WSCF Laboratory

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RECEIVED SEPTEMBER 29, 2009

Memorandum

To: Michael Neely
CH2M-HILL PRC
PO Box 1600
Richland, WA 99352

Date: September 28, 2009

From: WSCF Laboratory
WSCF Analytical Chemistry

CC:

Subject: FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF91032

Reference: (1) SOW, Mod 2, #36587, Release 3
(2) HNF-SD-CD-QAPP-017, Rev 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following information for sample delivery group WSCF91032

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

Electronically signed by Markus Stauffer
For Lab Manager

Attachments 4

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF91032
Data Deliverable Date 09/15/09

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F09-061	B21WF5	91032001	WATER	09/08/09	09/08/09
F09-061	B21WF7	91032002	WATER	09/08/09	09/08/09

ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Attachment 2
Narrative
WSCF91032

- Batch QC performed on sample #91032002.
    - Silver recovery in the MS/MSD were both at 144% which may indicate a matrix issue. Appropriate sample was N flagged.
    - Copper and Zinc were not captured for sample 91032002 from the original analysis. The sample was reanalyzed to acquire the result for Copper and Zinc. The QC from sample 91031002 was applied to both the original and the reanalysis.

All other QC controls are within the established limits.

pH – The hold time requirement for this analysis was met. A Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

All QC controls are within the established limits.

Organic Comments

PCB – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

All QC controls are within the established limits.

Semi-VOA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

All QC controls are within the established limits.

TPHD-WA – The hold time requirements for this analysis were met. A Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

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.

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

Attachment 2
Narrative
WSCF91032

Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 41 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Michael Neely

Contract #	MOA-FH-CHPRC-2008
Group #	WSCF91032
Report Date	September 28, 2009

Analytical: Electronically signed by Markus Stauffer

Client Services: Electronically signed by Andrew Kopriva

All radiochemistry results are reported on an "as received" basis.

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Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF91032

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
63746	63747	4	BLANK	14813	BLANK		ICP-2008 MS All possible metal
63746	63747	5	LCS	14814	LCS		ICP-2008 MS All possible metal
63746	63747	24	SAMPLE	91032002	B21WF7		ICP-2008 MS All possible metal
63746	63747	27	MS	14815	B21WF7(91032002MS)	91032002	ICP-2008 MS All possible metal
63746	63747	28	MSD	14816	B21WF7(91032002MSD)	91032002	ICP-2008 MS All possible metal
63746	63869	4	BLANK	14813	BLANK		ICP-2008 MS All possible metal
63746	63869	5	LCS	14814	LCS		ICP-2008 MS All possible metal
63746	63869	6	SAMPLE	91032002	B21WF7		ICP-2008 MS All possible metal
63746	63869	7	MS	14815	B21WF7(91032002MS)	91032002	ICP-2008 MS All possible metal
63746	63869	8	MSD	14816	B21WF7(91032002MSD)	91032002	ICP-2008 MS All possible metal
63868	63871	1	SAMPLE	91032002	B21WF7		ICP-6010 - All possible metals
63868	63871	2	BLANK	15081	BLANK		ICP-6010 - All possible metals
63868	63871	3	LCS	15082	LCS		ICP-6010 - All possible metals
63868	63871	4	MS	15083	B21WF7(91032002MS)	91032002	ICP-6010 - All possible metals
63868	63871	5	MSD	15084	B21WF7(91032002MSD)	91032002	ICP-6010 - All possible metals

Batch QC List

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
63488	63800	1	MS	14644	B21WF7(91032002MS)	91032002	Extractable Diesel and Petroleum
63488	63800	2	MSD	14645	B21WF7(91032002MSD)	91032002	Extractable Diesel and Petroleum
63488	63800	3	SAMPLE	91032002	B21WF7		Extractable Diesel and Petroleum
63488	63800	4	BLANK	14640	BLANK		Extractable Diesel and Petroleum
63488	63800	5	LCS	14641	LCS		Extractable Diesel and Petroleum
63535	63751	1	MS	14768	B21WF7(91032002MS)	91032002	PCBs by EPA SW-846 Method 8082
63535	63751	2	MSD	14769	B21WF7(91032002MSD)	91032002	PCBs by EPA SW-846 Method 8082
63535	63751	3	BLANK	14766	BLANK		PCBs by EPA SW-846 Method 8082
63535	63751	4	LCS	14767	LCS		PCBs by EPA SW-846 Method 8082
63535	63751	5	SAMPLE	91032002	B21WF7		PCBs by EPA SW-846 Method 8082
63811	63838	1	MS	15043	B21WF7(91032002MS)	91032002	SW-846 8270D Semivolatiles
63811	63838	2	MSD	15044	B21WF7(91032002MSD)	91032002	SW-846 8270D Semivolatiles
63811	63838	3	SAMPLE	91032002	B21WF7		SW-846 8270D Semivolatiles
63811	63838	4	BLANK	15041	BLANK		SW-846 8270D Semivolatiles
63811	63838	5	LCS	15042	LCS		SW-846 8270D Semivolatiles

Batch QC List

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91032

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
63507	63509	1	BLANK	14666	BLANK		SW-846 8260B Volatiles, separate prep
63507	63509	2	LCS	14667	LCS		SW-846 8260B Volatiles, separate prep
63507	63509	3	MS	14668	B21HR0(91017001MS)	91017001	SW-846 8260B Volatiles, separate prep
63507	63509	4	MSD	14669	B21HR0(91017001MSD)	91017001	SW-846 8260B Volatiles, separate prep
63507	63509	13	SAMPLE	91032001	B21WF5		SW-846 8260B Volatiles, separate prep
63507	63509	14	SAMPLE	91032002	B21WF7		SW-846 8260B Volatiles, separate prep

Batch QC List

Attention Michael Neely
Department Wet Chemistry

Group # WSCF91032

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
63464	63464	1	LCS	14580	LCS		pH Direct Measurement (W)
63464	63464	2	DUP	14581	B21WF7(91032002DUP)	91032002	pH Direct Measurement (W)
63464	63464	3	SAMPLE	91032002	B21WF7		pH Direct Measurement (W)
63464	63464	5	LCS	14582	LCS		pH Direct Measurement (W)

Method Reference

Attention Michael Neely
Department Inorganic

Group # WSCF91032

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, industry methods or HEIS 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 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-505-411	Elemental Analysis by ICP Atomic Emission Spectroscopy (ICP-AES)		
	EPA SW-846	6010C	Inductively Coupled Plasma-Atomic Emmision Spectrometry
	HEIS	6010_METALS_ICP	Inductively Coupled Plasma-Atomic Emmision Spectrometry
LA-505-412	Determination of Trace Elements in Waters & Wastes by ICP-Mass Spectrometry		
	EPA-600/R-94-111	200.8	Determination of Trace Elements in Waters and Waste by Inductively Coupled Plasma
	HEIS	200.8_METALS_ICPMS	Determination of Trace Elements in Waters and Waste by Inductively Coupled Plasma, Mass Spec.

