

Mission Support Alliance
P.O. Box 650
Richland, Washington 99352



M4W41-SLF-09-326

December 30, 2009

Mr. M. A. Neely, Manager
Analytical Services
CH2M HILL Plateau Remediation Contract
PO Box 1600 MSIN R3-60
Richland, WA 99352

Dear Mike,

FINAL RESULTS FOR SAMPLE DELIVERY GROUP WSCF20091138 – SAF NUMBER F10-025

- References:
- (1) Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, 'FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER'
 - (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 WSCF20091138:

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

Very truly yours,

S. L. Fitzgerald
WSCF Analytical Lab

SLF/grf

Attachments 5

cc:

w/Attachments	
R. L. Barker	S3-30
H. K. Meznarich	S3-30
J. E. Trechter	S3-30
S. J. Trent	R3-50
File/LB	

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M4W41-SLF-09-326

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF NUMBER CROSS REFERENCE

Group#: WSCF20091138
Data Deliverable Date: 22-dec-2009
Data Deliverable: Cover Sheet

SAF#	Sample ID	WSCF#	Matrix
F10-025	B22VR2	W09GR00957	SOIL

M4W41-SLF-09-326

ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Introduction

Two (2) S&GRP samples were received at the WSCF Laboratory on November 9, 2009. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED" so proper preservation is assumed.

The following generic data qualifiers (i.e., B, D, and J) may be applicable to this report, as appropriate;

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wetchem analyses), as appropriate.
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report*, pages 11 through 12, for a complete listing of approved analytical methods.

Organic Comments

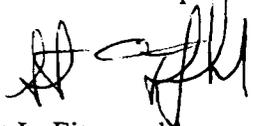
Sample concentrations are corrected for moisture content and reported on a dry weight basis.

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 16 through 18 for QC details. Analytical Note(s):

- B22VR3 – Analyses of this Methanol Blank sample and its associated high concentration VOA sample was not required.

All QC controls are within the established limits.

We certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by the following signatures.



Scot L. Fitzgerald
WSCF Analytical Laboratory Manager

Richard Barker 12/30/09
Richard Barker
WSCF Client Services

M4W41-SLF-09-326

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 12 pages
Including cover page

WSCF
ANALYTICAL RESULTS REPORT

for
Groundwater Remediation Program

Richland, WA 99354

Attention: Steve Trent

Analytical: *[Signature]* S. Fitzgerald 12/30/09
Client Services: *[Signature]* Richard Barker 12/30/09

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#: WSCF20091138
Report Date: 28-dec-2009
Report WGPP/ver. 5.2
Groundwater Remediation Program

Department: Inorganic

W13q Worklist/Batch/QC Report for Group# WSCF20091138

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
				SAMPLE	W09GR00957	Percent Solids

W13q Worklist/Batch/QC Report for Group# WSCF20091138

WL#	S#	Batch	QC#	Tray Type	Sample#	Test
			45358	BLANK		VOA Ground Water Protection
			45358	LCS		VOA Ground Water Protection
			45358	MS	W09GR00957	VOA Ground Water Protection
			45358	MSD	W09GR00957	VOA Ground Water Protection
			45358	SAMPLE	W09GR00957	VOA Ground Water Protection
			45358	SPK-RPD	W09GR00957	VOA Ground Water Protection
			45358	SURR	W09GR00957	VOA Ground Water Protection

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-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

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: 28-dec-2009
Report#: WSCF20091138
Report WGPMM/5.2

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)

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: 28-dec-2009
Report#: WSCF20091138
Report WGGPPM/5.2

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F10-025
Sample # W09GR00957
Client ID: B22VR2

Group #: WSCF20091138
Department: Inorganic
Sampled: 11/09/09
Received: 11/09/09

GPP WSCF
Matrix: SOIL

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Total solids	TS	LA-519-412		97.8	Percent			1.00	0.0		11/12/09

MDL = Minimum Detection Limit 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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F10-025
Sample # W09GR00957
Client ID: B22VR2

