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RECEIVED DECEMBER 30, 2008

Fluor Hanford
WSCF Analytical Lab
P.O. Box 1000
Richland, Washington 99352
Telephone 373-7495
Telefax 372-0456

FLUOR®

M4W41-SLF-08-1330

December 30, 2008

Mr. M. A. Neely, Manager
Analytical Services
CH2M HILL Plateau Remediation Contract
PO Box 1600 MSIN B6-06
Richland, WA 99352

Dear Mike:

FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20082226 – SAF NUMBER F09-003

Reference: (1) Memorandum of Agreement #MOA-FH-CHPRC-2008, Rev. 0, for the Performance & Payment of Services, dated October 1, 2008

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

This letter contains the following attachments for sample delivery group WSCF20082226:

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

Very truly yours,

S. L. Fitzgerald
WSCF Analytical Lab

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SLF/grf

Attachments 5

cc: w/Attachments

T. F. Dale	S3-30	J. E. Trechter	S3-30
A. J. Kopriva	S3-30	S. J. Trent	B6-06
H. K. Meznarich	S3-30	File/LB	
P. D. Mix	S3-30		

M4W41-SLF-08-1330

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20082226
Data Deliverable Date: 29-dec-2008
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F09-003	B1XPR8	W08GR04100	SOIL
	B1XPT0	W08GR04102	SOIL
	B1XPT2	W08GR04101	SOIL

M4W41-SLF-08-1330

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Introduction

Four (4) S&GRP samples were received at the WSCF Laboratory on November 12, 2008. Three of the four samples were analyzed at the WSCF Laboratory. Summary of sample disposition is offered below:

- B1XPR8, B1XPT0, and B1XPT2 – Samples were successfully analyzed at the WSCF Laboratory for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Memorandum of Agreement (MOA-FH-CHPRC-2008, Rev.0)*, referenced in the cover letter.

- B1XPT1 – Analyses of this Methanol Blank sample and the associated high concentration VOA sample 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, copies of the sample record sheets are included as Attachment 5.

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

ICP-MS Metals – 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 17 for QC details. Analytical Note(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1XFN8 (SDG# 20082207, SAF# F08-165) and B1XPT2 (SDG# 20082226, SAF# F09-003).

All QC controls are within the established limits.

Total Solids – analyzed for organic moisture correction.

Organic Comments

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. See pages 22 through 25 for QC details. Analytical Notes(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1XFP1 (SDG# 20082210, SAF# F08-165).

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. See pages 26 through 28 for QC details. Analytical Notes(s):

- Matrix Spike and Matrix Spike Duplicate were analyzed on sample# B1XPT0 (SDG# 20082226, SAF# F09-003).

- The recovery for the surrogate 1,2-Dichloroethane-d4 was greater than the laboratory established requirement of 125% in the blank, LCS, MS, MSD, and sample B1XPT0. The surrogate recovery in these samples ranged from 127% to 129%.

All other controls are within the established limits.

Rad Chem – There are no hold times associated with WSCF's radiochemical methods. A Duplicate, Matrix Spike *(Matrix Spikes apply only to Neptunium, Technetium & Tritium and Matrix Spike Duplicate applies to Neptunium),* Blank and Laboratory Control Sample were analyzed with this delivery group. See pages 34 through 36 for QC details. Analytical Note(s):

- Rad Chem analyses requested to be performed on this sample included: Gamma Energy Analysis, Plutonium Isotopic by AEA, and Sr-89/90.

- Gamma Energy Analysis: Duplicate was analyzed on sample# B1XPT2, (SDG#20082226, SAF# F09-003).

- Plutonium by AEA: Duplicate was analyzed on sample# B1XPT2, (SDG#20082226, SAF# F09-003).

- Strontium 89/90: Matrix Spike was analyzed on sample# B1XPT2, (SDG#20082226, SAF# F09-003).

- All QC controls are within the established limits.

I certify that this data package is in compliance with the MOA, 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-08-1330

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 29 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for

Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: S.F. Fitzgerald 12-30-08

Client Services: A. Koprivia 12-30-08

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

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

Contract#: MOA-FH-CHPRC-2008
Report#: WSCF20082226
Report Date: 30-dec-2008
Report WGPP/ver. 5.2
Groundwater Remediation Program

w13qlog v4.2 30-dec-2008 10:13:44

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20082226

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
				SAMPLE	W08GR04101	Percent Solids
38571	1	38994	43483	BLANK		ICP-200.8 MS All possible meta
38571	2	38994	43483	LCS		ICP-200.8 MS All possible meta
38571	4	38994	43483	MS	W08GR04036	ICP-200.8 MS All possible meta
38571	5	38994	43483	MSD	W08GR04036	ICP-200.8 MS All possible meta
38571	5	38994	43483	SPK-RPD	W08GR04036	ICP-200.8 MS All possible meta
38571	7	38994	43483	MS	W08GR04101	ICP-200.8 MS All possible meta
38571	8	38994	43483	MSD	W08GR04101	ICP-200.8 MS All possible meta
38571	6	38994	43483	SAMPLE	W08GR04101	ICP-200.8 MS All possible meta
38571	8	38994	43483	SPK-RPD	W08GR04101	ICP-200.8 MS All possible meta

w13qlog v4.2 30-dec-2008 10:13:44

Department: Organic

W13q Worklist/Batch/QC Report for Group# WSCF20082226

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			43482	BLANK		SW-846 8270C Semi-Vols
			43482	LCS		SW-846 8270C Semi-Vols
			43482	MS	W08GR04042	SW-846 8270C Semi-Vols
			43482	MSD	W08GR04042	SW-846 8270C Semi-Vols
			43482	SPK-RPD	W08GR04042	SW-846 8270C Semi-Vols
			43482	SAMPLE	W08GR04101	SW-846 8270C Semi-Vols
			43482	SURR	W08GR04101	SW-846 8270C Semi-Vols
			43541	BLANK		VOA Ground Water Protection
			43541	LCS		VOA Ground Water Protection
			43541	MS	W08GR04102	VOA Ground Water Protection
			43541	MSD	W08GR04102	VOA Ground Water Protection
			43541	SAMPLE	W08GR04102	VOA Ground Water Protection
			43541	SPK-RPD	W08GR04102	VOA Ground Water Protection
			43541	SURR	W08GR04102	VOA Ground Water Protection