Note: A complete list of WSCF analytical procedures and reference regulatory or industry methods is available online at http://www7.rl.gov/rapidweb/AS-DOL/index.cfm

Method Reference

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

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, industry methods or HEIS 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 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	Polychlorinated Biphenyls (PCB'S) 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
LA-523-456	Semivolatile Sample Analysis by SW-846 Method 8270D		
	EPA SW-846	8000B	Determinative Chromagraphic Separations
	EPA SW-846	8270D	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-Dx, Extractible Diesel and Petroleum Productions Analysis in Soil and Water		
	WDOE	Total Petroleum Hydrocarbons in Diesel	
		HEIS	
	HEIS|WTPH_DIESEL		WDOE|Total Petroleum Hydrocarbons in Diesel
			HEIS|WTPH_DIESEL|TPH Diesel

Note: A complete list of WSCF analytical procedures and reference regulatory or industry methods is available online at http://www7.rl.gov/rapidweb/AS-DOL/index.cfm

Method Reference

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91032

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, industry methods or HEIS 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 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	Volatile Sample Analysis by SW-846 Method 8260B		
	EPA SW-846	8000B	Determinative Chromographic 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 reference regulatory or industry methods is available online at http://www7.rl.gov/rapidweb/AS-DOL/index.cfm

Method Reference

Attention Michael Neely
Department Wet Chemistry

Group # WSCF91032

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, industry methods or HEIS 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 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-212-402	Determination of pH Direct Measurement - WSCF		
	EPA-600/4-79-020	pH	150.1
	EPA SW-846	9040B	pH Electrometric Measurement
	HEIS	150.1_PH	pH

Note: A complete list of WSCF analytical procedures and reference regulatory or industry methods is available online at http://www7.rl.gov/rapidweb/AS-DOL/index.cfm

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF91032

Sample # 91032002
SAF# F09-061
Sample ID B21WF7

Matrix WATER
Sampled 09/08/09
Received 09/08/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**09/17/09**
ICP-AES										
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/17/09
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/17/09
Boron	7440-42-8	LA-505-411	U	<19		ug/L	1	19	95	09/17/09
ICPMS Prep										**09/15/09**
ICP-MS										
Manganese	7439-96-5	LA-505-412	U	<0.10		ug/L	1	0.10	1.0	09/15/09
Nickel	7440-02-0	LA-505-412	U	<0.20		ug/L	1	0.20	2.0	09/15/09
Silver	7440-22-4	LA-505-412	UN	<0.10		ug/L	1	0.10	1.0	09/15/09
Antimony	7440-36-0	LA-505-412	U	<0.30		ug/L	1	0.30	3.0	09/15/09
Barium	7440-39-3	LA-505-412	U	<0.20		ug/L	1	0.20	2.0	09/15/09
Beryllium	7440-41-7	LA-505-412	U	<0.050		ug/L	1	0.050	0.50	09/15/09
Cadmium	7440-43-9	LA-505-412	U	<0.10		ug/L	1	0.10	1.0	09/15/09
Chromium	7440-47-3	LA-505-412	U	<0.50		ug/L	1	0.50	5.0	09/15/09
Cobalt	7440-48-4	LA-505-412	U	<0.050		ug/L	1	0.050	0.25	09/15/09
Copper	7440-50-8	LA-505-412		1.68		ug/L	1	0.10	1.0	09/16/09
Vanadium	7440-62-2	LA-505-412	U	<0.20		ug/L	1	0.20	2.0	09/15/09
Zinc	7440-66-6	LA-505-412	U	<0.80		ug/L	1	0.80	5.0	09/16/09

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD sample recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF91032

Sample # 91032002
SAF# F09-061
Sample ID B21WF7

Matrix WATER
Sampled 09/08/09
Received 09/08/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-412	U	<0.10		ug/L	1	0.10	1.0	09/15/09
Mercury	7439-97-6	LA-505-412	U	<0.050		ug/L	1	0.050	0.20	09/15/09
Strontium	7440-24-6	LA-505-412	U	<0.10		ug/L	1	0.10	1.0	09/15/09
Thallium	7440-28-0	LA-505-412	U	<0.050		ug/L	1	0.050	0.50	09/15/09
Tin	7440-31-5	LA-505-412	U	<0.050		ug/L	1	0.050	0.50	09/15/09
Uranium	7440-61-1	LA-505-412	U	<0.050		ug/L	1	0.050	0.20	09/15/09
Arsenic	7440-38-2	LA-505-412	U	<0.40		ug/L	1	0.40	4.0	09/15/09
Selenium	7782-49-2	LA-505-412	U	<0.30		ug/L	1	0.30	3.0	09/16/09

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DF = Dilution Factor
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B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
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E - Analyte is an estimate, see comment section.
N - MS and/or MSD sample recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

Sample # 91032002
SAF# F09-061
Sample ID B21WF7

Matrix WATER
Sampled 09/08/09
Received 09/08/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8270 Prep										**09/14/09**
SW-846 8270D										
4-Nitrophenol	100-02-7	LA-523-456	U	<0.6		ug/L	1	0.6	4	09/16/09
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	<0.9		ug/L	1	0.9	4	09/16/09
Phenol	108-95-2	LA-523-456	U	<0.9		ug/L	1	0.9	4	09/16/09
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	<0.7		ug/L	1	0.7	4	09/16/09
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
Pyrene	129-00-0	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
n-Nitroso-di-n-propylamine	621-64-7	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
Acenaphthene	83-32-9	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
Pentachlorophenol	87-86-5	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
2-Chlorophenol	95-57-8	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
Anthracene	120-12-7	LA-523-456	U	<0.6		ug/L	1	0.6	4	09/16/09
Benzo(g,h,i)perylene	191-24-2	LA-523-456	U	<0.7		ug/L	1	0.7	4	09/16/09
Indeno(1,2,3-cd)pyrene	193-39-5	LA-523-456	U	<0.7		ug/L	1	0.7	4	09/16/09
Benzo(b)fluoranthene	205-99-2	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
Fluoranthene	206-44-0	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09

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B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumpt. compound evidence based on MS library search.

T - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

Sample # 91032002
SAF# F09-061
Sample ID B21WF7

Matrix WATER
Sampled 09/08/09
Received 09/08/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Benzo(k)fluoranthene	207-08-9	LA-523-456	U	<0.7		ug/L	1	0.7	4	09/16/09
Acenaphthylene	208-96-8	LA-523-456	U	<0.6		ug/L	1	0.6	4	09/16/09
Chrysene	218-01-9	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
Benzo(a)pyrene	50-32-8	LA-523-456	U	<0.6		ug/L	1	0.6	4	09/16/09
Dibenzo(a,h)anthracene	53-70-3	LA-523-456	U	<0.6		ug/L	1	0.6	4	09/16/09
Benzo(a)anthracene	56-55-3	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
Phenanthrene	85-01-8	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
Fluorene	86-73-7	LA-523-456	U	<0.6		ug/L	1	0.6	4	09/16/09
Naphthalene	91-20-3	LA-523-456	U	<0.5		ug/L	1	0.5	4	09/16/09
Organic Prep MISC										**09/11/09**
TPHDWA										
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	09/16/09
Kerosene	TPHKEROSEN	LA-523-493	U	<70		ug/L	1	70	100	09/16/09
SPE										**09/14/09**
PCBs										
Aroclor-1016	12674-11-2	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	09/14/09
Aroclor-1221	11104-28-2	LA-523-427	U	<0.2		ug/L	1	0.2	0.4	09/14/09
Aroclor-1232	11141-16-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	09/14/09
Aroclor-1242	53469-21-9	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	09/14/09

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WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

Sample # 91032002
SAF# F09-061
Sample ID B21WF7

Matrix WATER
Sampled 09/08/09
Received 09/08/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Aroclor-1248	12672-29-6	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	09/14/09
Aroclor-1254	11097-69-1	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	09/14/09
Aroclor-1260	11096-82-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	09/14/09

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumpt. compound evidence based on MS library search.

T - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91032

Sample # 91032001
SAF# F09-061
Sample ID B21WF5

Matrix WATER
Sampled 09/08/09
Received 09/08/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8260 Prep										**09/10/09**
SW-846 8260B										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	09/10/09

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumptive compound based on MS Library search.

T - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91032

Sample # 91032001
SAF# F09-061
Sample ID B21WF5

Matrix WATER
Sampled 09/08/09
Received 09/08/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
2-Hexanone	591-78-6	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Chloromethane	74-87-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Chloroethane	75-00-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Methylene chloride	75-09-2	LA-523-455	J	3.2		ug/L	1	1	5	09/10/09
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Bromodichloromethane	75-27-4	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumptive compound based on MS Library search.

T - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91032

Sample # 91032002
SAF# F09-061
Sample ID B21WF7

Matrix WATER
Sampled 09/08/09
Received 09/08/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8260 Prep										**09/10/09**
SW-846 8260B										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	09/10/09

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumptive compound based on MS Library search.

T - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91032

Sample # 91032002
SAF# F09-061
Sample ID B21WF7

Matrix WATER
Sampled 09/08/09
Received 09/08/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
2-Hexanone	591-78-6	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Chloromethane	74-87-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Chloroethane	75-00-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Methylene chloride	75-09-2	LA-523-455	J	4.6		ug/L	1	1	5	09/10/09
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Bromodichloromethane	75-27-4	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	09/10/09

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumptive compound based on MS Library search.

T - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF91032

Sample # 91032002
SAF# F09-061
Sample ID B21WF7

Matrix WATER
Sampled 09/08/09
Received 09/08/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
pH										**09/09/09**
pH										
pH	PH	LA-212-402		6.04		unitless	1	0.010	0.50	09/09/09

MDL = Minimum Detection
RQ = Result Qualifier
TP Err = Total Propagated
DF = Dilution Factor
+ - Indicates more than nine qualifier

B - Analyte < the RDL but >= the IDL/MDL.
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
N - MS and/or MSD sample recovery outside control limits.
U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.

Quality Control Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF91032

QC Batch 63464
Associated Samples 91032002

Test pH Direct Measurement (W)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #14580**							
pH	PH		8.00	unitless	100	98.875 - 101.25				09/09/09
DUP			**QC Sample #14581**							
			Original 91032002							
pH	PH	6.04	5.94	unitless			1.70	20		09/09/09
LCS			**QC Sample #14582**							
pH	PH		8.03	unitless	100.4	98.875 - 101.25				09/09/09

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

QC Batch 63488
Associated Samples 91032002

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #14640**							
Diesel	TPHDIESEL		<80	ug/L					U	09/16/09
Kerosene	TPHKEROSE		<80	ug/L					U	09/16/09
LCS			**QC Sample #14641**							
Diesel	TPHDIESEL		2500	ug/L	99.3	65 - 128				09/16/09
MS			**QC Sample #14644**							
			Original 91032002							
Diesel	TPHDIESEL	<70	2200	ug/L	95.2	73 - 123				09/16/09
MSD			**QC Sample #14645**							
			Original 91032002					**Paired**	**14644**	
Diesel	TPHDIESEL	<70	2400	ug/L	103.7	73 - 123	8.50	20		09/16/09

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91032

QC Batch 63507
Associated Samples 91032001, 91032002

Test SW-846 8260B Volatiles, separate prep

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #14666**							
1,1-Dichloroethene	75-35-4		<1	ug/L					U	09/10/09
Trichloroethene	79-01-6		<1	ug/L					U	09/10/09
Benzene	71-43-2		<1	ug/L					U	09/10/09
Toluene	108-88-3		<1	ug/L					U	09/10/09
Chlorobenzene	108-90-7		<1	ug/L					U	09/10/09
1,1-Dichloroethane	75-34-3		<1	ug/L					U	09/10/09
Ethylbenzene	100-41-4		<1	ug/L					U	09/10/09
Styrene	100-42-5		<1	ug/L					U	09/10/09
cis-1,3-Dichloropropene	10061-01-5		<1	ug/L					U	09/10/09
trans-1,3-Dichloroprope	10061-02-6		<1	ug/L					U	09/10/09
1,2-Dichloroethane	107-06-2		<1	ug/L					U	09/10/09
Methyl isobutyl ketone	108-10-1		<1	ug/L					U	09/10/09
Dibromochloromethane	124-48-1		<1	ug/L					U	09/10/09
Tetrachloroethene	127-18-4		<1	ug/L					U	09/10/09
Total Xylenes	1330-20-7		<1	ug/L					U	09/10/09
Total	540-59-0		<1	ug/L					U	09/10/09
Carbon tetrachloride	56-23-5		<1	ug/L					U	09/10/09
2-Hexanone	591-78-6		<1	ug/L					U	09/10/09
Acetone	67-64-1		<1	ug/L					U	09/10/09
Chloroform	67-66-3		<1	ug/L					U	09/10/09
1,1,1-Trichloroethane	71-55-6		<1	ug/L					U	09/10/09