Group #: WSCF20091138
Department: Organic
Sampled: 11/09/09
Received: 11/09/09

Matrix: SOIL

GPP
WSCF

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
VOA Ground Water Protection											
1,1-Dichloroethene	75-35-4	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Trichloroethene	79-01-6	LA-523-455	U	< 0.290	ug/kg			1.00	0.29		11/17/09
Benzene	71-43-2	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Toluene	108-88-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Chlorobenzene	108-90-7	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
1,1-Dichloroethane	75-34-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Ethylbenzene	100-41-4	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Styrene	100-42-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
1,2-Dichloroethane	107-06-2	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
4-Methyl-2-Pentanone	108-10-1	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Dibromochloromethane	124-48-1	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Tetrachloroethene	127-18-4	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Xylenes (total)	1330-20-7	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
1,2-Dichloroethene(Total)	540-59-0	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Carbon tetrachloride	56-23-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
2-Hexanone	591-78-6	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Acetone	67-64-1	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Chloroform	67-66-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Bromomethane	74-83-9	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Chloromethane	74-87-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Chloroethane	75-00-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09

MDL = Minimum Detection Limit 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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL RESULTS REPORT

Attention: Steve Trent
SAF Number: F10-025
Sample # W09GR00957
Client ID: B22VR2

Group #: WSCF20091138
Department: Organic
Sampled: 11/09/09
Received: 11/09/09

Matrix: SOIL
GPP
WSCF

Test Performed	CAS #	Method	RQ	Result	Unit	TP Err	Unit	DF	MDL	PQL	Analysis Date
Vinyl chloride	75-01-4	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Methylenechloride	75-09-2	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Carbon disulfide	75-15-0	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Bromoform	75-25-2	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Bromodichloromethane	75-27-4	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
1,2-Dichloropropane	78-87-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
2-Butanone	78-93-3	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
Trichloromonofluoromethane	75-69-4	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
trans-1,2-Dichloroethylene	156-60-5	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09
cis-1,2-Dichloroethylene	156-59-2	LA-523-455	U	< 1.40	ug/kg			1.00	1.4		11/17/09

MDL = Minimum Detection Limit 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

Report WGPP/ver. 5.2

Groundwater Remediation Program

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20091138
 Matrix: SOLID
 Test: VOA Ground Water Protection

Sample Date: 11/09/09
 Receive Date: 11/09/09

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	39.270	116.000	% Recov	63.000	117.000				11/17/09
MS	Benzene	71-43-2	39.930	118.000	% Recov	75.000	129.000				11/17/09
MS	4-Bromofluorobenzene(Surr)	460-00-4	70.520	104.000	% Recov	75.000	125.000				11/17/09
MS	Chlorobenzene	108-90-7	38.700	115.000	% Recov	79.000	119.000				11/17/09
MS	1,2-Dichloroethane-d4(Surr)	17060-07-0	80.240	119.000	% Recov	75.000	125.000				11/17/09
MS	Toluene-d8(Surr)	2037-26-5	68.700	102.000	% Recov	75.000	125.000				11/17/09
MS	Toluene	108-88-3	40.180	119.000	% Recov	76.000	120.000				11/17/09
MS	Trichloroethene	79-01-6	38.450	114.000	% Recov	73.000	123.000				11/17/09
MSD	1,1-Dichloroethene	75-35-4	38.460	117.000	% Recov	63.000	117.000				11/17/09
MSD	Benzene	71-43-2	38.270	116.000	% Recov	75.000	129.000				11/17/09
MSD	4-Bromofluorobenzene(Surr)	460-00-4	65.360	99.300	% Recov	75.000	125.000				11/17/09
MSD	Chlorobenzene	108-90-7	38.750	118.000	% Recov	79.000	119.000				11/17/09
MSD	1,2-Dichloroethane-d4(Surr)	17060-07-0	76.670	117.000	% Recov	75.000	125.000				11/17/09
MSD	Toluene-d8(Surr)	2037-26-5	64.640	98.300	% Recov	75.000	125.000				11/17/09
MSD	Toluene	108-88-3	39.380	120.000	% Recov	76.000	120.000				11/17/09
MSD	Trichloroethene	79-01-6	38.590	117.000	% Recov	73.000	123.000				11/17/09
SPK-RPD	1,1-Dichloroethene	75-35-4	117.000		RPD			0.858	20.000		11/17/09
SPK-RPD	Benzene	71-43-2	116.000		RPD			1.709	20.000		11/17/09
SPK-RPD	4-Bromofluorobenzene(Surr)	460-00-4	99.300		RPD			4.624	20.000		11/17/09
SPK-RPD	Chlorobenzene	108-90-7	118.000		RPD			2.575	20.000		11/17/09
SPK-RPD	1,2-Dichloroethane-d4(Surr)	17060-07-0	117.000		RPD			1.695	20.000		11/17/09
SPK-RPD	Toluene-d8(Surr)	2037-26-5	98.300		RPD			3.694	20.000		11/17/09
SPK-RPD	Toluene	108-88-3	120.000		RPD			0.837	20.000		11/17/09
SPK-RPD	Trichloroethene	79-01-6	117.000		RPD			2.597	20.000		11/17/09
SURR	4-Bromofluorobenzene(Surr)	460-00-4	75.050	105.000	% Recov	75.000	125.000				11/17/09
SURR	1,2-Dichloroethane-d4(Surr)	17060-07-0	84.620	118.000	% Recov	75.000	125.000				11/17/09