w13qlog v4.2 30-dec-2008 10:13:44

Department: Radiochemistry

W13q Worklist/Batch/QC Report for Group# WSCF20082226

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
38555	1	38977	43491	BLANK		Gamma Energy Analysis-grd H2O
38555	2	38977	43491	LCS		Gamma Energy Analysis-grd H2O
38555	3	38977	43491	DUP	W08GR04100	Gamma Energy Analysis-grd H2O
38555	4	38977	43491	SAMPLE	W08GR04100	Gamma Energy Analysis-grd H2O
38555	5	38977	43491	SAMPLE	W08GR04101	Gamma Energy Analysis-grd H2O
38667	1	39092	43592	BLANK		Plutonium Isotopics by AEA
38667	2	39092	43592	LCS		Plutonium Isotopics by AEA
38667	3	39092	43592	DUP	W08GR04101	Plutonium Isotopics by AEA
38667	4	39092	43592	SAMPLE	W08GR04101	Plutonium Isotopics by AEA
38667	5	39092	43592	SURR	W08GR04101	Plutonium Isotopics by AEA
38663	1	39081	43635	BLANK		Strontium 89/90
38663	2	39081	43635	LCS		Strontium 89/90
38663	6	39081	43635	SAMPLE	W08GR04100	Strontium 89/90
38663	7	39081	43635	SURR	W08GR04100	Strontium 89/90
38663	3	39081	43635	DUP	W08GR04101	Strontium 89/90
38663	4	39081	43635	SAMPLE	W08GR04101	Strontium 89/90
38663	5	39081	43635	SURR	W08GR04101	Strontium 89/90

WSCF
METHOD REFERENCES REPORT

Department: Inorganic

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

LA-505-412 LA-505-412: DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY

EPA-600/R-94-111 200.8	DETERMINATION OF TRACE ELEMENTS IN WATERS AND WASTES BY INDUCTIVELY COUPLED PLAS
HEIS 200.8_METALS_ICPMS	Inductively Coupled Plasma - Mass Spectrometry
HEIS RADISOTOPES_ICPMS	Radioisotopes by ICP/MS

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

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

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

WSCF
METHOD REFERENCES REPORT

Department: Organic

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

LA-523-455	LA-523-455: VOLATILE SAMPLE ANALYSIS BY SW-846	
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8260B	VOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
	HEIS 8260_VOA_GCMS	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
LA-523-456	LA-523-456: SEMIVOLATILE SAMPLE ANALYSIS BY SW-846, METHOD 8270C	
	EPA SW-846 8000B	DETERMINATIVE CHROMATOGRAPHIC SEPARATIONS
	EPA SW-846 8270C	SEMIVOLATILE ORGANIC COMPOUNDS BY GAS CHROMATOGRAPHY/MASS SPECTROMETRY (GC/MS)
	HEIS 8270_SVOA_GCMS	Semivolatile Orgamoc Compounds By Gas Chromatography/Mass Spectrometry (GC/MS)

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

WSCF
METHOD REFERENCES REPORT

Department: Radiochemistry

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

LA-508-415 LA-508-415: OPERATION OF THE PROTEAN 2-INCH ALPHA/BETA COUNTING SYSTEM FOR GROSS

HEIS ALPHA_GPC	GROSS ALPHA GPC
HEIS BETA_GPC	GROSS BETA GPC
HEIS SRTOT_SEP_PRECIP_GPC	Strontium 89/90

LA-508-471 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: F09-003
Sample # W08GR04101
Client ID: B1XPT2 TRENT WSCF

Matrix: SOIL

Group #: WSCF20082226
Department: Inorganic
Sampled: 11/12/08
Received: 11/12/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
ICP-200.8 MS All possible meta Prep											**11/18/08**
ICP-200.8 MS All possible meta											
Chromium	7440-47-3	LA-505-412		13.4	mg/kg			0.99	0.497		11/19/08
Uranium	7440-61-1	LA-505-412		0.680	mg/kg			0.99	0.0497		11/19/08
Total solids											
Total solids	TS	LA-519-412		78.7	Percent			1.00	0.0		11/17/08

MDL = Minimum Detection Limit U - Analyzed for but not detected above limiting criteria(inorg) U - Analyzed for but not detected above limiting criteria.(org)
RQ = Result Qualifier
TP Err = Total Propagated Error
DF = Dilution Factor
* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Inorganic

SDG Number: WSCF20082226
Matrix: SOLID
Test: ICP-200.8 MS All possible meta

Sample Date: 11/06/08
Receive Date:11/06/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR04036											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Chromium	7440-47-3	186.27	93.135	% Recov	70.000	130.000				11/19/08
MSD	Chromium	7440-47-3	166.37	83.185	% Recov	70.000	130.000				11/19/08
SPK-RPD	Chromium	7440-47-3	83.185		RPD			11.286	20.000		11/19/08
Lab ID: W08GR04101											
BATCH QC ASSOCIATED WITH SAMPLE											
MS	Chromium	7440-47-3	162.92	81.460	% Recov	70.000	130.000				11/19/08
MS	Uranium	7440-61-1	214.72	107.360	% Recov	70.000	130.000				11/19/08
MSD	Chromium	7440-47-3	166.72	83.360	% Recov	70.000	130.000				11/19/08
MSD	Uranium	7440-61-1	218.92	109.460	% Recov	70.000	130.000				11/19/08
SPK-RPD	Chromium	7440-47-3	83.360		RPD			2.306	20.000		11/19/08
SPK-RPD	Uranium	7440-61-1	109.460		RPD			1.937	20.000		11/19/08
BATCH QC											
BLANK	Chromium	7440-47-3	<0.5	n/a	ug/L					U	11/19/08
BLANK	Uranium	7440-61-1	<5e-2	n/a	ug/L					U	11/19/08
LCS	Chromium	7440-47-3	59.12	81.097	% Recov	77.000	125.000				11/19/08
LCS	Uranium	7440-61-1	383.4	95.850	% Recov	81.000	125.000				11/19/08