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91032

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Bromomethane	74-83-9		<1	ug/L					U	09/10/09
Chloromethane	74-87-3		<1	ug/L					U	09/10/09
Chloroethane	75-00-3		<1	ug/L					U	09/10/09
Vinyl chloride	75-01-4		<1	ug/L					U	09/10/09
Methylene chloride	75-09-2		<1	ug/L					U	09/10/09
Carbon disulfide	75-15-0		<1	ug/L					U	09/10/09
Bromoform	75-25-2		<1	ug/L					U	09/10/09
Bromodichloromethane	75-27-4		<1	ug/L					U	09/10/09
1,2-Dichloropropane	78-87-5		<1	ug/L					U	09/10/09
Methyl ethyl ketone	78-93-3		<1	ug/L					U	09/10/09
1,1,2-Trichloroethane	79-00-5		<1	ug/L					U	09/10/09
1,1,2,2-Tetrachloroetha	79-34-5		<1	ug/L					U	09/10/09
LCS			**QC Sample #14667**							
1,1-Dichloroethene	75-35-4		22	ug/L	87.5	75 - 125				09/10/09
Trichloroethene	79-01-6		21	ug/L	84.3	75 - 125				09/10/09
Benzene	71-43-2		23	ug/L	90.6	75 - 125				09/10/09
Toluene	108-88-3		23	ug/L	91.4	75 - 125				09/10/09
Chlorobenzene	108-90-7		24	ug/L	94.9	75 - 125				09/10/09
MS			**QC Sample #14668**							
			Original 91017001							
1,1-Dichloroethene	75-35-4		21	ug/L	85.8	75 - 125				09/10/09
Trichloroethene	79-01-6		21	ug/L	83	75 - 125				09/10/09
Benzene	71-43-2		22	ug/L	89.8	75 - 125				09/10/09
Toluene	108-88-3		23	ug/L	90.7	75 - 125				09/10/09
Chlorobenzene	108-90-7		23	ug/L	93.6	75 - 125				09/10/09
MSD			**QC Sample #14669**							
			Original 91017001					**Paired 14668**		

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91032

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,1-Dichloroethene	75-35-4		21	ug/L	82.4	75 - 125	4.00	20		09/10/09
Trichloroethene	79-01-6		21	ug/L	82.8	75 - 125	0.20	20		09/10/09
Benzene	71-43-2		23	ug/L	91.6	75 - 125	2.00	20		09/10/09
Toluene	108-88-3		23	ug/L	92.6	75 - 125	2.10	20		09/10/09
Chlorobenzene	108-90-7		24	ug/L	95.8	75 - 125	2.30	20		09/10/09

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

QC Batch 63535
Associated Samples 91032002

Test PCBs by EPA SW-846 Method 8082

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #14766**							
Aroclor-1016	12674-11-2		<0.1	ug/L					U	09/14/09
Aroclor-1221	11104-28-2		<0.2	ug/L					U	09/14/09
Aroclor-1232	11141-16-5		<0.1	ug/L					U	09/14/09
Aroclor-1242	53469-21-9		<0.1	ug/L					U	09/14/09
Aroclor-1248	12672-29-6		<0.1	ug/L					U	09/14/09
Aroclor-1254	11097-69-1		<0.1	ug/L					U	09/14/09
Aroclor-1260	11096-82-5		<0.1	ug/L					U	09/14/09
LCS			**QC Sample #14767**							
Aroclor-1254	11097-69-1		1.9	ug/L	95.4	60 - 130				09/14/09
MS			**QC Sample #14768**							
			Original 91032002							
Aroclor-1254	11097-69-1	<0.09	1.6	ug/L	86.8	60 - 130				09/14/09
MSD			**QC Sample #14769**							
			Original 91032002					**Paired**	**14768**	
Aroclor-1254	11097-69-1	<0.09	1.5	ug/L	81.5	60 - 130	6.30			09/14/09

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF91032

QC Batch 63746
Associated Samples 91032002

Test ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #14813**							
Manganese	7439-96-5		<0.10	ug/L					U	09/15/09
Nickel	7440-02-0		<0.20	ug/L					U	09/15/09
Silver	7440-22-4		<0.10	ug/L					U	09/15/09
Antimony	7440-36-0		<0.30	ug/L					U	09/15/09
Barium	7440-39-3		<0.20	ug/L					U	09/15/09
Beryllium	7440-41-7		<0.050	ug/L					U	09/15/09
Cadmium	7440-43-9		<0.10	ug/L					U	09/15/09
Chromium	7440-47-3		<0.50	ug/L					U	09/15/09
Cobalt	7440-48-4		<0.050	ug/L					U	09/15/09
Copper	7440-50-8		<0.10	ug/L					U	09/16/09
Vanadium	7440-62-2		<0.20	ug/L					U	09/15/09
Zinc	7440-66-6		<0.80	ug/L					U	09/16/09
Lead	7439-92-1		<0.10	ug/L					U	09/15/09
Mercury	7439-97-6		<0.050	ug/L					U	09/15/09
Strontium	7440-24-6		<0.10	ug/L					U	09/15/09
Thallium	7440-28-0		<0.050	ug/L					U	09/15/09
Tin	7440-31-5		<0.050	ug/L					U	09/15/09
Uranium	7440-61-1		<0.050	ug/L					U	09/15/09
Arsenic	7440-38-2		<0.40	ug/L					U	09/15/09
Selenium	7782-49-2		<0.30	ug/L					U	09/16/09

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF91032

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #14814**							
Manganese	7439-96-5		37.6	ug/L	94.1	85 - 115				09/15/09
Nickel	7440-02-0		37.3	ug/L	93.2	85 - 115				09/15/09
Silver	7440-22-4		37.3	ug/L	93.4	85 - 115				09/15/09
Antimony	7440-36-0		38.6	ug/L	96.6	85 - 115				09/15/09
Barium	7440-39-3		37.7	ug/L	94.3	85 - 115				09/15/09
Beryllium	7440-41-7		37.3	ug/L	93.2	85 - 115				09/15/09
Cadmium	7440-43-9		38.0	ug/L	95	85 - 115				09/15/09
Chromium	7440-47-3		37.6	ug/L	94	85 - 115				09/15/09
Cobalt	7440-48-4		37.4	ug/L	93.6	85 - 115				09/15/09
Copper	7440-50-8		44.8	ug/L	111.9	85 - 115				09/16/09
Vanadium	7440-62-2		37.9	ug/L	94.8	85 - 115				09/15/09
Zinc	7440-66-6		44.9	ug/L	112.4	85 - 115				09/16/09
Lead	7439-92-1		37.6	ug/L	94	85 - 115				09/15/09
Mercury	7439-97-6		1.71	ug/L	85.7	85 - 115				09/15/09
Strontium	7440-24-6		37.9	ug/L	94.7	85 - 115				09/15/09
Thallium	7440-28-0		37.6	ug/L	94	85 - 115				09/15/09
Tin	7440-31-5		37.7	ug/L	94.4	85 - 115				09/15/09
Uranium	7440-61-1		37.8	ug/L	94.6	85 - 115				09/15/09
Arsenic	7440-38-2		37.2	ug/L	93.1	85 - 115				09/15/09
Selenium	7782-49-2		42.4	ug/L	106	85 - 115				09/16/09
MS			**QC Sample #14815**							
			Original 91032002							
Manganese	7439-96-5	<0.10	35.8	ug/L	89.6	70 - 130				09/15/09
Nickel	7440-02-0	<0.20	33.6	ug/L	84.1	70 - 130				09/15/09
Silver	7440-22-4	<0.10	57.8	ug/L	144.4	70 - 130			NX1	09/15/09
Antimony	7440-36-0	<0.30	36.6	ug/L	91.4	70 - 130				09/15/09