Lab ID: W09GR00957
 BATCH QC ASSOCIATED WITH SAMPLE

WSCF ANALYTICAL LABORATORY QC REPORT

Department: Organic

SDG Number: WSCF20091138
 Matrix: SOLID
 Test: VOA Ground Water Protection

Sample Date: 11/09/09
 Receive Date: 11/09/09

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	73.420	103.000	% Recov	80.000	126.000				11/17/09
BATCH QC											
BLANK	1,1-Dichloroethane	75-34-3	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	1,1,1-Trichloroethane	71-55-6	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	1,1,2-Trichloroethane	79-00-5	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	1,1,2,2-Tetrachloroethane	79-34-5	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	1,1-Dichloroethene	75-35-4	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	1,2-Dichloroethane	107-06-2	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	1,2-Dichloroethene(Total)	540-59-0	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	2-Hexanone	591-78-6	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	4-Methyl-2-Pentanone	108-10-1	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Acetone	67-64-1	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Bromodichloromethane	75-27-4	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Benzene	71-43-2	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	4-Bromofluorobenzene(Surr)	460-00-4	52.890	106.000	% Recov	75.000	125.000				11/17/09
BLANK	Bromoform	75-25-2	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Carbon disulfide	75-15-0	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Carbon tetrachloride	56-23-5	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Dibromochloromethane	124-48-1	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Chloroform	67-66-3	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Chlorobenzene	108-90-7	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	cis-1,2-Dichloroethylene	156-59-2	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	cis-1,3-Dichloropropene	10061-01-5	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Chloroethane	75-00-3	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	1,2-Dichloroethane-d4(Surr)	17060-07-0	59.180	118.000	% Recov	75.000	125.000				11/17/09
BLANK	trans-1,2-Dichloroethylene	156-60-5	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	1,2-Dichloropropane	78-87-5	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Ethylbenzene	100-41-4	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Bromomethane	74-83-9	< 1.0	n/a	ug/Kg					U	11/17/09

