mg/kg			0.79	0.158		05/01/08
Silver	7440-22-4	LA-505-412	U	< 0.0791	mg/kg			0.79	0.0791		05/01/08
Barium	7440-39-3	LA-505-412	X	45.9	mg/kg			0.79	0.158		05/01/08
Beryllium	7440-41-7	LA-505-412		0.140	mg/kg			0.79	0.0395		05/01/08
Cadmium	7440-43-9	LA-505-412	U	< 0.0791	mg/kg			0.79	0.0791		05/01/08
Chromium	7440-47-3	LA-505-412		8.77	mg/kg			0.79	0.395		05/01/08
Copper	7440-50-8	LA-505-412		9.13	mg/kg			0.79	0.0791		05/01/08
Zinc	7440-66-6	LA-505-412		20.8	mg/kg			0.79	0.633		05/01/08
Lead	7439-92-1	LA-505-412		1.89	mg/kg			0.79	0.0791		05/01/08
Mercury	7439-97-6	LA-505-412	U	< 0.0395	mg/kg			0.79	0.0395		05/01/08
Arsenic	7440-38-2	LA-505-412		1.61	mg/kg			0.79	0.316		05/01/08
Selenium	7782-49-2	LA-505-412	U	< 0.237	mg/kg			0.79	0.237		05/01/08
Total solids											
Total solids	TS	LA-519-412		91.7	Percent			1.00	0.0		04/30/08
pH Measurement											
pH Measurement	PH	LA-212-411		9.04	unitless			1.00	0.010		05/08/08

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

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: Anions by Ion Chromatography

Sample Date: 02/19/08
 Receive Date: 05/01/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01134											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Fluoride	16984-48-8	<0.3		RPD			n/a	20.000	U	05/22/08
DUP	Nitrogen in Nitrite	NO2-N	<0.5		RPD			n/a	20.000	U	05/22/08
DUP	Nitrogen in Nitrate	NO3-N	0.787		RPD			83.119	20.000 *		05/22/08
DUP	Sulfate	14808-79-8	<3.5		RPD			n/a	20.000	U	05/22/08
MS	Fluoride	16984-48-8	0.470604	94.499	% Recov	80.000	120.000				05/22/08
MS	Nitrogen in Nitrite	NO2-N	0.472936	95.158	% Recov	80.000	120.000				05/22/08
MS	Nitrogen in Nitrate	NO3-N	0.450412	100.092	% Recov	80.000	120.000				05/22/08
MS	Sulfate	14808-79-8	1.910832	96.507	% Recov	80.000	120.000				05/22/08
MSD	Fluoride	16984-48-8	0.472274	94.834	% Recov	80.000	120.000				05/22/08
MSD	Nitrogen in Nitrite	NO2-N	0.471064	94.781	% Recov	80.000	120.000				05/22/08
MSD	Nitrogen in Nitrate	NO3-N	0.445202	98.934	% Recov	80.000	120.000				05/22/08
MSD	Sulfate	14808-79-8	1.916812	96.809	% Recov	80.000	120.000				05/22/08
SPK-RPD	Fluoride	16984-48-8	94.834		RPD			0.354	20.000		05/22/08
SPK-RPD	Nitrogen in Nitrite	NO2-N	94.781		RPD			0.397	20.000		05/22/08
SPK-RPD	Nitrogen in Nitrate	NO3-N	98.934		RPD			1.164	20.000		05/22/08
SPK-RPD	Sulfate	14808-79-8	96.809		RPD			0.312	20.000		05/22/08
BATCH QC											
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	05/22/08
BLANK	Fluoride	16984-48-8	<6e-3	n/a	mg/L	0.000	0.030			U	05/22/08
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	05/22/08
BLANK	Nitrogen in Nitrite	NO2-N	<1e-2	n/a	mg/L	0.000	0.020			U	05/22/08
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	05/22/08
BLANK	Nitrogen in Nitrate	NO3-N	<5e-3	n/a	mg/L	0.000	0.040			U	05/22/08
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	05/22/08
BLANK	Sulfate	14808-79-8	<7e-2	n/a	mg/L	0.000	0.200			U	05/22/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080850
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	106.918	107.347	% Recov	80.000	120.000				05/22/08
LCS	Nitrogen in Nitrite	NO2-N	99.243	99.842	% Recov	80.000	120.000				05/22/08
LCS	Nitrogen in Nitrate	NO3-N	92.5205	102.686	% Recov	80.000	120.000				05/22/08
LCS	Sulfate	14808-79-8	387.1743	97.771	% Recov	80.000	120.000				05/22/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080850
 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
Lab ID: W08GR01020											
BATCH QC ASSOCIATED WITH SAMPLE											
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	178.58	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			3.788	20.000		05/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20080850
 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: WSCF20080850
 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: WSCF20080850
Matrix: SOLID
Test: pH Soil and Waste Measurement

Sample Date: 04/17/08
Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
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Lab ID: W08GR01075
BATCH QC ASSOCIATED WITH SAMPLE

DUP	pH Soil and Waste Measurement	PH	9.10		RPD			0.220	3.000		05/08/08
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WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-043

Group #: WSCF20080850
Department: Inorganic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS: Barium spike RPD over 20% but still pass. X-flag ORGANICS: All results are moisture corrected and reported on a dry weight basis. cgc

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 # W08GR01097
Client ID: B1VB30