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-003
Sample # W08GR04101
Client ID: B1XPT2 TRENT WSCF

Matrix: SOIL

Group #: WSCF20082226
Department: Organic
Sampled: 11/12/08
Received: 11/12/08

Test Performed	CAS #	Method	RQ	Result		Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
SW-846 8270C Semi-Vols Prep												**11/17/08**
SW-846 8270C Semi-Vols												
4-Nitrophenol	100-02-7	LA-523-456	U	<	250	ug/kg			1.00	2.5e+02		11/19/08
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	<	300	ug/kg			1.00	3.0e+02		11/19/08
Phenol	108-95-2	LA-523-456	U	<	180	ug/kg			1.00	1.8e+02		11/19/08
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	<	180	ug/kg			1.00	1.8e+02		11/19/08
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	<	180	ug/kg			1.00	1.8e+02		11/19/08
Pyrene	129-00-0	LA-523-456	U	<	180	ug/kg			1.00	1.8e+02		11/19/08
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	<	180	ug/kg			1.00	1.8e+02		11/19/08
N-Nitrosodi-n-dipropylamine	621-64-7	LA-523-456	U	<	180	ug/kg			1.00	1.8e+02		11/19/08
Acenaphthene	83-32-9	LA-523-456	U	<	180	ug/kg			1.00	1.8e+02		11/19/08
Pentachlorophenol	87-86-5	LA-523-456	U	<	250	ug/kg			1.00	2.5e+02		11/19/08
2-Chlorophenol	95-57-8	LA-523-456	U	<	180	ug/kg			1.00	1.8e+02		11/19/08
Bis(2-ethylhexyl) phthalate	117-81-7	LA-523-456	U	<	180	ug/kg			1.00	1.8e+02		11/19/08

MDL=Minimum Detection Limit U - Analyzed for but not detected above limiting criteria(inorg) U - Analyzed for but not detected above limiting criteria.(org)
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor
* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-003
Sample # W08GR04102
Client ID: B1XPT0 TRENT WSCF

Matrix: SOIL

Group #: WSCF20082226
Department: Organic
Sampled: 11/12/08
Received: 11/12/08

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	< 1.30	ug/kg			1.00	1.3		11/20/08
Trichloroethene	79-01-6	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Benzene	71-43-2	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Toluene	108-88-3	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Chlorobenzene	108-90-7	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Ethylbenzene	100-41-4	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Styrene	100-42-5	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
2-Hexanone	591-78-6	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Acetone	67-64-1	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Chloroform	67-66-3	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Bromomethane	74-83-9	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Chloromethane	74-87-3	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Chloroethane	75-00-3	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08

MDL = Minimum Detection Limit U - Analyzed for but not detected above limiting criteria(inorg) U - Analyzed for but not detected above limiting criteria.(org)
RQ = Result Qualifier
TP Err = Total Propagated Error
DF = Dilution Factor

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-003
Sample # W08GR04102
Client ID: B1XPT0 TRENT WSCF

Matrix: SOIL

Group #: WSCF20082226
Department: Organic
Sampled: 11/12/08
Received: 11/12/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Methylenechloride	75-09-2	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Carbon disulfide	75-15-0	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Bromoform	75-25-2	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
2-Butanone	78-93-3	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.30	ug/kg			1.00	1.3		11/20/08

MDL=Minimum Detection Limit U - Analyzed for but not detected above limiting criteria(inorg) U - Analyzed for but not detected above limiting criteria.(org)
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor
* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-003 :F09-003

Group #: WSCF20082226
Department: Organic

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR04101	B1XPT2	TRENT	SW-846 8270C Semi-Vols	SMP 11.922 Diethylphthalate	84-66-2	11.92276		4.2e+02	ug/kg
W08GR04101	B1XPT2	TRENT	SW-846 8270C Semi-Vols	SMP 14.317 Di-n-butylphthalate	84-74-2	14.31705		8.9e+02	ug/kg

RQ=Result Qualifier

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082226
Matrix: SOLID
Test: SW-846 8270C Semi-Vols

Sample Date: 11/06/08
Receive Date:11/06/08

Lab ID: W08GR04042
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	4122.3	102.000	% Recov	75.000	121.000				11/18/08
MS	1,4-Dichlorobenzene	106-46-7	4158.5	103.000	% Recov	68.000	121.000				11/18/08
MS	2,4-Dinitrotoluene	121-14-2	3752.3	93.100	% Recov	66.000	113.000				11/18/08
MS	2-Fluorophenol(Surr)	367-12-4	4192.1	104.000	% Recov	72.000	120.000				11/18/08
MS	Acenaphthene	83-32-9	4071.3	101.000	% Recov	69.000	125.000				11/18/08
MS	4-Chloro-3-methylphenol	59-50-7	6088.9	101.000	% Recov	68.000	116.000				11/18/08
MS	2-Chlorophenol	95-57-8	6250.7	103.000	% Recov	65.000	124.000				11/18/08
MS	N-Nitrosodi-n-dipropylamine	621-64-7	4122.2	102.000	% Recov	69.000	127.000				11/18/08
MS	2-Fluorobiphenyl(Surr)	321-60-8	4060.0	101.000	% Recov	66.000	122.000				11/18/08
MS	Phenol	108-95-2	6240.1	103.000	% Recov	71.000	122.000				11/18/08
MS	Nitrobenzene-d5(Surr)	4165-60-0	4095.4	102.000	% Recov	63.000	125.000				11/18/08
MS	4-Nitrophenol	100-02-7	5650.8	93.400	% Recov	55.000	113.000				11/18/08
MS	Pentachlorophenol	87-86-5	5119.2	84.600	% Recov	50.000	113.000				11/18/08
MS	Phenol-d5(Surr)	4165-62-2	4314.1	107.000	% Recov	66.000	124.000				11/18/08
MS	Pyrene	129-00-0	4093.5	102.000	% Recov	67.000	125.000				11/18/08
MS	2,4,6-Tribromophenol(Surr)	118-79-6	4095.4	102.000	% Recov	49.000	120.000				11/18/08
MS	Terphenyl-d14(Surr)	98904-43-9	4687.7	116.000	% Recov	58.000	128.000				11/18/08
MSD	1,2,4-Trichlorobenzene	120-82-1	3974.2	99.600	% Recov	75.000	121.000				11/18/08
MSD	1,4-Dichlorobenzene	106-46-7	3946.4	98.900	% Recov	68.000	121.000				11/18/08
MSD	2,4-Dinitrotoluene	121-14-2	3570.6	89.500	% Recov	66.000	113.000				11/18/08
MSD	2-Fluorophenol(Surr)	367-12-4	4038.7	101.000	% Recov	72.000	120.000				11/18/08
MSD	Acenaphthene	83-32-9	3966.2	99.400	% Recov	69.000	125.000				11/18/08
MSD	4-Chloro-3-methylphenol	59-50-7	5799.7	96.900	% Recov	68.000	116.000				11/18/08
MSD	2-Chlorophenol	95-57-8	5994.8	100.000	% Recov	65.000	124.000				11/18/08
MSD	N-Nitrosodi-n-dipropylamine	621-64-7	3969.3	99.400	% Recov	69.000	127.000				11/18/08
MSD	2-Fluorobiphenyl(Surr)	321-60-8	4079.9	102.000	% Recov	66.000	122.000				11/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082226
Matrix: SOLID
Test: SW-846 8270C Semi-Vols