WSCF ANALYTICAL LABORATORY QC REPORT

Department: **Organic**

SDG Number: WSCF20091138
 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	Chloromethane	74-87-3	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	2-Butanone	78-93-3	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Methylenechloride	75-09-2	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Tetrachloroethene	127-18-4	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Styrene	100-42-5	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Xylenes (total)	1330-20-7	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Toluene-d8(Surr)	2037-26-5	50.920	102.000	% Recov	80.000	126.000				11/17/09
BLANK	Toluene	108-88-3	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	trans-1,3-Dichloropropene	10061-02-6	< 1.0	n/a	ug/Kg					U	11/17/09
BLANK	Trichloromonofluoromethane	75-69-4	< 1.0	n/a	ug/Kg	0.000	5.000			U	11/17/09
BLANK	Trichloroethene	79-01-6	< 0.20	n/a	ug/Kg					U	11/17/09
BLANK	Vinyl chloride	75-01-4	< 1.0	n/a	ug/Kg					U	11/17/09
LCS	1,1-Dichloroethene	75-35-4	27.090	108.000	% Recov	75.000	125.000				11/17/09
LCS	Benzene	71-43-2	29.020	116.000	% Recov	75.000	125.000				11/17/09
LCS	4-Bromofluorobenzene(Surr)	460-00-4	53.930	108.000	% Recov	75.000	125.000				11/17/09
LCS	Chlorobenzene	108-90-7	29.600	118.000	% Recov	75.000	125.000				11/17/09
LCS	1,2-Dichloroethane-d4(Surr)	17060-07-0	59.430	119.000	% Recov	75.000	125.000				11/17/09
LCS	Toluene-d8(Surr)	2037-26-5	49.750	99.500	% Recov	80.000	126.000				11/17/09
LCS	Toluene	108-88-3	29.880	120.000	% Recov	75.000	125.000				11/17/09
LCS	Trichloroethene	79-01-6	27.700	111.000	% Recov	75.000	125.000				11/17/09

M4W41-SLF-09-326

ATTACHMENT 4

SAMPLE RECEIPT INFORMATION, INCL. RECORD SHEET

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

ACKNOWLEDGMENT OF SAMPLES RECEIVED

12/22/09
- 12

Groundwater Remediation Program

Richland, WA 99354
Attn: Steve Trent

Customer Code: GPP
PO#: 302117/ES10
Group#: 20091138
Project#: F10-025
Proj Mgr: Steve Trent
Phone: 373-5886

The following samples were received from you on 11/09/09. 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
W09GR00957	B22VR2	GPP @VOA-GPP PERSOLID	Solid, or handle as if solid	11/09/09
W09GR00958	B22VR3	GPP @VOA-GPP	Solid, or handle as if solid	11/09/09

Test Acronym Description

Test Acronym	Description
@VOA-GPP	VOA Ground Water Protection
PERSOLID	Percent Solids

CH2MHill Plateau Remediation Company

COLLECTOR

Kova Remo

SAMPLING LOCATION

C7514 (299-E24-25); 1-006D

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.

** 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) (Trichloromonofluoromethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloromethylene)

(2)VOA - 5035/8260 (HIGH LEVEL); VOA - 5035/8260 (HIGH LEVEL) - (Add-On) (Trichloromonofluoromethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene)

 ORIGINAL

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

COMPANY CONTACT

DYERMAN, DL

TELEPHONE NO.

373-2530

PROJECT DESIGNATION

200-PW-2 OU Characterization Vadose Zone - Soil ("L" Well)

FIELD LOGBOOK NO.

HNF-N-491-5

ACTUAL SAMPLE DEPTH

9.9 to 12.4'

OFFSITE PROPERTY NO.

N/A

PROJECT COORDINATOR

DYERMAN, DL

SAF NO.

F10-025

COA

302117ES10

BILL OF LADING/AIR BILL NO.