Matrix: SOIL

Group #: WSCF20080850
Department: Organic
Sampled: 04/21/08
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
NWTPH-D TPH Diesel Range (Wa) Prep											
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		05/05/08
Kerosene	TPHKEROSENE	LA-523-493	U	< 3.20e+03	ug/kg			1.00	3.2e+03		05/05/08
PCBs complete list Prep											
PCBs complete list											
Aroclor-1016	12674-11-2	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1221	11104-28-2	LA-523-427	U	< 21.0	ug/kg			1.00	21		05/06/08
Aroclor-1232	11141-16-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1242	53469-21-9	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1248	12672-29-6	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1254	11097-69-1	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1260	11096-82-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1262	37324-23-5	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
Aroclor-1268	11100-14-4	LA-523-427	U	< 10.0	ug/kg			1.00	10		05/06/08
SW-846 8270C Semi-Vols Prep											
SW-846 8270C Semi-Vols											
4-Nitrophenol	100-02-7	LA-523-456	U	< 220	ug/kg			1.00	2.2e+02		05/06/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	< 260	ug/kg			1.00	2.6e+02		05/06/08
Phenol	108-95-2	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
Pyrene	129-00-0	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		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

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR01097
Client ID: B1VB30

GPP **TRENT**
WSCF

Matrix: SOIL

Group #: WSCF20080850
Department: Organic
Sampled: 04/21/08
Received: 04/28/08

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		05/06/08
Pentachlorophenol	87-86-5	LA-523-456	U	< 220	ug/kg			1.00	2.2e+02		05/06/08
2-Chlorophenol	95-57-8	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
Tributyl phosphate	126-73-8	LA-523-456	U	< 150	ug/kg			1.00	1.5e+02		05/06/08
1,2,4-Trimethylbenzene	95-63-6	LA-523-456	U	< 190	ug/kg			1.00	1.9e+02		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

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR01098
Client ID: B1VB28

GPP TRENT
WSCF

Matrix: SOIL

Group #: WSCF20080850
Department: Organic
Sampled: 04/21/08
Received: 04/28/08

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	< 0.780	ug/kg			1.00	0.78		05/02/08
Trichloroethene	79-01-6	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Benzene	71-43-2	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Toluene	108-88-3	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Chlorobenzene	108-90-7	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Ethylbenzene	100-41-4	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Styrene	100-42-5	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
2-Hexanone	591-78-6	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Acetone	67-64-1	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Chloroform	67-66-3	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Bromomethane	74-83-9	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Chloromethane	74-87-3	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Chloroethane	75-00-3	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		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)

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

U - Analyzed for but not detected above limiting criteria.

X - Other flags/notes described in the comments/narrative(inorg)

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR01098
Client ID: B1VB28

GPP TRENT
WSCF

Matrix: SOIL

Group #: WSCF20080850
Department: Organic
Sampled: 04/21/08
Received: 04/28/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Methylenechloride	75-09-2	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Carbon disulfide	75-15-0	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Bromoform	75-25-2	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
2-Butanone	78-93-3	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Hexane	110-54-3	LA-523-455	U	< 0.780	ug/kg			1.00	0.78		05/02/08
Tetrahydrofuran	109-99-9	LA-523-455	U	< 1.60	ug/kg			1.00	1.6		05/02/08
Acetonitrile	75-05-8	LA-523-455	U	< 1.60	ug/kg			1.00	1.6		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)

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

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

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WSCF

TENTATIVELY IDENTIFIED PEAK REPORT

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

Group #: WSCF20080850
Department: Organic

Sample #	Client ID	Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01097	B1VB30 GPP TRENT	SW-846 8270C Semi-Vols	SMP 13.496 Di-n-butylphthalate	84-74-2	13.49611		2.8e +02	ug/kg

RQ=Result Qualifier

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Groundwater Remediation Program

WGPPE v 5.2 Report#: WSCF20080850

Report Date: 25-jun-2008

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WSCF ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F08-043

Group #: WSCF20080850
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		ICP-MS: Barium spike RPD over 20% but still pass. X-flag ORGANICS: All results are moisture corrected and reported on a dry weight basis. cgc

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 LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: NWTPH-D TPH Diesel Range (Wa)

Sample Date: 04/10/08
 Receive Date: 04/16/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01053											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	ortho-Terphenyl	Surr	84-15-1	20260	101.000	% Recov	70.000	130.000			05/05/08
MS	Total Pet. Hydrocarbons Diesel		TPHDIESEL	111020	110.000	% Recov	75.000	125.000			05/05/08
MSD	ortho-Terphenyl	Surr	84-15-1	19493	97.700	% Recov	70.000	130.000			05/05/08
MSD	Total Pet. Hydrocarbons Diesel		TPHDIESEL	107400	108.000	% Recov	75.000	125.000			05/05/08
SPK-RPD	ortho-Terphenyl	Surr	84-15-1	97.700		RPD			3.322	20.000	05/05/08
SPK-RPD	Total Pet. Hydrocarbons Diesel		TPHDIESEL	108.000		RPD			1.835	20.000	05/05/08
Lab ID: W08GR01097											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	ortho-Terphenyl	Surr	84-15-1	20563	95.900	% Recov	70.000	130.000			05/05/08
BATCH QC											
BLANK	Kerosene		TPHKEROSENE	< 3000	n/a	ug/Kg				U	05/05/08
BLANK	ortho-Terphenyl	Surr	84-15-1	16572	82.900	% Recov	70.000	130.000			05/05/08
BLANK	Total Pet. Hydrocarbons Diesel		TPHDIESEL	< 3000	n/a	ug/Kg				U	05/05/08
LCS	ortho-Terphenyl	Surr	84-15-1	19214	96.100	% Recov	70.000	130.000			05/05/08
LCS	Total Pet. Hydrocarbons Diesel		TPHDIESEL	98085	98.100	% Recov	80.000	120.000			05/05/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: PCBs complete list

