WSCF Laboratory
PO Box 650 S3-30
Richland, WA 99352

July 18, 2012

Scot Fitzgerald
CH2M-HILL PRC
PO Box 1600
Richland, WA 99352

Dear Scot Fitzgerald,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF120832

Reference: (1) SOW, Mod 2, #36587, Release 3
(2) MSC-SD-CD-QAPP-017, current version, Waste Sampling & Characterization Facility Quality Assurance Program Plan

This letter contains the following information for sample delivery group WSCF120832

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

Very truly yours,

Electronically signed by Joseph Hale
For Lab Manager, Dan T. Smith
WSCF Analytical Lab
(509) 373-4804

Attachments 4

CC: w/Attachments

File/LB

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF120832
Data Deliverable Date 07/11/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F12-019	B2L7X0	120832001	SOIL	06/26/12	06/26/12
F12-019	B2L7X4	120832002	SOIL	06/26/12	06/26/12
F12-019	B2L7W6	120832003	SOIL	06/26/12	06/26/12
F12-019	B2L7W7	120832004	SOIL	06/26/12	06/26/12
F12-019	B2L7X1	120832005	SOIL	06/26/12	06/26/12
F12-019	B2L7X5	120832006	SOIL	06/26/12	06/26/12

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Attachment 2
Narrative
WSCF120832

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. 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), Master Contract 39818, Revision 3, "Laboratory Analytical Services to CHPRC Soil and Groundwater Remediation Project."*

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". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, C, D, J and U) 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 wet chemical analyses), as appropriate.
- **C** – Analyte was detected in the blank and was evaluated. Affected sample results in the batch were C flagged (applies to inorganic and wet chemical analyses).
- **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.
- **B (organic analyses)** – Analyte was detected in the blank and was evaluated. Affected sample results in the batch were B flagged.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

Refer to *WSCF Method References Report* for a complete listing of approved analytical methods.

Inorganic Comments

Attachment 2
Narrative
WSCF120832

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

- All applicable QC controls are within the established limits.

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

- Aluminum – Matrix Spike and Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- All other applicable QC controls are within the established limits.

Organic Comments

Alcohol/Glycols - The hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate, Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All applicable 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 applicable 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 applicable 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. Analytical Note(s):

- All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Neptunium and Technetium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Attachment 2
Narrative
WSCF120832

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

Gross Alpha / Gross Beta:

- Gross Beta – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near the minimum detectable activity. No flags issued.
- All other applicable QC controls are within the established limits.

Neptunium-237:

- All applicable QC controls are within the established limits.

Isotopic Plutonium analysis:

- Plutonium-238 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near the minimum detectable activity. No flags issued.
- All other applicable QC controls are within the established limits.

Isotopic Uranium analysis:

- Uranium-235 and Uranium-238 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near the minimum detectable activity. No flags issued.
- Uranium-234 – The Blank is less than two times the RDL. "B" Flag not required.
- All other applicable QC controls are within the established limits.

Strontium-89/90:

- All applicable QC controls are within the established limits.

Technetium-99:

- All applicable 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 electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 66 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Scot Fitzgerald

Contract #	MOA-FH-CHPRC-2008
Group #	WSCF120832
Report Date	July 18, 2012

Analytical: Electronically signed by Joseph Hale

Client Services: Electronically signed by Marisol Avila

Solid samples results that have a 'Percent Solid' test are reported on a "dry weight basis", except results of TCLP, Percent Solid, and Total Activity. If no `Percent Solid' test is reported then the results are reported on an "as received" basis.

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) 373-7005. Information designation of this report is the responsibility of the customer.

Batch QC List

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120832

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
203893	203895	3	BLANK	77571	BLANK		Anions by Ion Chromatography (Solid)
203893	203895	4	LCS	77572	LCS		Anions by Ion Chromatography (Solid)
203893	203895	5	MS	77573	B2L7X0(120832001MS)	120832001	Anions by Ion Chromatography (Solid)
203893	203895	6	MSD	77574	B2L7X0(120832001MSD)	120832001	Anions by Ion Chromatography (Solid)
203893	203895	7	DUP	77575	B2L7X0(120832001DUP)	120832001	Anions by Ion Chromatography (Solid)
203893	203895	8	SAMPLE	120832001	B2L7X0		Anions by Ion Chromatography (Solid)
203893	203895	9	SAMPLE	120832002	B2L7X4		Anions by Ion Chromatography (Solid)
204274	204757	4	BLANK	77886	BLANK		ICP-2008 MS All possible metal
204274	204757	5	LCS	77887	LCS		ICP-2008 MS All possible metal
204274	204757	6	SAMPLE	120832001	B2L7X0		ICP-2008 MS All possible metal
204274	204757	7	MS	77888	B2L7X0(120832001MS)	120832001	ICP-2008 MS All possible metal
204274	204757	8	MSD	77889	B2L7X0(120832001MSD)	120832001	ICP-2008 MS All possible metal
204274	204757	9	SAMPLE	120832002	B2L7X4		ICP-2008 MS All possible metal
204274	204757	10	SAMPLE	120832003	B2L7W6		ICP-2008 MS All possible metal