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF91032

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Barium	7440-39-3	<0.20	36.1	ug/L	90.2	70 - 130				09/15/09
Beryllium	7440-41-7	<0.050	35.5	ug/L	88.8	70 - 130				09/15/09
Cadmium	7440-43-9	<0.10	35.6	ug/L	89	70 - 130				09/15/09
Chromium	7440-47-3	<0.50	34.4	ug/L	86	70 - 130				09/15/09
Cobalt	7440-48-4	<0.050	34.0	ug/L	84.9	70 - 130				09/15/09
Copper	7440-50-8	1.68	43.5	ug/L	108.8	70 - 130				09/16/09
Vanadium	7440-62-2	<0.20	35.9	ug/L	89.7	70 - 130				09/15/09
Zinc	7440-66-6	<0.80	42.8	ug/L	107.1	70 - 130				09/16/09
Lead	7439-92-1	<0.10	36.8	ug/L	91.9	70 - 130				09/15/09
Mercury	7439-97-6	<0.050	1.63	ug/L	81.7	70 - 130				09/15/09
Strontium	7440-24-6	<0.10	39.8	ug/L	99.5	70 - 130				09/15/09
Thallium	7440-28-0	<0.050	37.3	ug/L	93.3	70 - 130				09/15/09
Tin	7440-31-5	<0.050	36.8	ug/L	92	70 - 130				09/15/09
Uranium	7440-61-1	<0.050	34.5	ug/L	86.4	70 - 130				09/15/09
Arsenic	7440-38-2	<0.40	39.1	ug/L	97.6	70 - 130				09/15/09
Selenium	7782-49-2	<0.30	41.5	ug/L	103.6	70 - 130				09/16/09
MSD			**QC Sample #14816**							
			Original	**91032002**				**Paired**	**14815**	
Manganese	7439-96-5	<0.10	35.6	ug/L	88.9	70 - 130	0.80	20		09/15/09
Nickel	7440-02-0	<0.20	33.6	ug/L	84	70 - 130	0.10	20		09/15/09
Silver	7440-22-4	<0.10	57.7	ug/L	144.2	70 - 130	0.10	20	NX1	09/15/09
Antimony	7440-36-0	<0.30	36.4	ug/L	91.1	70 - 130	0.30	20		09/15/09
Barium	7440-39-3	<0.20	36.2	ug/L	90.4	70 - 130	0.20	20		09/15/09
Beryllium	7440-41-7	<0.050	35.2	ug/L	88.1	70 - 130	0.80	20		09/15/09
Cadmium	7440-43-9	<0.10	36.0	ug/L	90	70 - 130	1.10	20		09/15/09
Chromium	7440-47-3	<0.50	34.2	ug/L	85.5	70 - 130	0.60	20		09/15/09
Cobalt	7440-48-4	<0.050	34.1	ug/L	85.2	70 - 130	0.40	20		09/15/09
Copper	7440-50-8	1.68	43.6	ug/L	108.9	70 - 130	0.10	20		09/16/09

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF91032

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Vanadium	7440-62-2	<0.20	36.2	ug/L	90.6	70 - 130	1.00	20		09/15/09
Zinc	7440-66-6	<0.80	42.8	ug/L	107.1	70 - 130	0.00	20		09/16/09
Lead	7439-92-1	<0.10	36.3	ug/L	90.8	70 - 130	1.20	20		09/15/09
Mercury	7439-97-6	<0.050	1.67	ug/L	83.3	70 - 130	1.90	20		09/15/09
Strontium	7440-24-6	<0.10	39.7	ug/L	99.2	70 - 130	0.30	20		09/15/09
Thallium	7440-28-0	<0.050	36.8	ug/L	92.1	70 - 130	1.30	20		09/15/09
Tin	7440-31-5	<0.050	36.5	ug/L	91.2	70 - 130	0.90	20		09/15/09
Uranium	7440-61-1	<0.050	34.1	ug/L	85.2	70 - 130	1.40	20		09/15/09
Arsenic	7440-38-2	<0.40	39.7	ug/L	99.3	70 - 130	1.70	20		09/15/09
Selenium	7782-49-2	<0.30	41.8	ug/L	104.5	70 - 130	0.90	20		09/16/09

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

QC Batch 63811
Associated Samples 91032002

Test SW-846 8270D Semivolatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #15041**							
4-Nitrophenol	100-02-7		<0.6	ug/L					U	09/16/09
1,4-Dichlorobenzene	106-46-7		<1	ug/L					U	09/16/09
Phenol	108-95-2		<1	ug/L					U	09/16/09
1,2,4-Trichlorobenzene	120-82-1		<0.7	ug/L					U	09/16/09
2,4-Dinitrotoluene	121-14-2		<0.5	ug/L					U	09/16/09
Pyrene	129-00-0		<0.5	ug/L					U	09/16/09
4-Chloro-3-methylpheno	59-50-7		<0.5	ug/L					U	09/16/09
n-Nitroso-di-n-propylami	621-64-7		<0.5	ug/L					U	09/16/09
Acenaphthene	83-32-9		<0.5	ug/L					U	09/16/09
Pentachlorophenol	87-86-5		<0.5	ug/L					U	09/16/09
2-Chlorophenol	95-57-8		<0.5	ug/L					U	09/16/09
Anthracene	120-12-7		<0.6	ug/L					U	09/16/09
Benzo(g,h,i)perylene	191-24-2		<0.7	ug/L					U	09/16/09
Indeno(1,2,3-cd)pyrene	193-39-5		<0.7	ug/L					U	09/16/09
Benzo(b)fluoranthene	205-99-2		<0.5	ug/L					U	09/16/09
Fluoranthene	206-44-0		<0.5	ug/L					U	09/16/09
Benzo(k)fluoranthene	207-08-9		<0.8	ug/L					U	09/16/09
Acenaphthylene	208-96-8		<0.7	ug/L					U	09/16/09
Chrysene	218-01-9		<0.5	ug/L					U	09/16/09
Benzo(a)pyrene	50-32-8		<0.6	ug/L					U	09/16/09
Dibenzo(a,h)anthracene	53-70-3		<0.6	ug/L					U	09/16/09