Sample Date: 03/31/08
 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: W08GR01033											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Aroclor-1260	11096-82-5	214.74	103.000	% Recov	75.000	125.000				05/06/08
MS	Decachlorobiphenyl	2051-24-3	204.34	98.100	% Recov	50.000	150.000				05/06/08
MS	Tetrachloro-m-xylene	877-09-8	195.45	93.800	% Recov	50.000	150.000				05/06/08
MSD	Aroclor-1260	11096-82-5	213.48	106.000	% Recov	75.000	125.000				05/06/08
MSD	Decachlorobiphenyl	2051-24-3	201.16	100.000	% Recov	50.000	150.000				05/06/08
MSD	Tetrachloro-m-xylene	877-09-8	193.50	96.400	% Recov	50.000	150.000				05/06/08
SPK-RPD	Aroclor-1260	11096-82-5	106.000		RPD			2.871	25.000		05/06/08
SPK-RPD	Decachlorobiphenyl	2051-24-3	100.000		RPD			1.918	20.000		05/06/08
SPK-RPD	Tetrachloro-m-xylene	877-09-8	96.400		RPD			2.734	20.000		05/06/08
Lab ID: W08GR01097											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Decachlorobiphenyl	2051-24-3	197.55	96.300	% Recov	50.000	150.000				05/06/08
SURR	Tetrachloro-m-xylene	877-09-8	185.09	90.200	% Recov	50.000	150.000				05/06/08
BATCH QC											
BLANK	Aroclor-1016	12674-11-2	< 10	n/a	UGKG					U	05/06/08
BLANK	Aroclor-1221	11104-28-2	< 20	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1232	11141-16-5	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1242	53489-21-9	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1248	12672-29-6	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1254	11097-69-1	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1260	11096-82-5	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1262	37324-23-5	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Aroclor-1268	11100-14-4	< 10	n/a	ug/Kg					U	05/06/08
BLANK	Decachlorobiphenyl	2051-24-3	191.10	95.600	% Recov	50.000	150.000				05/06/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080850

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	185.59	92.800	% Recov	50.000	150.000				05/06/08
LCS	Aroclor-1260	11096-82-5	205.86	103.000	% Recov	70.000	130.000				05/06/08
LCS	Decachlorobiphenyl	2051-24-3	198.16	99.100	% Recov	50.000	150.000				05/06/08
LCS	Tetrachloro-m-xylene	877-09-8	185.66	92.800	% Recov	50.000	150.000				05/06/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: SW-846 8270C Semi-Vols

Sample Date: 03/26/08
 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: W08GR01038											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	1,2,4-Trichlorobenzene	120-82-1	4855.4	109.000	% Recov	75.000	121.000				05/06/08
MS	1,4-Dichlorobenzene	106-46-7	4834.2	109.000	% Recov	68.000	121.000				05/06/08
MS	2,4-Dinitrotoluene	121-14-2	4628.0	104.000	% Recov	66.000	113.000				05/06/08
MS	2-Fluorophenol(Surr)	367-12-4	4428.8	99.900	% Recov	72.000	120.000				05/06/08
MS	Acenaphthene	83-32-9	5009.1	113.000	% Recov	69.000	125.000				05/06/08
MS	4-Chloro-3-methylphenol	59-50-7	7004.0	105.000	% Recov	68.000	116.000				05/06/08
MS	2-Chlorophenol	95-57-8	6983.5	105.000	% Recov	65.000	124.000				05/06/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	4919.2	111.000	% Recov	69.000	127.000				05/06/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	4763.2	107.000	% Recov	66.000	122.000				05/06/08
MS	Phenol	108-95-2	7009.8	105.000	% Recov	71.000	122.000				05/06/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	4747.5	107.000	% Recov	63.000	125.000				05/06/08
MS	4-Nitrophenol	100-02-7	5908.3	88.800	% Recov	55.000	113.000				05/06/08
MS	Pentachlorophenol	87-86-5	5767.6	86.700	% Recov	50.000	113.000				05/06/08
MS	Phenol-d5(Surr)	4165-62-2	4699.5	106.000	% Recov	66.000	124.000				05/06/08
MS	Pyrene	129-00-0	5508.6	124.000	% Recov	67.000	125.000				05/06/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	4594.5	104.000	% Recov	49.000	120.000				05/06/08
MS	Terphenyl-d14(Surr)	98904-43-9	5356.6	121.000	% Recov	58.000	128.000				05/06/08
MSD	1,2,4-Trichlorobenzene	120-82-1	4965.4	112.000	% Recov	75.000	121.000				05/06/08
MSD	1,4-Dichlorobenzene	106-46-7	4770.4	108.000	% Recov	68.000	121.000				05/06/08
MSD	2,4-Dinitrotoluene	121-14-2	4720.4	107.000	% Recov	66.000	113.000				05/06/08
MSD	2-Fluorophenol(Surr)	367-12-4	4652.6	105.000	% Recov	72.000	120.000				05/06/08
MSD	Acenaphthene	83-32-9	5116.2	116.000	% Recov	69.000	125.000				05/06/08
MSD	4-Chloro-3-methylphenol	59-50-7	7395.4	111.000	% Recov	68.000	116.000				05/06/08
MSD	2-Chlorophenol	95-57-8	7185.2	108.000	% Recov	65.000	124.000				05/06/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	5172.5	117.000	% Recov	69.000	127.000				05/06/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	4923.2	111.000	% Recov	66.000	122.000				05/06/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: SW-846 8270C Semi-Vols