Sample Date: 11/06/08
Receive Date:11/06/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MSD	Phenol	108-95-2	6050.4	101.000	% Recov	71.000	122.000				11/18/08
MSD	Nitrobenzene-d5(Surr)	4165-60-0	4047.0	101.000	% Recov	63.000	125.000				11/18/08
MSD	4-Nitrophenol	100-02-7	5216.6	87.100	% Recov	55.000	113.000				11/18/08
MSD	Pentachlorophenol	87-86-5	4721.6	78.900	% Recov	50.000	113.000				11/18/08
MSD	Phenol-d5(Surr)	4165-62-2	4067.8	102.000	% Recov	66.000	124.000				11/18/08
MSD	Pyrene	129-00-0	4129.4	103.000	% Recov	67.000	125.000				11/18/08
MSD	2,4,6-Tribromophenol(Surr)	118-79-6	3928.2	98.400	% Recov	49.000	120.000				11/18/08
MSD	Terphenyl-d14(Surr)	98904-43-9	4699.0	118.000	% Recov	58.000	128.000				11/18/08
SPK-RPD	1,2,4-Trichlorobenzene	120-82-1	99.600		RPD			2.381	20.000		11/18/08
SPK-RPD	1,4-Dichlorobenzene	106-46-7	98.900		RPD			4.061	20.000		11/18/08
SPK-RPD	2,4-Dinitrotoluene	121-14-2	89.500		RPD			3.943	20.000		11/18/08
SPK-RPD	2-Fluorophenol(Surr)	367-12-4	101.000		RPD			2.927	20.000		11/18/08
SPK-RPD	Acenaphthene	83-32-9	99.400		RPD			1.597	20.000		11/18/08
SPK-RPD	4-Chloro-3-methylphenol	59-50-7	96.900		RPD			4.144	20.000		11/18/08
SPK-RPD	2-Chlorophenol	95-57-8	100.000		RPD			2.956	20.000		11/18/08
SPK-RPD	N-Nitrosodi-n-dipropylamine	621-64-7	99.400		RPD			2.582	20.000		11/18/08
SPK-RPD	2-Fluorobiphenyl(Surr)	321-60-8	102.000		RPD			0.985	20.000		11/18/08
SPK-RPD	Phenol	108-95-2	101.000		RPD			1.961	20.000		11/18/08
SPK-RPD	Nitrobenzene-d5(Surr)	4165-60-0	101.000		RPD			0.985	20.000		11/18/08
SPK-RPD	4-Nitrophenol	100-02-7	87.100		RPD			6.981	20.000		11/18/08
SPK-RPD	Pentachlorophenol	87-86-5	78.900		RPD			6.972	20.000		11/18/08
SPK-RPD	Phenol-d5(Surr)	4165-62-2	102.000		RPD			4.785	20.000		11/18/08
SPK-RPD	Pyrene	129-00-0	103.000		RPD			0.976	20.000		11/18/08
SPK-RPD	2,4,6-Tribromophenol(Surr)	118-79-6	98.400		RPD			3.593	20.000		11/18/08
SPK-RPD	Terphenyl-d14(Surr)	98904-43-9	118.000		RPD			1.709	20.000		11/18/08

Lab ID: W08GR04101
BATCH QC ASSOCIATED WITH SAMPLE

SURR	2-Fluorophenol(Surr)	367-12-4	4423.8	87.700	% Recov	72.000	120.000				11/19/08
SURR	2-Fluorobiphenyl(Surr)	321-60-8	4253.5	84.400	% Recov	66.000	122.000				11/19/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082226
Matrix: SOLID
Test: SW-846 8270C Semi-Vols

Sample Date: 11/12/08
Receive Date:11/12/08

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	4519.0	89.600	% Recov	63.000	125.000				11/19/08
SURR	Phenol-d5(Surr)	4165-62-2	4447.6	88.200	% Recov	66.000	124.000				11/19/08
SURR	2,4,6-Tribromophenol(Surr)	118-79-6	4207.2	83.400	% Recov	49.000	120.000				11/19/08
SURR	Terphenyl-d14(Surr)	98904-43-9	5273.7	105.000	% Recov	58.000	128.000				11/19/08