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Benzo(a)anthracene	56-55-3		<0.5	ug/L					U	09/16/09
Phenanthrene	85-01-8		<0.6	ug/L					U	09/16/09
Fluorene	86-73-7		<0.7	ug/L					U	09/16/09
Naphthalene	91-20-3		<0.5	ug/L					U	09/16/09
LCS			**QC Sample #15042**							
4-Nitrophenol	100-02-7		24	ug/L	81.6	32 - 118				09/16/09
1,4-Dichlorobenzene	106-46-7		24	ug/L	79.5	30 - 96				09/16/09
Phenol	108-95-2		28	ug/L	92.8	67 - 105				09/16/09
1,2,4-Trichlorobenzene	120-82-1		25	ug/L	83.8	46 - 107				09/16/09
2,4-Dinitrotoluene	121-14-2		27	ug/L	91.7	59 - 106				09/16/09
Pyrene	129-00-0		30	ug/L	100.5	66 - 118				09/16/09
4-Chloro-3-methylpheno	59-50-7		30	ug/L	98.9	61 - 196				09/16/09
n-Nitroso-di-n-propylami	621-64-7		29	ug/L	95.2	71 - 114				09/16/09
Acenaphthene	83-32-9		27	ug/L	90	61 - 116				09/16/09
Pentachlorophenol	87-86-5		22	ug/L	72.1	62 - 114				09/16/09
2-Chlorophenol	95-57-8		26	ug/L	85.9	66 - 106				09/16/09
Naphthalene	91-20-3		26	ug/L	85.2	40 - 140				09/16/09
Fluorene	86-73-7		26	ug/L	86.9	40 - 140				09/16/09
Anthracene	120-12-7		28	ug/L	94.6	40 - 140				09/16/09
Benzo(a)pyrene	50-32-8		28	ug/L	94.8	40 - 140				09/16/09
MS			**QC Sample #15043**							
			Original 91032002							
4-Nitrophenol	100-02-7	<0.6	25	ug/L	87.5	32 - 118				09/16/09
1,4-Dichlorobenzene	106-46-7	<0.9	24	ug/L	83.5	30 - 96				09/16/09
Phenol	108-95-2	<0.9	26	ug/L	92.6	67 - 105				09/16/09
1,2,4-Trichlorobenzene	120-82-1	<0.7	24	ug/L	84.4	46 - 107				09/16/09
2,4-Dinitrotoluene	121-14-2	<0.5	27	ug/L	94.5	59 - 106				09/16/09

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Pyrene	129-00-0	<0.5	30	ug/L	106.4	66 - 118				09/16/09
4-Chloro-3-methylpheno	59-50-7	<0.5	30	ug/L	103.7	61 - 196				09/16/09
n-Nitroso-di-n-propylami	621-64-7	<0.5	28	ug/L	96.8	71 - 114				09/16/09
Acenaphthene	83-32-9	<0.5	26	ug/L	91.9	61 - 116				09/16/09
Pentachlorophenol	87-86-5	<0.5	23	ug/L	78.9	62 - 114				09/16/09
2-Chlorophenol	95-57-8	<0.5	27	ug/L	92.9	66 - 106				09/16/09
Naphthalene	91-20-3	<0.5	28	ug/L	96.6	40 - 140				09/16/09
Fluorene	86-73-7	<0.6	26	ug/L	90.3	40 - 140				09/16/09
Anthracene	120-12-7	<0.6	28	ug/L	98.6	40 - 140				09/16/09
Benzo(a)pyrene	50-32-8	<0.6	28	ug/L	98.2	40 - 140				09/16/09
MSD			**QC Sample #15044**							
			Original	**91032002**					**Paired**	**15043**
4-Nitrophenol	100-02-7	<0.6	22	ug/L	76.4	32 - 118	13.50	20		09/16/09
1,4-Dichlorobenzene	106-46-7	<0.9	26	ug/L	92.2	30 - 96	9.90	20		09/16/09
Phenol	108-95-2	<0.9	26	ug/L	90.2	67 - 105	2.60	20		09/16/09
1,2,4-Trichlorobenzene	120-82-1	<0.7	28	ug/L	96.9	46 - 107	13.80	20		09/16/09
2,4-Dinitrotoluene	121-14-2	<0.5	27	ug/L	95.4	59 - 106	0.90	20		09/16/09
Pyrene	129-00-0	<0.5	31	ug/L	110.2	66 - 118	3.50	20		09/16/09
4-Chloro-3-methylpheno	59-50-7	<0.5	28	ug/L	99.5	61 - 196	4.10	20		09/16/09
n-Nitroso-di-n-propylami	621-64-7	<0.5	27	ug/L	94.4	71 - 114	2.50	20		09/16/09
Acenaphthene	83-32-9	<0.5	27	ug/L	92.8	61 - 116	1.00	20		09/16/09
Pentachlorophenol	87-86-5	<0.5	21	ug/L	74.5	62 - 114	5.70	20		09/16/09
2-Chlorophenol	95-57-8	<0.5	25	ug/L	87.9	66 - 106	5.50	20		09/16/09
Naphthalene	91-20-3	<0.5	27	ug/L	95	40 - 140	1.70	20		09/16/09
Fluorene	86-73-7	<0.6	26	ug/L	90.5	40 - 140	0.20	20		09/16/09
Anthracene	120-12-7	<0.6	28	ug/L	97.6	40 - 140	1.00	20		09/16/09
Benzo(a)pyrene	50-32-8	<0.6	28	ug/L	99.4	40 - 140	1.20	20		09/16/09

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF91032

QC Batch 63868
Associated Samples 91032002

Test ICP-6010 - All possible metals

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #15081**							
Lithium	7439-93-2		<4.0	ug/L					U	09/17/09
Beryllium	7440-41-7		<4.0	ug/L					U	09/17/09
Boron	7440-42-8		<19	ug/L					U	09/17/09
LCS			**QC Sample #15082**							
Lithium	7439-93-2		518	ug/L	103.6	80 - 120				09/17/09
Beryllium	7440-41-7		537	ug/L	107.5	80 - 120				09/17/09
Boron	7440-42-8		1010	ug/L	100.7	80 - 120				09/17/09
MS			**QC Sample #15083**							
			Original 91032002							
Lithium	7439-93-2	<4.0	519	ug/L	103.8	75 - 125				09/17/09
Beryllium	7440-41-7	<4.0	535	ug/L	107	75 - 125				09/17/09
Boron	7440-42-8	<19	1000	ug/L	100.3	75 - 125				09/17/09
MSD			**QC Sample #15084**							
			Original 91032002					**Paired**	**15083**	
Lithium	7439-93-2	<4.0	515	ug/L	103	75 - 125	0.80	20		09/17/09
Beryllium	7440-41-7	<4.0	534	ug/L	106.8	75 - 125	0.20	20		09/17/09
Boron	7440-42-8	<19	984	ug/L	98.4	75 - 125	1.90	20		09/17/09