Sample Date: 03/26/08
 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	7386.0	111.000	% Recov	71.000	122.000				05/06/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	4904.8	111.000	% Recov	63.000	125.000				05/06/08
MSD	4-Nitrophenol	100-02-7	6615.4	99.700	% Recov	55.000	113.000				05/06/08
MSD	Pentachlorophenol	87-86-5	6594.1	99.300	% Recov	50.000	113.000				05/06/08
MSD	Phenol-d5(Surr)	4165-62-2	4740.8	107.000	% Recov	66.000	124.000				05/06/08
MSD	Pyrene	129-00-0	5471.2	124.000	% Recov	67.000	125.000				05/06/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	4730.5	107.000	% Recov	49.000	120.000				05/06/08
MSD	Terphenyl-d14(Surr)	98904-43-9	5552.1	125.000	% Recov	58.000	128.000				05/06/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	112.000		RPD			2.715	20.000		05/06/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	108.000		RPD			0.922	20.000		05/06/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	107.000		RPD			2.844	20.000		05/06/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	105.000		RPD			4.978	20.000		05/06/08
SPK-RPD	Acenaphthene	83-32-9	118.000		RPD			2.620	20.000		05/06/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	111.000		RPD			5.556	20.000		05/06/08
SPK-RPD	2-Chlorophenol	95-57-8	108.000		RPD			2.817	20.000		05/06/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	117.000		RPD			5.263	20.000		05/06/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	111.000		RPD			3.670	20.000		05/06/08
SPK-RPD	Phenol	108-95-2	111.000		RPD			5.556	20.000		05/06/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	111.000		RPD			3.670	20.000		05/06/08
SPK-RPD	4-Nitrophenol	100-02-7	99.700		RPD			11.565	20.000		05/06/08
SPK-RPD	Pentachlorophenol	87-86-5	99.300		RPD			13.548	20.000		05/06/08
SPK-RPD	Phenol-d5(Surr)	4165-62-2	107.000		RPD			0.939	20.000		05/06/08
SPK-RPD	Pyrene	129-00-0	124.000		RPD			0.000	20.000		05/06/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	107.000		RPD			2.844	20.000		05/06/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	125.000		RPD			3.252	20.000		05/06/08

Lab ID: W08GR01097
 BATCH QC ASSOCIATED WITH SAMPLE

SURR	2-Fluorophenol(Surr)	367-12-4	4716.5	110.000	% Recov	72.000	120.000				05/06/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	4769.0	111.000	% Recov	66.000	122.000				05/06/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: SW-846 8270C Semi-Vols

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
SURR	Nitrobenzene-d5(Surr)	4165-60-0	4865.6	113.000	% Recov	63.000	125.000				05/06/08
SURR	Phenol-d5(Surr)	4165-62-2	4795.8	112.000	% Recov	66.000	124.000				05/06/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	3784.0	88.000	% Recov	49.000	120.000				05/06/08
SURR	Terphenyl-d14(Surr)	98904-43-9	5395.6	125.000	% Recov	58.000	128.000				05/06/08

BATCH QC

BLANK	1,2,4-Trimethylbenzene	95-63-6	< 180	n/a	ug/Kg					U	05/06/08
BLANK	1,2,4-Trichlorobenzene	120-82-1	< 140	n/a	ug/Kg					U	05/06/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 240	n/a	ug/Kg					U	05/06/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 140	n/a	ug/Kg					U	05/06/08
BLANK	2-Fluorophenol(Surr)	367-12-4	3245.6	81.100	% Recov	72.000	120.000				05/06/08
BLANK	Acenaphthene	83-32-9	< 140	n/a	ug/Kg					U	05/06/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 140	n/a	ug/Kg					U	05/06/08
BLANK	2-Chlorophenol	95-57-8	< 140	n/a	ug/Kg					U	05/06/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 140	n/a	ug/Kg					U	05/06/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	3223.3	80.600	% Recov	66.000	122.000				05/06/08
BLANK	Phenol	108-95-2	< 140	n/a	ug/Kg					U	05/06/08
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	3268.5	81.700	% Recov	63.000	125.000				05/06/08
BLANK	4-Nitrophenol	100-02-7	< 200	n/a	ug/Kg					U	05/06/08
BLANK	Pentachlorophenol	87-86-5	< 200	n/a	ug/Kg					U	05/06/08
BLANK	Phenol-d5(Surr)	4165-62-2	3227.2	80.700	% Recov	66.000	124.000				05/06/08
BLANK	Pyrene	129-00-0	< 140	n/a	ug/Kg					U	05/06/08
BLANK	Tributyl phosphate	126-73-8	< 140	n/a	ug/Kg					U	05/06/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	2693.6	67.300	% Recov	49.000	120.000				05/06/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	3511.7	87.800	% Recov	58.000	128.000				05/06/08
LCS	1,2,4-Trichlorobenzene	120-82-1	4451.0	111.000	% Recov	76.000	118.000				05/06/08
LCS	1,4-Dichlorobenzene	106-46-7	4474.7	112.000	% Recov	68.000	121.000				05/06/08
LCS	2,4-Dinitrotoluene	121-14-2	4243.3	106.000	% Recov	68.000	112.000				05/06/08
LCS	2-Fluorophenol(Surr)	367-12-4	4399.7	110.000	% Recov	50.000	110.000				05/06/08
LCS	Acenaphthene	83-32-9	4541.2	114.000	% Recov	75.000	121.000				05/06/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080850
 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	6574.7	110.000	% Recov	68.000	117.000				05/06/08
LCS	2-Chlorophenol	95-57-8	6755.2	113.000	% Recov	84.000	114.000				05/06/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	4533.2	113.000	% Recov	76.000	119.000				05/06/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	4304.0	107.600	% Recov	58.000	109.000				05/06/08
LCS	Phenol	108-95-2	6775.8	112.930	% Recov	80.000	113.000				05/06/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	4479.7	112.000	% Recov	60.000	118.000				05/06/08
LCS	4-Nitrophenol	100-02-7	5440.8	90.700	% Recov	42.000	123.000				05/06/08
LCS	Pentachlorophenol	87-86-5	5921.1	98.700	% Recov	55.000	120.000				05/06/08
LCS	Phenol-d5(Surr)	4165-62-2	4489.2	112.000	% Recov	59.000	116.000				05/06/08
LCS	Pyrene	129-00-0	4837.4	120.935	% Recov	67.000	122.000				05/06/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	4078.1	102.000	% Recov	60.000	120.000				05/06/08
LCS	Terphenyl-d14(Surr)	98904-43-9	4723.9	118.097	% Recov	60.000	120.000				05/06/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080850
 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
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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
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
SURR	4-Bromofluorobenzene(Surr)	460-00-4	41.300	106.000	% Recov	75.000	125.000				05/02/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	43.790	112.000	% Recov	75.000	125.000				05/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20080850
 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
SURR	Toluene-d8(Surr)	2037-26-5	41.980	107.000	% Recov	80.000	126.000				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/e	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
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