BATCH QC

BLANK	1,2,4-Trichlorobenzene	120-82-1	< 150	n/a	ug/Kg					U	11/18/08
BLANK	1,4-Dichlorobenzene	106-46-7	< 250	n/a	ug/Kg					U	11/18/08
BLANK	2,4-Dinitrotoluene	121-14-2	< 150	n/a	ug/Kg					U	11/18/08
BLANK	2-Fluorophenol(Surr)	367-12-4	4059.9	101.000	% Recov	72.000	120.000				11/18/08
BLANK	Acenaphthene	83-32-9	< 150	n/a	ug/Kg					U	11/18/08
BLANK	Bis(2-ethylhexyl) phthalate	117-81-7	< 150	n/a	ug/Kg					U	11/18/08
BLANK	4-Chloro-3-methylphenol	59-50-7	< 150	n/a	ug/Kg					U	11/18/08
BLANK	2-Chlorophenol	95-57-8	< 150	n/a	ug/Kg					U	11/18/08
BLANK	N-Nitrosodi-n-dipropylamine	621-64-7	< 150	n/a	ug/Kg					U	11/18/08
BLANK	2-Fluorobiphenyl(Surr)	321-60-8	4103.6	103.000	% Recov	66.000	122.000				11/18/08
BLANK	Phenol	108-95-2	< 150	n/a	ug/Kg					U	11/18/08
BLANK	Nitrobenzene-d5(Surr)	4165-60-0	4071.7	102.000	% Recov	63.000	125.000				11/18/08
BLANK	4-Nitrophenol	100-02-7	< 330	n/a	ug/Kg					U	11/18/08
BLANK	Pentachlorophenol	87-86-5	< 400	n/a	ug/Kg					U	11/18/08
BLANK	Phenol-d5(Surr)	4165-62-2	4186.9	105.000	% Recov	66.000	124.000				11/18/08
BLANK	Pyrene	129-00-0	< 150	n/a	ug/Kg					U	11/18/08
BLANK	2,4,6-Tribromophenol(Surr)	118-79-6	3417.4	85.400	% Recov	49.000	120.000				11/18/08
BLANK	Terphenyl-d14(Surr)	98904-43-9	4809.6	120.000	% Recov	58.000	128.000				11/18/08
LCS	1,2,4-Trichlorobenzene	120-82-1	4230.1	106.000	% Recov	76.000	118.000				11/18/08
LCS	1,4-Dichlorobenzene	106-46-7	4078.5	102.000	% Recov	68.000	121.000				11/18/08
LCS	2,4-Dinitrotoluene	121-14-2	3902.7	97.600	% Recov	68.000	112.000				11/18/08
LCS	2-Fluorophenol(Surr)	367-12-4	4367.4	109.000	% Recov	50.000	110.000				11/18/08
LCS	Acenaphthene	83-32-9	4211.5	105.000	% Recov	75.000	121.000				11/18/08
LCS	4-Chloro-3-methylphenol	59-50-7	6097.6	102.000	% Recov	68.000	117.000				11/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082226
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	2-Chlorophenol	95-57-8	6304.6	105.000	% Recov	84.000	114.000				11/18/08
LCS	N-Nitrosodi-n-dipropylamine	621-64-7	4289.2	107.000	% Recov	76.000	119.000				11/18/08
LCS	2-Fluorobiphenyl(Surr)	321-60-8	4256.5	106.000	% Recov	58.000	109.000				11/18/08
LCS	Phenol	108-95-2	6468.8	108.000	% Recov	80.000	113.000				11/18/08
LCS	Nitrobenzene-d5(Surr)	4165-60-0	4178.9	104.000	% Recov	60.000	118.000				11/18/08
LCS	4-Nitrophenol	100-02-7	5715.9	95.300	% Recov	42.000	123.000				11/18/08
LCS	Pentachlorophenol	87-86-5	5557.5	92.600	% Recov	55.000	120.000				11/18/08
LCS	Phenol-d5(Surr)	4165-62-2	4353.7	109.000	% Recov	59.000	116.000				11/18/08
LCS	Pyrene	129-00-0	4151.0	104.000	% Recov	67.000	122.000				11/18/08
LCS	2,4,6-Tribromophenol(Surr)	118-79-6	4095.4	102.000	% Recov	60.000	120.000				11/18/08
LCS	Terphenyl-d14(Surr)	98904-43-9	4729.7	118.000	% Recov	60.000	120.000				11/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082226
Matrix: SOLID
Test: VOA Ground Water Protection

Sample Date: 11/12/08
Receive Date:11/12/08

Lab ID: W08GR04102
BATCH QC ASSOCIATED WITH SAMPLE

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
MS	1,1-Dichloroethene	75-35-4	25.350	95.800	% Recov	63.000	117.000				11/20/08
MS	Benzene	71-43-2	24.760	93.500	% Recov	75.000	129.000				11/20/08
MS	4-Bromofluorobenzene(Surr)	460-00-4	53.660	101.000	% Recov	75.000	125.000				11/20/08
MS	Chlorobenzene	108-90-7	25.590	96.700	% Recov	79.000	119.000				11/20/08
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	68.280	129.000	% Recov	75.000	125.000			*	11/20/08
MS	Toluene-d8(Surr)	2037-26-5	51.710	97.700	% Recov	75.000	125.000				11/20/08
MS	Toluene	108-88-3	24.810	93.700	% Recov	76.000	120.000				11/20/08
MS	Trichloroethene	79-01-6	21.870	82.600	% Recov	73.000	123.000				11/20/08
MSD	1,1-Dichloroethene	75-35-4	30.450	95.900	% Recov	63.000	117.000				11/20/08
MSD	Benzene	71-43-2	30.550	96.200	% Recov	75.000	129.000				11/20/08
MSD	4-Bromofluorobenzene(Surr)	460-00-4	63.790	100.000	% Recov	75.000	125.000				11/20/08
MSD	Chlorobenzene	108-90-7	31.400	98.800	% Recov	79.000	119.000				11/20/08
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	81.720	129.000	% Recov	75.000	125.000			*	11/20/08
MSD	Toluene-d8(Surr)	2037-26-5	62.120	97.800	% Recov	75.000	125.000				11/20/06
MSD	Toluene	108-88-3	30.340	95.500	% Recov	76.000	120.000				11/20/08
MSD	Trichloroethene	79-01-6	26.120	82.200	% Recov	73.000	123.000				11/20/08
SPK-RPD	1,1-Dichloroethene	75-35-4	95.900		RPD			0.104	20.000		11/21/08
SPK-RPD	Benzene	71-43-2	96.200		RPD			2.847	20.000		11/21/08
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	100.000		RPD			0.995	20.000		11/21/08
SPK-RPD	Chlorobenzene	108-90-7	98.800		RPD			2.148	20.000		11/21/08
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	129.000		RPD			0.000	20.000		11/21/08
SPK-RPD	Toluene-d8(Surr)	2037-26-5	97.800		RPD			0.102	20.000		11/21/08
SPK-RPD	Toluene	108-88-3	95.500		RPD			1.903	20.000		11/21/06
SPK-RPD	Trichloroethene	79-01-6	82.200		RPD			0.485	20.000		11/21/08
SURR	4-Bromofluorobenzene(Surr)	460-00-4	63.920	101.000	% Recov	75.000	125.000				11/20/08
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	82.190	129.000	% Recov	75.000	125.000			*	11/20/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082226
Matrix: SOLID
Test: VOA Ground Water Protection