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

QC Batch 63488
Associated Samples 91032002

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #14640**							
o-Terphenyl	84-15-1				81.6	70 - 130				09/16/09
LCS			**QC Sample #14641**							
o-Terphenyl	84-15-1				97.5	70 - 130				09/16/09
MS			**QC Sample #14644**							
			Original	**91032002**						
o-Terphenyl	84-15-1				99.8	70 - 130				09/16/09
MSD			**QC Sample #14645**							
			Original	**91032002**					**Paired**	**14644**
o-Terphenyl	84-15-1				107.4	70 - 130	7.30	20		09/16/09
SAMPLE			**Sample #91032002**							
o-Terphenyl	84-15-1				101.6	70 - 130				09/16/09

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91032

QC Batch 63507
Associated Samples 91032001, 91032002

Test SW-846 8260B Volatiles, separate prep

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #14666**							
1,2-Dichloroethane-d4	17060-07-0				90.7	75 - 125				09/10/09
Toluene-d8	2037-26-5				100.4	75 - 125				09/10/09
4-Bromofluorobenzene	460-00-4				100.4	75 - 125				09/10/09
LCS			**QC Sample #14667**							
1,2-Dichloroethane-d4	17060-07-0				89.9	75 - 125				09/10/09
Toluene-d8	2037-26-5				100	75 - 125				09/10/09
4-Bromofluorobenzene	460-00-4				101.1	75 - 125				09/10/09
MS			**QC Sample #14668**							
			Original 91017001							
1,2-Dichloroethane-d4	17060-07-0				91	75 - 125				09/10/09
Toluene-d8	2037-26-5				100.6	75 - 125				09/10/09
4-Bromofluorobenzene	460-00-4				98	75 - 125				09/10/09
MSD			**QC Sample #14669**							
			Original 91017001						**Paired 14668**	
1,2-Dichloroethane-d4	17060-07-0				92.1	75 - 125	1.20	20		09/10/09
Toluene-d8	2037-26-5				101.1	75 - 125	0.50	20		09/10/09
4-Bromofluorobenzene	460-00-4				99.5	75 - 125	1.50	20		09/10/09
SAMPLE			**Sample #91032001**							
1,2-Dichloroethane-d4	17060-07-0				91.8	75 - 125				09/10/09

Quality Control Report

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91032

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Toluene-d8	2037-26-5				101.7	75 - 125				09/10/09
4-Bromofluorobenzene	460-00-4				97.4	75 - 125				09/10/09
SAMPLE			**Sample #91032002**							
1,2-Dichloroethane-d4	17060-07-0				91.7	75 - 125				09/10/09
Toluene-d8	2037-26-5				102.4	75 - 125				09/10/09
4-Bromofluorobenzene	460-00-4				98.5	75 - 125				09/10/09

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

QC Batch 63535
Associated Samples 91032002

Test PCBs by EPA SW-846 Method 8082

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #14766**							
Tetrachloro-m-xylene	877-09-8				82	60 - 140				09/14/09
Decachlorobiphenyl	2051-24-3				96.9	60 - 140				09/14/09
LCS			**QC Sample #14767**							
Tetrachloro-m-xylene	877-09-8				87.1	60 - 140				09/14/09
Decachlorobiphenyl	2051-24-3				108	60 - 140				09/14/09
MS			**QC Sample #14768**							
			Original	**91032002**						
Tetrachloro-m-xylene	877-09-8				83.6	60 - 140				09/14/09
Decachlorobiphenyl	2051-24-3				97.2	60 - 140				09/14/09
MSD			**QC Sample #14769**							
			Original	**91032002**				**Paired**	**14768**	
Tetrachloro-m-xylene	877-09-8				76.4	60 - 140	9.00			09/14/09
Decachlorobiphenyl	2051-24-3				84.7	60 - 140	13.70			09/14/09
SAMPLE			**Sample #91032002**							
Tetrachloro-m-xylene	877-09-8				82.1	60 - 140				09/14/09
Decachlorobiphenyl	2051-24-3				99.8	60 - 140				09/14/09

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

QC Batch 63811
Associated Samples 91032002

Test SW-846 8270D Semivolatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #15041**							
2-Fluorophenol	367-12-4				86.5	50 - 110				09/16/09
Phenol-d5	4165-62-2				88.5	59 - 116				09/16/09
Nitrobenzene-d5	4165-60-0				90.9	60 - 118				09/16/09
2-Fluorobiphenyl	321-60-8				83.2	58 - 109				09/16/09
2,4,6-Tribromophenol	118-79-6				76.1	60 - 120				09/16/09
Terphenyl-d14	98904-43-9				107.6	60 - 120				09/16/09
LCS			**QC Sample #15042**							
2-Fluorophenol	367-12-4				81	42 - 105				09/16/09
Phenol-d5	4165-62-2				94.5	54 - 120				09/16/09
Nitrobenzene-d5	4165-60-0				102.4	64 - 111				09/16/09
2-Fluorobiphenyl	321-60-8				86.2	56 - 122				09/16/09
2,4,6-Tribromophenol	118-79-6				104.4	24 - 122				09/16/09
Terphenyl-d14	98904-43-9				106.7	35 - 150				09/16/09
MS			**QC Sample #15043**							
			Original	**91032002**						
2-Fluorophenol	367-12-4				79	42 - 105				09/16/09
Phenol-d5	4165-62-2				95.4	54 - 120				09/16/09
Nitrobenzene-d5	4165-60-0				102.7	64 - 111				09/16/09
2-Fluorobiphenyl	321-60-8				87.5	56 - 122				09/16/09
2,4,6-Tribromophenol	118-79-6				97.5	24 - 122				09/16/09

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF91032

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Terphenyl-d14	98904-43-9				107.3	35 - 150				09/16/09
MSD			**QC Sample #15044**							
			Original	**91032002**					**Paired** **15043**	
2-Fluorophenol	367-12-4				79.3	42 - 105	0.40	20		09/16/09
Phenol-d5	4165-62-2				93.3	54 - 120	2.20	20		09/16/09
Nitrobenzene-d5	4165-60-0				93.5	64 - 111	9.40	20		09/16/09
2-Fluorobiphenyl	321-60-8				80.5	56 - 122	8.30	20		09/16/09
2,4,6-Tribromophenol	118-79-6				104	24 - 122	6.50	20		09/16/09
Terphenyl-d14	98904-43-9				115.5	35 - 150	7.40	20		09/16/09
SAMPLE			**Sample #91032002**							
2-Fluorophenol	367-12-4				86.3	50 - 110				09/16/09
Phenol-d5	4165-62-2				92.2	59 - 116				09/16/09
Nitrobenzene-d5	4165-60-0				101.7	60 - 118				09/16/09
2-Fluorobiphenyl	321-60-8				87.1	58 - 109				09/16/09
2,4,6-Tribromophenol	118-79-6				92	60 - 120				09/16/09
Terphenyl-d14	98904-43-9				113.6	60 - 120				09/16/09