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20080850
 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	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 RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR01097
Client ID: B1VB30

GPP TRENT
WSCF

Matrix: SOIL

Group #: WSCF20080850
Department: Radiochemistry
Sampled: 04/21/08
Received: 04/28/08

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		0.0320	pCi/g	+0.0154	pCi/g	1.00	3.9e-03		06/12/08
Am-243 tracer by AEA	AM243	LA-508-471		3.90	pCi/g			1.00	3.9e-03		06/12/08
Gamma Energy Analysis-grd H2O											
Cobalt-60	10198-40-0	LA-508-481	U	-6.15e-04	pCi/g	+4.73e-03	pCi/g	1.00	7.8e-03		05/07/08
Cesium-137	10045-97-3	LA-508-481	U	-5.56e-03	pCi/g	+5.56e-03	pCi/g	1.00	7.5e-03		05/07/08
Europium-152	14683-23-9	LA-508-481	U	-4.62e-03	pCi/g	+0.0134	pCi/g	1.00	0.022		05/07/08
Europium-154	15585-10-1	LA-508-481	U	-0.0145	pCi/g	+0.0158	pCi/g	1.00	0.025		05/07/08
Europium-155	14391-16-3	LA-508-481	U	-7.24e-03	pCi/g	+0.0188	pCi/g	1.00	0.032		05/07/08
Niobium-94	14681-63-1	LA-508-481	U	1.12e-03	pCi/g	+4.16e-03	pCi/g	1.00	7.1e-03		05/07/08
Radium-226	13982-63-3	LA-508-481		0.321	pCi/g	+0.0541	pCi/g	1.00	0.014		05/07/08
Radium-228	15262-20-1	LA-508-481		0.414	pCi/g	+0.0693	pCi/g	1.00	0.025		05/07/08
Neptunium by AEA											
Neptunium-237	13994-20-2	LA-508-471	U	4.30e-03	pCi/g	+0.0284	pCi/g	1.00	0.056		06/10/08
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	-1.80e-03	pCi/g	+0.0180	pCi/g	1.00	0.053		06/12/08
Pu-239/240 by AEA	PU-239/240	LA-508-471	U	1.80e-03	pCi/g	+9.54e-03	pCi/g	1.00	0.020		06/12/08
Pu-242 tracer by AEA	PU242	LA-508-471		6.10	pCi/g			1.00	0.020		06/12/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.580	pCi/g	+0.684	pCi/g	1.00	0.37		05/06/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		93.5	Percent			1.00	0.0		05/06/08
Uranium Isotopics by AEA											
Uranium-233/234	U-233/234	LA-508-471		0.140	pCi/g	+0.0490	pCi/g	1.00	0.023		06/24/08
Uranium-235	15117-96-1	LA-508-471		0.0170	pCi/g	+0.0128	pCi/g	1.00	5.7e-03		06/24/08
Uranium-238	U-238	LA-508-471		0.190	pCi/g	+0.0627	pCi/g	1.00	0.018		06/24/08

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

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WSCF

ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F08-043
Sample # W08GR01097
Client ID: B1VB30

GPP TRENT
WSCF

Matrix: SOIL

Group #: WSCF20080850
Department: Radiochemistry
Sampled: 04/21/08
Received: 04/28/08

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	0.038		06/24/08

MDL=Minimum Detection Limit

RQ=Result Qualifier

TP Err=Total Propagated Error

DF=Dilution Factor

B - The analyte < the RDL but > = the IDL/MDL (inorg)

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

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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF

TENTATIVELY IDENTIFIED PEAK REPORT

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

Group #: WSCF20080850
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	AC-228			0.37	pCi/g
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	AC-228 Count Error			19	%
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	BI-212			0.30	pCi/g
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	BI-212 Count Error			25	%
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	BI-214			0.41	pCi/g
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error			13	%
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	CS-134			0.026	pCi/g
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	CS-134 Count Error			37	%
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	K-40			11	pCi/g
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	K-40 Count Error			13	%
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	PB-212			0.45	pCi/g
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error			9.5	%
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	PB-214			0.54	pCi/g
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error			22	%
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	SN-126			0.12	pCi/g
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	SN-126 Count Error			26	%
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	TH-234			0.66	pCi/g
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	TH-234 Count Error			29	%
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	TL-208			0.13	pCi/g
W08GR01097	B1VB30	GPP	TRENT	Gamma Energy Analysis-grd H2O	TL-208 Count Error			15	%