Sample Date: 11/12/08
Receive Date:11/12/08

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	62.550	98.500	% Recov	80.000	126.000				11/20/08
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	50.680	101.000	% Recov	75.000	125.000				11/20/08
BLANK	Bromoform	75-25-2	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Chloroethane	75-00-3	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	63.270	127.000	% Recov	75.000	125.000				11/20/08
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Bromomethane	74-83-9	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Chloromethane	74-87-3	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/Kg					U	11/20/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20082226
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	Methylenechloride	75-09-2	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Toluene-d8(Surr)	2037-26-5	48.850	97.700	% Recov	80.000	126.000				11/20/08
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Trichloroethene	79-01-6	< 1.0	n/a	ug/Kg					U	11/20/08
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/Kg					U	11/20/08
LCS	1,1-Dichloroethene	75-35-4	23.850	95.400	% Recov	75.000	125.000				11/21/08
LCS	Benzene	71-43-2	23.430	93.700	% Recov	75.000	125.000				11/21/08
LCS	4-Bromofluorobenzene(Surr)	460-00-4	49.680	99.400	% Recov	75.000	125.000				11/21/08
LCS	Chlorobenzene	108-90-7	24.020	96.100	% Recov	75.000	125.000				11/21/08
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	63.830	128.000	% Recov	75.000	125.000				11/21/08
LCS	Toluene-d8(Surr)	2037-26-5	48.840	97.700	% Recov	80.000	126.000				11/21/08
LCS	Toluene	108-88-3	23.250	93.000	% Recov	75.000	125.000				11/21/08
LCS	Trichloroethene	79-01-6	20.360	81.400	% Recov	75.000	125.000				11/21/08

WSCF
ANALYTICAL COMMENT REPORT

Attention: Steve Trent
Project Number F09-003

Group #: WSCF20082226
Department: Organic

Sample #	Client ID	Lab Area	Test	Comment
		VALGROUP		Organics: All results are moisture corrected and reported on a dry weight basis. cgc VOA: One Surrogate, 1,2-Dichloroethane-d4, out high in the sample, Blank, LCS, MS, and MSD.

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: F09-003
Sample # W08GR04100
Client ID: B1XPR8 TRENT WSCF

Matrix: SOIL

Group #: WSCF20082226
Department: Radiochemistry
Sampled: 11/12/08
Received: 11/12/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cesium-137	10045-97-3	LA-508-481	U	1.10e-03	pCi/g	+-5.70e-03	pCi/g	1.00	8.6e-03		11/18/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	-0.440	pCi/g	+-0.440	pCi/g	1.00	0.41		12/01/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		92.1	Percent			1.00	0.0		12/01/08

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

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

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

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

WSCF
ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F09-003
Sample # W08GR04101
Client ID: B1XPT2 TRENT WSCF

Matrix: SOIL

Group #: WSCF20082226
Department: Radiochemistry
Sampled: 11/12/08
Received: 11/12/08

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Gamma Energy Analysis-grd H2O											
Cobalt-60	10198-40-0	LA-508-481	U	-6.54e-03	pCi/g	+-0.0128	pCi/g	1.00	0.020		11/19/08
Cesium-137	10045-97-3	LA-508-481	U	5.47e-04	pCi/g	+-5.47e-03	pCi/g	1.00	0.020		11/19/08
Europium-152	14683-23-9	LA-508-481	U	0.0196	pCi/g	+-0.0446	pCi/g	1.00	0.054		11/19/08
Plutonium Isotopics by AEA											
Plutonium-238	13981-16-3	LA-508-471	U	-4.90e-03	pCi/g	+-0.0118	pCi/g	1.00	0.026		12/01/08
Pu-239/240 by AEA	PU-239/240	LA-508-471	U	1.60e-03	pCi/g	+-3.22e-03	pCi/g	1.00	4.4e-03		12/01/08
Pu-242	13982-10-0	LA-508-471		5.80	pCi/g			1.00	0.012		12/01/08
Strontium 89/90											
Strontium-89/90	SR-RAD	LA-508-415	U	0.600	pCi/g	+-0.426	pCi/g	1.00	0.38		12/01/08
Sr-85 Tracer by Beta Counting	SR85	LA-508-415		91.4	Percent			1.00	0.0		12/01/08

MDL=Minimum Detection Limit U - Analyzed for but not detected above limiting criteria(inorg) U - Analyzed for but not detected above limiting criteria.(org)
RQ=Result Qualifier
TP Err=Total Propagated Error
DF=Dilution Factor
* - Indicates results that have NOT been validated; + - Indicates more than six qualifier symbols

WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-003 :F09-003

Group #: WSCF20082226
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	AC-228				0.42	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	AC-228 Count Error				21	%
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	BI-212				0.35	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	BI-212 Count Error				24	%
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	BI-214				0.64	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error				11	%
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	CS-134				0.018	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	CS-134 Count Error				47	%
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	K-40				14	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	PB-212				0.52	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error				10	%
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	PB-214				0.88	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error				18	%
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	RA-226				0.52	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	RA-226 Count Error				16	%
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	RA-228				0.50	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	RA-228 Count Error				17	%
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	SN-126				0.18	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	SN-126 Count Error				32	%
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	TH-234				0.50	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	TH-234 Count Error				30	%
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	TL-208				0.15	pCi/g
W08GR04100	B1XPR8	TRENT	Gamma Energy Analysis-grd H2O	TL-208 Count Error				15	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	AC-228				1.6	pCi/g