N/A

F10-025-014

PAGE 2 OF 2

PRICE CODE

8N

AIR QUALITY

DATA

TURNAROUND

45 Days / 45 Days

METHOD OF SHIPMENT

GOVERNMENT VEHICLE

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 COMPANY CONTACT: DYEKMAN, DL
 TELEPHONE NO.: 373-2530
 PROJECT COORDINATOR: DYEKMAN, DL
 PRICE CODE: 8N
 DATA TURNAROUND: 45 Days / 45 Days
 PROJECT DESIGNATION: 200-PW-2 OU Characterization Vadose Zone - Soil ("L" Well)
 SAF NO.: F10-025
 AIR QUALITY:
 FIELD LOGBOOK NO.: *9911*
 ACTUAL SAMPLE DEPTH: *9.8 to 12.4*
 COA: 302117ES10
 METHOD OF SHIPMENT: GOVERNMENT VEHICLE
 OFFSITE PROPERTY NO.: *HNF-N-4915*
 BILL OF LADING/AIR BILL NO.:
 SHIPPED TO: Waste Sampling & Characterization
 N/A

MATRIX*	POSSIBLE SAMPLE HAZARDS/REMARKS	PRESERVATION	TYPE OF CONTAINER	NO. OF CONTAINER(S)	VOLUME	SAMPLE ANALYSIS	SAMPLE DATE	SAMPLE TIME
A=Air DL=Drum L=Liquid DS=Drum S=Solid L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation 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)	Cool-9C	ags*	1	40mL		<i>11-9-09</i>	<i>1058</i>

SPECIAL HANDLING AND/OR STORAGE	RADIOACTIVE TIE TO:	SAMPLE NO.	MATRIX*
	B22V96	B22VR3	SOIL
		<i>W09 G.00 958</i>	

CHAIN OF POSSESSION	SIGN/PRINT NAMES	DATE/TIME	DATE/TIME
RELINQUISHED BY/REMOVED FROM <i>Ed Kinn, Erin + John</i>	RECEIVED BY/STORED IN <i>WJ Kessler</i>	<i>11-9-09</i>	<i>1510</i>
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		
RELINQUISHED BY/REMOVED FROM	RECEIVED BY/STORED IN		
LABORATORY SECTION <i>23</i>	RECEIVED BY		
FINAL SAMPLE DISPOSITION <i>04</i>	DISPOSAL METHOD		

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 (TCL); VOA - 5035/8260 - (Add-On)
 (Trichloromonofluoromethane, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene)



TITLE: ORIGINAL
 DATE/TIME: _____
 DISPOSED BY: _____
 DATE/TIME: _____

Attachment 1 - Sample Record Sheet

SAMPLE RECORD SHEET

Location: 07514 - 299 - E24-25 I 006 Dup

Sampler Initials and Date:

Sample Number	Sample Suffix ¹	Tare Weight provided (grams)	Tare Weight prior to sample ² (grams)	Initial Weight ³ (grams)	Total Weight ⁴ (grams)	Soil Weight ⁵ (grams)	Methanol in sample bottle (ml)
B22VR2	K	No Methanol		32.4	35.9	3.5	No Methanol
B22VR2	L			32.3	36.0	3.7	
B22VR2	M			32.3	34.1	3.8	
B22VR2	N			32.4	36.6	4.2	
B22VR2	P			32.3	36.2	3.9	
B22VR2	W	38.7	38.5	39.0	43.3	4.3	10ml
B22VR2	X	38.8	38.7	39.0	42.3	3.3	10ml
B22VR2	Y	38.2	38.0	38.4	41.9	3.5	10ml
B22VR3	*	37.9	37.8	38.2	38.2	0	10ml

¹Sample suffix of K, L, M, N, and P relate to low-level concentration samples and will not have any preservation beyond freezing between -7°C and -20°C.
 Sample suffix of W, X, and Y relate to methanol preservation for high-level samples.
 Sample suffix of "*" relates to methanol blank. Cool these samples to 4°C ± 2°C.

²Tare weight prior to sample must be within +/- 0.2 grams of Vendors tare weight or bottle cannot be used. Weigh only the bottle, no labels, stickers or bags.

³Initial weight is to include all labels, stickers, bags, methanol (for vendor filled methanol samples with suffix W,X,Y and *) spin bars (for samples with suffix K,L,M,N and P) and anything else that will be associated with the bottle when it is weighed with the sample.

⁴Ensure that everything weighed for the empty bottle and no additional items (besides the sample) is weighed.

⁵Soil weight is the vial with sample minus Initial Weight.