RQ = Result Qualifier

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Groundwater Remediation Program

WGPE v 5.2 Report #: WSCF20080850

Report Date: 25-jun-2008

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: Americium by AEA

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01080											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Americium-241	14596-10-2	1.9e-2		RPD			19.048	20.000		06/12/08
DUP	Am-243 tracer by AEA	AM243	3.812	95.960	% Recov	30.000	105.000				06/12/08
Lab ID: W08GR01097											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Am-243 tracer by AEA	AM243	3.947	96.370	% Recov	30.000	105.000				06/12/08
BATCH QC											
BLANK	Americium-241	14596-10-2	2.1e-2	0.021	pCi/g	-10.000	1000.000				06/12/08
BLANK	Am-243 tracer by AEA	AM243	4.003	76.590	% Recov	30.000	105.000				06/12/08
LCS	Americium-241	14596-10-2	12.94	100.000	% Recov	80.000	120.000				06/12/08
LCS	Am-243 tracer by AEA	AM243	11.11	95.650	% Recov	30.000	105.000				06/12/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: Gamma Energy Analysis-grd H2O

Sample Date: 04/23/08
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01082											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Cobalt-60	10198-40-0	U6.949e-3		RPD			n/a	20.000		05/09/08
DUP	Cesium-137	10045-97-3	U-8.742e-3		RPD			n/a	20.000		05/09/08
DUP	Europium-152	14683-23-9	U-4.24e-3		RPD			n/a	20.000		05/09/08
DUP	Europium-154	15585-10-1	U-3.154e-2		RPD			n/a	20.000		05/09/08
DUP	Europium-155	14391-16-3	U7.107e-2		RPD			n/a	20.000		05/09/08
DUP	Niobium-94	14681-63-1	U6.869e-3		RPD			n/a	20.000		05/09/08
DUP	Radium-226	13982-63-3	0.676		RPD			0.074	20.000		05/09/08
DUP	Radium-228	15262-20-1	0.9012		RPD			1.465	20.000		05/09/08
BATCH QC											
BLANK	Cobalt-60	10198-40-0	U4.829e-4	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Cesium-137	10045-97-3	U-1.184e-4	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Europium-152	14683-23-9	U2.656e-3	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Europium-154	15585-10-1	U1.159e-3	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Europium-155	14391-16-3	U2.543e-3	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Niobium-94	14681-63-1	U9.778e-4	n/a	pCi/g	-10.000	1000.000				05/13/08
BLANK	Radium-226	13982-63-3	7.127e-2	0.071	pCi/g	-10.000	1000.000				05/13/08
BLANK	Radium-228	15262-20-1	5.118e-2	0.051	pCi/g	-10.000	1000.000				05/13/08
LCS	Cobalt-60	10198-40-0	10140	102.012	% Recov	80.000	120.000				05/02/08
LCS	Cesium-137	10045-97-3	6122	101.358	% Recov	80.000	120.000				05/02/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: Neptunium by AEA

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01080											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Neptunium-237	13994-20-2	U1.4e-2		RPD			n/a	25.000		06/10/08
MS	Neptunium-237	13994-20-2	96.2	96.200	% Recov	75.000	125.000				06/10/08
MSD	Neptunium-237	13994-20-2	95	95.000	% Recov	75.000	125.000				06/10/08
SPK-RPD	Neptunium-237	13994-20-2	95.000		% RPD			1.255	20.000		06/10/08
Lab ID: W08GR01082											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	93.1	93.100	% Recov	75.000	125.000				06/10/08
Lab ID: W08GR01097											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Neptunium-237	13994-20-2	95.1	95.100	% Recov	75.000	125.000				06/10/08
BATCH QC											
BLANK	Neptunium-237	13994-20-2	U4.1e-3	n/a	pCi/G	-10.000	1000.000				06/10/08
LCS	Neptunium-237	13994-20-2	12.12	95.096	% Recov	80.000	120.000				06/10/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: Plutonium Isotopics by AEA

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01080											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Plutonium-238	13981-16-3	U3.4e-3		RPD			n/a	20.000		06/12/08
DUP	Pu-239/240 by AEA	PU-239/240	U8.6e-3		RPD			n/a	20.000		06/12/08
DUP	Pu-242 tracer by AEA	PU242	5.901	94.100	% Recov	30.000	105.000				06/12/08
Lab ID: W08GR01097											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Pu-242 tracer by AEA	PU242	6.111	94.000	% Recov	30.000	105.000				06/12/08
BATCH QC											
BLANK	Plutonium-238	13981-16-3	U1.5e-2	n/a	pCi/g	-10.000	1000.000				06/12/08
BLANK	Pu-239/240 by AEA	PU-239/240	U9.4e-3	n/a	pCi/g	-10.000	1000.000				06/12/08
BLANK	Pu-242 tracer by AEA	PU242	6.196	90.150	% Recov	30.000	105.000				06/12/08
LCS	Pu-239/240 by AEA	PU-239/240	11.68	90.966	% Recov	80.000	120.000				06/12/08
LCS	Pu-242 tracer by AEA	PU242	17.19	96.240	% Recov	30.000	105.000				06/12/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: Strontium 89/90