RQ=Result Qualifier

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WSCF
TENTATIVELY IDENTIFIED PEAK REPORT

Attention: Steve Trent
Project Number F09-003 :F09-003

Group #: WSCF20082226
Department: Radiochemistry

Sample #	Client ID		Test Name	Peak Name	CAS#	RT	RQ	Result	Units
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	AC-228 Count Error				16	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	BI-212				1.1	pCi/g
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	BI-212 Count Error				18	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	BI-214				0.74	pCi/g
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	BI-214 Count Error				15	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	CS-134				0.095	pCi/g
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	CS-134 Count Error				29	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	K-40				21	pCi/g
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	K-40 Count Error				13	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	PB-212				2.0	pCi/g
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	PB-212 Count Error				8.3	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	PB-214				1.6	pCi/g
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	PB-214 Count Error				21	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	RA-226				0.58	pCi/g
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	RA-226 Count Error				17	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	RA-228				1.6	pCi/g
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	RA-228 Count Error				15	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	SN-126				0.34	pCi/g
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	SN-126 Count Error				20	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	TH-234				1.7	pCi/g
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	TH-234 Count Error				23	%
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	TL-208				0.56	pCi/g
W08GR04101	B1XPT2	TRENT	Gamma Energy Analysis-grd H2O	TL-208 Count Error				14	%

RQ=Result Qualifier

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WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20082226
Matrix: SOLID
Test: Gamma Energy Analysis-grd H2O

Sample Date: 11/12/08
Receive Date:11/12/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR04100											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Cesium-137	10045-97-3	U-9.522e-3		RPD			n/a	20.000		11/18/08
BATCH QC											
BLANK	Cobalt-60	10198-40-0	U1.651e-4	n/a	pCi/g	-10.000	1000.000				11/19/08
BLANK	Cesium-137	10045-97-3	U2.43e-3	n/a	pCi/g	-10.000	1000.000				11/19/08
BLANK	Europium-152	14683-23-9	U-2.475e-3	n/a	pCi/g	-10.000	1000.000				11/19/08
LCS	Cobalt-60	10198-40-0	10190	102.515	% Recov	80.000	120.000				11/18/08
LCS	Cesium-137	10045-97-3	6200	102.649	% Recov	80.000	120.000				11/18/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20082226
Matrix: SOLID
Test: Plutonium Isotopics by AEA

Sample Date: 11/12/08
Receive Date:11/12/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR04101											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Plutonium-238	13981-16-3	U4.6e-3		RPD			n/a	20.000		12/01/08
DUP	Pu-239/240 by AEA	PU-239/240	U1.5e-3		RPD			n/a	20.000		12/01/08
DUP	Pu-242	13982-10-0	5.804	87.100	% Recov	30.000	105.000				12/01/08
SURR	Pu-242	13982-10-0	5.782	79.250	% Recov	30.000	105.000				12/01/08
BATCH QC											
BLANK	Plutonium-238	13981-16-3	U-3e-3	n/a	pCi/g	-10.000	1000.000				12/01/08
BLANK	Pu-239/240 by AEA	PU-239/240	U1.2e-2	n/a	pCi/g	-10.000	1000.000				12/01/08
BLANK	Pu-242	PU242	6.245	93.070	% Recov	30.000	105.000				12/01/08
LCS	Pu-239/240 by AEA	PU-239/240	12.67	98.638	% Recov	80.000	120.000				12/01/08
LCS	Pu-242	PU242	6.195	81.513	% Recov	30.000	105.000				12/01/08

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Radiochemistry

SDG Number: WSCF20082226
Matrix: SOLID
Test: Strontium 89/90

Sample Date: 11/12/08
Receive Date:11/12/08

QC Type	Analyte	CAS #	QC Found	QC Yield	Units	Lower Limit	Upper Limit	RPD(%)	RPD Limit	RQ	Analysis Date
Lab ID: W08GR04100											
BATCH QC ASSOCIATED WITH SAMPLE											
SURR	Sr-85 Tracer by Beta Counting	SR85	92.1	92.100	% Recov	30.000	105.000				12/01/08
Lab ID: W08GR04101											
BATCH QC ASSOCIATED WITH SAMPLE											
DUP	Sr-85 Tracer by Beta Counting	SR85	98.9	98.900	% Recov	30.000	105.000				12/01/08
DUP	Strontium-89/90	SR-RAD	U-4.5E-01		RPD			n/a	20.000		12/01/08
SURR	Sr-85 Tracer by Beta Counting	SR85	91.4	91.400	% Recov	30.000	105.000				12/01/08
BATCH QC											
BLANK	Sr-85 Tracer by Beta Counting	SR85	93.4	93.400	% Recov	30.000	105.000				12/01/08
BLANK	Strontium-89/90	10098-97-2	U-2.5E-01	n/a	pCi/g	-10.000	300.000				12/01/08
LCS	Sr-85 Tracer by Beta Counting	SR85	95.6	95.600	% Recov	30.000	105.000				12/01/08
LCS	Strontium-89/90	10098-97-2	68.5	98.675	% Recov	80.000	120.000				12/01/08

M4W41-SLF-08-1330

ATTACHMENT 4

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

File
11/25/08

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 301529/ES10
Group#: 20082226
Project#: F09-003
Proj Mgr: Steve Trent E6-35
Phone: 373-5869

The following samples were received from you on 11/12/08. 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
W08GR04100	B1XPR8	TRENT @GEA-GPP @SR89_90	Solid, or handle as if solid	11/12/08
W08GR04101	B1XPT2	TRENT @2008 @AEA-30 @GEA-GPP @SR89_90 @SVOCGPP PERSOLID	Solid, or handle as if solid	11/12/08
W08GR04102	B1XPT0	TRENT @VOA-GPP	Solid, or handle as if solid	11/12/08
W08GR04103	B1XPT1	TRENT @VOA-GPP	Solid, or handle as if solid	11/12/08

Test Acronym Description

Test Acronym	Description
@2008	ICP-200.8 MS All possible meta
@AEA-30	Plutonium Isotopics by AEA
@GEA-GPP	Gamma Energy Analysis-grd H2O
@SR89_90	Strontium 89/90
@SVOCGPP	SW-846 8270C Semi-Vols
@VOA-GPP	VOA Ground Water Protection
PERSOLID	Percent Solids