Attention: Michael Neely

Group # WSCF91032

Quality Control Comments

Department Inorganic

14815 B21WF7(91032002MS)

Analyte Silver - ICP-2008 MS All possible metal

[1] ICP-MS: Silver MS recovery 144 % wihich may indicate a matrix issue

14816 B21WF7(91032002MSD)

Analyte Silver - ICP-2008 MS All possible metal

[1] ICP-MS: Silver MSD recovery 144% which may indicate a matrix issue

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 5 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

ACKNOWLEDGEMENT OF SAMPLES RECEIVED

WSCF Laboratory
PO Box 1000 S3-30
Richland, WA 99352

ATTN: Michael Neely

Customer Code: CHPRC
PO #: 400637
Work Order #: 91032
Profile #: F09-061-001
Proj. Mgr.:
Phone:

The following samples were received from you on 9/8/2009 1:20:00 PM. 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	Matrix	Collected	Received
		Tests scheduled		
91032001	B21WF5	WATER	9/8/2009 07:00	9/8/2009 13:20
		8260V-W		
91032002	B21WF7	WATER	9/8/2009 07:35	9/8/2009 13:20
		2008-W; 6010-W; 8260V-W; 8270SV-W; PCB-W; PH-W; TPHDWA-W		

Test Acronym Description

Test Acronym	Description
2008-W	ICP-MS (W)
6010-W	ICP-AES (W)
8260V-W	Volatiles by 8260B (W)
8270SV-W	Semivolatiles by 8270D (W)
PCB-W	PCB (8082) (W)
PH-W	pH (W)
TPHDWA-W	TPHD-WA (W)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F09-061-001	PAGE 1 OF 1
COLLECTOR KC Patterson	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 373-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE 78 AIR QUALITY ☐	DATA TURNAROUND 7 Days / 15 Days
SAMPLING LOCATION 600-36 TB - DAY 1	PROJECT DESIGNATION 200-MG-1 OU Waste Sites- QC Sampling		SAF NO. F09-061		
ICE CHEST NO. GWS-120	FIELD LOGBOOK NO. HNF-N-507	ACTUAL SAMPLE DEPTH NA	COA 302110ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, 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)

91032

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HCl or H2SO4 to pH <2/Cool=4C
TYPE OF CONTAINER	aGs*
NO. OF CONTAINER(S)	4
VOLUME	40mL
SAMPLE ANALYSIS	VOA - 8260B (TCL) (Carbon tetrachloride)

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B21WF5 001	WATER	0708-09	0700	—

ORIGINAL

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM KC Patterson SEP 08 2009	DATE/TIME 1320	RECEIVED BY/STORED IN MD Kessler MD Kessler SEP 08 2009	DATE/TIME 1320
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

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.

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			F09-061-003	PAGE 1 OF 2
COLLECTOR: KC Patterson	COMPANY CONTACT: WIDRIG, DL	TELEPHONE NO.: 373-2858	PROJECT COORDINATOR: WIDRIG, DL	PRICE CODE: 78 / AIR QUALITY: ☐	DATA TURNAROUND: 7 Days / 15 Days
SAMPLING LOCATION: 600-36 F3	PROJECT DESIGNATION: 200-MG-1 OU Waste Sites- QC Sampling		SAF NO.: F09-061		
ICE CHEST NO.: GWS-120	FIELD LOGBOOK NO.: 507-7	ACTUAL SAMPLE DEPTH: NA	COA: 302110ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*: A=Air, DL=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, 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	HCl or H2SO4 to pH <2/Cool~4C	Cool~4C	HCl to pH <2/Cool~4C	HNO3 to pH <2	Cool~4C	None
TYPE OF CONTAINER	aGs*	aG	aG	G/P	aG	G/P
NO. OF CONTAINER(S)	4	4	3	1	4	1
VOLUME	40mL	1000mL	1000mL	500mL	1000mL	125mL
SAMPLE ANALYSIS	VOA - 8260B (TCL) (Carbon tetrachloride)	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	OH - 150.1;

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME										
B2WF7 007	WATER	9-8-09	0735	—	—	—	—	—	—				

ORIGINAL

CHAIN OF POSSESSION		SIGN/ PRINT NAMES	
RELINQUISHED BY/REMOVED FROM: KC Patterson	DATE/TIME: 9/8/09 1320	RECEIVED BY/STORED IN: MD Kessler MD Kessler	DATE/TIME: 9/8/09 1320
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

SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS

ICED

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

A-6003-618(01/06)

Wednesday, September 09, 2009 1:20:32 AM
Page 3 of 4
ChemWare

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F09-061-003	PAGE 2 OF 2
COLLECTOR	COMPANY CONTACT WIDRIG, DL	TELEPHONE NO. 373-2858	PROJECT COORDINATOR WIDRIG, DL	PRICE CODE 78	DATA TURNAROUND
SAMPLING LOCATION 600-36 FB	PROJECT DESIGNATION 200-MG-1 OU Waste Sites- QC Sampling		SAF NO. F09-061	AIR QUALITY ☐	7 Days / 15 Days
ICE CHEST NO. QWS120	FIELD LOGBOOK NO. HNF-N- 507-7	ACTUAL SAMPLE DEPTH NA	COA 302110ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1)Semi-VOA - 8270B (TCL) (Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(ghi)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz[a,h]anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Naphthalene, Phenanthrene, Pyrene)
(2)TPH-DieselKerosene Range - WTPH-D (Total petroleum hydrocarbons - diesel range, Total petroleum hydrocarbons - kerosene range)
(3)ICP/MS - 200.8 (TAL) (Antimony, Barium, Cadmium, Chromium, Cobalt, Copper, Manganese, Nickel, Silver, Vanadium, Zinc) ICP/MS - 200.8 (Add-on) (Arsenic, Lead, Selenium, Strontium, Thallium, Tin, Uranium) ICP Metals - 6010B (Add-On) (Beryllium, Boron, Lithium) 200.8_HG - ICPMS (Mercury)
(4)PCBs - 8082 (Aroclor-1016, Aroclor-1221, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260)

ORIGINAL

A-6003-618(01/06)