Sample Date: 04/17/08
 Receive Date: 04/28/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01075											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	89.3	89.300	% Recov	30.000	105.000				05/06/08
DUP	Strontium-89/90	SR-RAD	6.1E+01		RPD			10.853	20.000		05/06/08
Lab ID: W08GR01097											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	93.5	93.500	% Recov	30.000	105.000				05/06/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	100.7	100.700	% Recov	30.000	105.000				05/06/08
BLANK	Strontium-89/90	10098-97-2	U-1.0	n/a	pCi/g	-10.000	300.000				05/06/08
LCS	Sr-85 Tracer by Beta Counting	SR85	85.5	85.500	% Recov	30.000	105.000				05/06/08
LCS	Strontium-89/90	10098-97-2	77.1	109.947	% Recov	80.000	120.000				05/06/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20080850
 Matrix: SOLID
 Test: Uranium Isotopics by AEA

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

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR01080											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	U-232 tracer by AEA	U232	3.914	90.480	% Recov	30.000	105.000				06/24/08
DUP	Uranium-233/234	U-233/234	1.7		RPD			5.714	20.000		06/24/08
DUP	Uranium-235	15117-96-1	0.17		RPD			12.500	20.000		06/24/08
DUP	Uranium-238	U-238	1.4		RPD			13.333	20.000		06/24/08
Lab ID: W08GR01097											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	U-232 tracer by AEA	U232	4.053	86.200	% Recov	30.000	105.000				06/24/08
BATCH QC											
BLANK	U-232 tracer by AEA	U232	4.11	90.920	% Recov	30.000	105.000				06/24/08
BLANK	Uranium-233/234	13966-29-5	U9.7e-3	n/a	pCi/g	-10.000	1000.000				06/24/08
BLANK	Uranium-235	15117-96-1	8.5e-3	0.009	pCi/g	-10.000	1000.000				06/24/08
BLANK	Uranium-238	24678-82-8	U1.2e-2	n/a	pCi/g	-10.000	1000.000				06/24/08
LCS	U-232 tracer by AEA	U232	11.4	83.960	% Recov	30.000	105.000				06/24/08
LCS	Uranium-233/234	13966-29-5	n/a	n/a	% Recov	75.000	125.000				06/24/08
LCS	Uranium-235	15117-96-1	n/a	n/a	% Recov	75.000	125.000				06/24/08
LCS	Uranium-238	24678-82-8	20.52	108.256	% Recov	80.000	120.000				06/24/08

M4W41-SLF-08-645

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

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354
 Attn: Steve Trent

Customer Code: GPP
 PO#: 123215/ES20
 Group#: 20080850
 Project#: F08-043
 Proj Mgr: Steve Trent E6-35
 Phone: 373-5869

The following samples were received from you on 04/28/08. 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
W08GR01097	B1VB30	GPP @2008 @GEA-GPP PERSOLID	TRENT Solid, or handle as if solid @AEA-30 @AEA-31 @AEA-32 @AEA-33 @IC-30 @PCBGPP @SR89_90 @SVOCGPP @TPHD PH-30	04/21/08
W08GR01098	B1VB28	GPP @VOA-GPP	TRENT Solid, or handle as if solid	04/21/08
W08GR01100	B1VB29	GPP	TRENT Solid, or handle as if solid	04/21/08

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

COLLECTOR
J. Herick

COMPANY CONTACT
TRENT, SJ

TELEPHONE NO.
373-5869

PROJECT COORDINATOR
WIDRIG, DL

PRICE CODE 8N

DATA TURNAROUND
45 Days / 45 Days

SAMPLING LOCATION
CS941, 1-ASS-001

PROJECT DESIGNATION
216-A-30 Crib Sampling

SAF NO.
F08-043

AIR QUALITY

ICE CHEST NO.

FIELD LOGBOOK NO.
HNF-W-585 2

ACTUAL SAMPLE DEPTH
235.. 287.6

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* POSSIBLE SAMPLE HAZARDS/ REMARKS
A=Air Contains Radioactive Material at concentrations
DL=Drum that are not regulated for transportation per 49
Liquids CFR but are not releasable per DOE Order
DS=Drum 5400.5 (1990/1993)
Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
W=Water
WI=Wipe
X=Other

PRESERVATION	Cool~4C	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None
TYPE OF CONTAINER	aG	aG	aG	GP	GP	Square Bottle - Poly
NO. OF CONTAINER(S)	1	1	1	1	1	1
VOLUME	120mL	120mL	120mL	120mL	120mL	500mL

SPECIAL HANDLING AND/OR STORAGE
Radioactive tie to B1VB27

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
--------------------------------------	--------------------------------------	-------------	--------------------------------------	--------------------------------------	--------------------------------------

ICED

26080850

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME						
B1VB30	W 86201097 SOIL	4/21/08	0930	X	X	X	X	X	X

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

2241090 2241090 2241090 2241090 2241090 5/19/08

SPECIAL INSTRUCTIONS

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
J. Herick	4/21/08 1040	Mo 509 Fridge #2	4/21/08 1040
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Mo 509 Fridge #2	4-28-08	D. Parham	4-28-08
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
D. Parham	4-28-08	V. Jones	4/28/08 12:00
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

54 of 59

LABORATORY SECTION RECEIVED BY

FINAL SAMPLE DISPOSITION DISPOSAL METHOD

TITLE DATE/TIME

DISPOSED BY DATE/TIME

COLLECTOR

PFISTER, HERICK

SAMPLING LOCATION

C5941, I-ASS-001

ICE CHEST NO.

SHIPPED TO

Waste Sampling & Characterization

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} Conductivity - 9050 {Specific Conductance} pH (Soil) - 9045 {pH Measurement}

(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}

COMPANY CONTACT

TRENT, SJ

TELEPHONE NO.