CH2MHill Plateau Remediation Company 12/29/08

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F09-003-001

COLLECTOR NCO Sampler WEISS, BAILEY	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION C6834	**PROJECT DESIGNATION** Monitoring Well C6834 - Waste Sampling		**SAF NO.** F09-003
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-575-5	**ACTUAL SAMPLE DEPTH**	**COA** 301529ES10
SHIPPED TO Waste Sampling & Characterization 20082226	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

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 may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	None
TYPE OF CONTAINER	Square Bottle - Poly
NO. OF CONTAINER(S)	1
VOLUME	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

Lab # 629981

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1XPR8 W086R04100	SOIL	11-12-08	1140	X

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[illegible]	11-12-08 / 1405	TA Pivoz [illegible]	11-12-08 / 1405

SPECIAL INSTRUCTIONS

Sample @ 15 feet. (Vadose Zone) Drum number FR3-08-005 / 0056075.
(1)Gamma Spectroscopy {Cesium-137, ~~Cobalt-60, Europium-152) Isotopic Plutonium~~; Strontium-89,90 -- Total Sr;

Only need to analyze for CS-137 & Total Sr per DGW SGW-38725

10/30/08

ICED

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F09-003-005	PAGE 1 OF 1
COLLECTOR NCO Sampler WEBB, BAILEY	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE BN AIR QUALITY ☐	DATA TURNAROUND 45 Days / 45 Days
SAMPLING LOCATION C6834	PROJECT DESIGNATION Monitoring Well C6834 - Waste Sampling		SAF NO. F09-003		
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N595-5	ACTUAL SAMPLE DEPTH	COA 301529ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		

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 may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	Cool-4C	None	None
TYPE OF CONTAINER	aG	G/P	Square Bottle - Poly
NO. OF CONTAINER(S)	1	1	1
VOLUME	250mL	250mL	500mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
Lot #	029336	029336	629981

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME			
B1XPT2	4101	SOIL	11-12-08	1125	X	X	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	11-12-08/1405	TA Finzel [signature]	11-12-08/1405
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS
Sample @ 33 feet. (Saturated Zone) Drum number FR3-08-006 / 0056011.
Radioactive tie to B1XPR9.
(1)Semi-VOA - 8270B (TCL) {Bis(2-ethylhexyl) phthalate}
(2)ICP/MS - 200.8 (TAL) {Chromium} ICP/MS - 200.8 (Add-on) {Uranium}
(3)Gamma Spectroscopy {Cesium-137, Cobalt-60, Europium-152} Isotopic Plutonium; Strontium-89,90 -- Total Sr;

ICED

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

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F09-003-003 | PAGE 1 OF 1

COLLECTOR NCO Sampler WEBB, BAILEY	**COMPANY CONTACT** TRENT, SJ	**TELEPHONE NO.** 373-5869	**PROJECT COORDINATOR** WIDRIG, DL
SAMPLING LOCATION C6834	**PROJECT DESIGNATION** Monitoring Well C6834 - Waste Sampling		**SAF NO.** F09-003
ICE CHEST NO.	**FIELD LOGBOOK NO.** HNF-N-585-5	**ACTUAL SAMPLE DEPTH**	**COA** 301529ES10
SHIPPED TO Waste Sampling & Characterization	**OFFSITE PROPERTY NO.**		**BILL OF LADING/AIR BILL NO.**

PRICE CODE 8N

AIR QUALITY ☐

DATA TURNAROUND 45 Days / 45 Days

METHOD OF SHIPMENT GOVERNMENT VEHICLE

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 may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

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	VOA - 5035/8260 (LOW LEVEL);	VOA - 5035/8260 (HIGH LEVEL);
	7312110	7312140

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B1XPT0 4102	SOIL	11-12-08	1125	X	X

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

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Owens/Owens	11-12-08/1405	JA Fleming/Jenn Fleming	11-12-08/1405

SPECIAL INSTRUCTIONS
Sample @ 33 feet. (Saturated Zone) Drum number FR3-08-006 / 0056011.
Radioactive tie to B1XPR9.

ICED

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

A-6003-618(01/06)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F09-003-004	PAGE 1 OF 1
COLLECTOR NCO Sampler WEBB, BAILEY	COMPANY CONTACT TRENT, SJ	TELEPHONE NO. 373-5869	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE 8N	DATA TURNAROUND
SAMPLING LOCATION C6834	PROJECT DESIGNATION Monitoring Well C6834 - Waste Sampling		SAF NO. F09-003	AIR QUALITY ☐	45 Days / 45 Days
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N-5PT-5	ACTUAL SAMPLE DEPTH	COA 301529ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS		
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	Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)	PRESERVATION	Cool~4C
		TYPE OF CONTAINER	aGs*
		NO. OF CONTAINER(S)	1
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	VOA - 5035/8260 (TCL); 7312110

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B1XPT1 4103	SOIL	11-12-08	1125	X

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
[signature]	11-12-08 / 1405	TA FRAZIER [signature]	11-12-08 / 1405
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

Sample @ 33 feet. (Saturated Zone) Drum number FR3-08-006 / 0056011. Radioactive tie to B1XPR9.

ICED

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

A-6003-618(01/06)

M4W41-SLF-08-1330

ATTACHMENT 5

SAMPLE RECORD SHEET

Consisting of 2 pages
Including cover page

C-6934 Drum FR3-08-006 11-12-08 1125
0056011 ~~10-12-08~~

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
B1XPT0	K	31.6	36.6	5.0	---	---	---
	L	31.8	37.8	6.0	---	---	---
	M	31.6	36.6	5.0	---	---	---
	N	31.8	37.6	5.8	---	---	---
	P	31.4	36.8	5.4	---	---	---
B1XPT1		30.6	30.6	Ø	4.1	5.0	34.7
B1XPT0	W	29.8	36.0	6.2	4.5	6.2	40.5
	X	30.6	36.3	5.7	4.4	5.7	40.7
	Y	30.8	36.8	6.0	4.4	6.0	41.2

[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