373-5869

PROJECT COORDINATOR

WIDRIG, DL

PROJECT DESIGNATION

216-A-30 Crib Sampling

SAF NO.

F08-043

FIELD LOGBOOK NO.

HNF-N-5852

ACTUAL SAMPLE DEPTH

285-287.6

COA

123215E520

OFFSITE PROPERTY NO.

N/A

BILL OF LADING/AIR BILL NO.

N/A

PRICE CODE

8N

AIR QUALITY

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

DATA
TURNAROUND
45 Days / 45
Days

ICED

COLLECTOR
Patricia H. ...

SAMPLING LOCATION
C5941, I-ASS-001

ICE CHEST NO.

SHIPPED TO

Waste Sampling & Characterization

MATRIX*

A=Air
DL=Drum
Liquids
DS=Drum
Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
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 B1V827

COMPANY CONTACT

TRENT, SJ

PROJECT DESIGNATION

216-A-30 Crib Sampling

FIELD LOGBOOK NO.

HNF-N 585 2

OFFSITE PROPERTY NO.

N/A

TELEPHONE NO.

373-5869

PROJECT COORDINATOR

WIDRIG, DL

SAF NO.

F08-043

COA

123215E520

BILL OF LADING/AIR BILL NO.

N/A

PRICE CODE

BN

AIR QUALITY

DATA
TURNAROUND

45 Days / 45
Days

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

PRESERVATION

Cool <-7C and MEOH/Cool--4
>-20C 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

B1V828 *W086201098* SOIL

4/21/08 0930

X X

ICED

CHAIN OF POSSESSION

RELINQUISHED BY/REMOVED FROM

S. Hellich / P. ...

DATE/TIME

4/21/08 1040

RECEIVED BY/STORED IN

MO 509 FRI 04E #2

DATE/TIME

4/21/08 1040

RELINQUISHED BY/REMOVED FROM

MO 509 Re #2

DATE/TIME

4-28-08 1320

RECEIVED BY/STORED IN

D. Parck

DATE/TIME

4-28-08 1320

RELINQUISHED BY/REMOVED FROM

D. Parck

DATE/TIME

4-28-08 1400

RECEIVED BY/STORED IN

Victor Simons

DATE/TIME

4/28/08 1400

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

Lot# 7312110

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}

TITLE

DATE/TIME

DISPOSED BY

DATE/TIME

56 of 59

COLLECTOR
Plister, Herrick

SAMPLING LOCATION
C5941, I-ASS-001

ICE CHEST NO.

SHIPPED TO

Waste Sampling & Characterization

MATRIX*

A=Air
DL=Drum
Liquids
DS=Drum
Solids
L=Liquid
O=Oil
S=Soil
SE=Sediment
T=Tissue
V=Vegetation
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 B1VB27

COMPANY CONTACT

TRENT, SJ

PROJECT DESIGNATION

216-A-30 Crib Sampling

FIELD LOGBOOK NO.

HNF-N-555 2

OFFSITE PROPERTY NO.

N/A

TELEPHONE NO.

373-5869

PROJECT COORDINATOR

WIDRIG, DL

SAF NO.

F08-043

COA

123215ES20

BILL OF LADING/AIR BILL NO.

N/A

PRICE CODE 8N

AIR QUALITY

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

DATA
TURNAROUND
45 Days / 45
Days

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

B1VB29 *W08620110* SOIL

4/21/08 0930 ✓

CHAIN OF POSSESSION

SIGN/ PRINT NAMES

SPECIAL INSTRUCTIONS

RELINQUISHED BY/REMOVED FROM

J. Herrick

DATE/TIME

4/21/08 1040

RECEIVED BY/STORED IN

MO 509 FRI 04E #2

DATE/TIME

4/21/08 1040

** 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}

RELINQUISHED BY/REMOVED FROM

MO 509 RE #2

DATE/TIME

4-28-08

RECEIVED BY/STORED IN

D. Parich

DATE/TIME

4-28-08

RELINQUISHED BY/REMOVED FROM

D. Parich

DATE/TIME

4-28-08

RECEIVED BY/STORED IN

Victor Sims

DATE/TIME

4/28/08 1400

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

RELINQUISHED BY/REMOVED FROM

DATE/TIME

RECEIVED BY/STORED IN

DATE/TIME

LABORATORY SECTION

RECEIVED BY

TITLE

DATE/TIME

FINAL SAMPLE DISPOSITION

DISPOSAL METHOD

DISPOSED BY

DATE/TIME

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M4W41-SLF-08-645

ATTACHMENT 6

SAMPLE RECORD SHEET

Consisting of 2 pages
Including cover page

A30

SPKIT SPOON

I-ASS-001

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
B1V1328	K	32.2	35.8	3.6	---	---	---
	L	31.8	38.2	6.4	---	---	---
	M	31.5	36.3	4.8	---	---	---
	N	31.5	36.7	5.2	---	---	---
	P	31.2	36.6	5.4	---	---	---
B1V1329		30.4	30.4	0	5.0 4.0	4.0 5.0	34.4
B23	W	29.8	34.5	4.7	4.0 3.2	3.2 4.0	37.7
	X	30.6	34.3	3.7	3.0 2.4	2.4 3.0	36.7
	Y	30.2	35.7	5.5	5.0 4.0	4.0 5.0	39.7

¹Sample 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.

²Empty 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.

³Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

⁴Sample weight is the vial with sample minus the vial empty

34.5
29.8

Fisher Scientific Methanol