Batch QC List

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
203954	204160	1	BLANK	77655	BLANK		SW-846 8270D Semivolatiles
203954	204160	2	LCS	77656	LCS		SW-846 8270D Semivolatiles
203954	204160	3	MS	77657	B2L7X0(120832001MS)	120832001	SW-846 8270D Semivolatiles
203954	204160	4	MSD	77658	B2L7X0(120832001MSD)	120832001	SW-846 8270D Semivolatiles
203954	204160	5	SAMPLE	120832001	B2L7X0		SW-846 8270D Semivolatiles
203954	204160	6	SAMPLE	120832002	B2L7X4		SW-846 8270D Semivolatiles
203954	204160	7	SAMPLE	120832003	B2L7W6		SW-846 8270D Semivolatiles
203956	204165	1	BLANK	77663	BLANK		Extractable Diesel and Petroleum
203956	204165	2	LCS	77664	LCS		Extractable Diesel and Petroleum
203956	204165	3	MS	77665	B2L7X0(120832001MS)	120832001	Extractable Diesel and Petroleum
203956	204165	4	MSD	77666	B2L7X0(120832001MSD)	120832001	Extractable Diesel and Petroleum
203956	204165	5	SAMPLE	120832001	B2L7X0		Extractable Diesel and Petroleum
203956	204165	6	SAMPLE	120832002	B2L7X4		Extractable Diesel and Petroleum
203956	204165	7	SAMPLE	120832003	B2L7W6		Extractable Diesel and Petroleum

Batch QC List

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
203865	203866	1	BLANK	77466	BLANK		SW-846 8260B Volatiles
203865	203866	2	LCS	77467	LCS		SW-846 8260B Volatiles
203865	203866	3	MS	77468	B2L7W7(120832004MS)	120832004	SW-846 8260B Volatiles
203865	203866	4	MSD	77469	B2L7W7(120832004MSD	120832004	SW-846 8260B Volatiles
203865	203866	5	SAMPLE	120832004	B2L7W7		SW-846 8260B Volatiles
203865	203866	6	SAMPLE	120832005	B2L7X1		SW-846 8260B Volatiles
203865	203866	7	SAMPLE	120832006	B2L7X5		SW-846 8260B Volatiles
203912	203913	1	BLANK	77639	BLANK		SW-846 Method 8015 for GPP
203912	203913	2	LCS	77640	LCS		SW-846 Method 8015 for GPP
203912	203913	3	MS	77641	B2L7X0(120832001MS)	120832001	SW-846 Method 8015 for GPP
203912	203913	4	MSD	77642	B2L7X0(120832001MSD)	120832001	SW-846 Method 8015 for GPP
203912	203913	5	SAMPLE	120832001	B2L7X0		SW-846 Method 8015 for GPP
203912	203913	6	SAMPLE	120832002	B2L7X4		SW-846 Method 8015 for GPP
203912	203913	7	SAMPLE	120832003	B2L7W6		SW-846 Method 8015 for GPP

Batch QC List

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
203752	203902	1	DUP	77420	B2L7X0(120832001DUP)	120832001	TC99 by Liquid Scintillation
203752	203902	2	MS	77421	B2L7X0(120832001MS)	120832001	TC99 by Liquid Scintillation
203752	203902	3	SAMPLE	120832001	B2L7X0		TC99 by Liquid Scintillation
203752	203902	4	SAMPLE	120832002	B2L7X4		TC99 by Liquid Scintillation
203752	203902	5	SAMPLE	120832003	B2L7W6		TC99 by Liquid Scintillation
203752	203902	6	BLANK	77418	BLANK		TC99 by Liquid Scintillation
203752	203902	7	LCS	77419	LCS		TC99 by Liquid Scintillation
203856	203957	1	BLANK	77444	BLANK		Neptunium (AEA)
203856	203957	2	LCS	77445	LCS		Neptunium (AEA)
203856	203957	3	SAMPLE	120832001	B2L7X0		Neptunium (AEA)
203856	203957	4	NpSPK	77446	NpSPK		Neptunium (AEA)
203856	203957	5	NpDUP	77447	B2L7X0(120832001NpDU	120832001	Neptunium (AEA)
203856	203957	6	NDUPSK	77448	NDUPSK		Neptunium (AEA)
203856	203957	7	SAMPLE	120832002	B2L7X4		Neptunium (AEA)
203856	203957	8	NpSPK	77449	NpSPK		Neptunium (AEA)
203856	203957	9	SAMPLE	120832003	B2L7W6		Neptunium (AEA)
203856	203957	10	NpSPK	77450	NpSPK		Neptunium (AEA)
203857	204151	1	BLANK	77451	BLANK		Plutonium (AEA)
203857	204151	2	LCS	77452	LCS		Plutonium (AEA)
203857	204151	3	SAMPLE	120832001	B2L7X0		Plutonium (AEA)
203857	204151	4	DUP	77453	B2L7X0(120832001DUP)	120832001	Plutonium (AEA)
203857	204151	5	SAMPLE	120832002	B2L7X4		Plutonium (AEA)
203857	204151	6	SAMPLE	120832003	B2L7W6		Plutonium (AEA)

Batch QC List

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
203857	204152	1	DUP	77453	B2L7X0(120832001DUP)	120832001	Uranium (AEA)
203857	204152	2	SAMPLE	120832001	B2L7X0		Uranium (AEA)
203857	204152	3	SAMPLE	120832002	B2L7X4		Uranium (AEA)
203857	204152	4	SAMPLE	120832003	B2L7W6		Uranium (AEA)
203857	204152	5	BLANK	77451	BLANK		Uranium (AEA)
203857	204152	6	LCS	77452	LCS		Uranium (AEA)
203900	204067	1	BLANK	77596	BLANK		Gross Alpha/Gross Beta
203900	204067	2	LCS	77597	LCS		Gross Alpha/Gross Beta
203900	204067	3	DUP	77598	B2L7X0(120832001DUP)	120832001	Gross Alpha/Gross Beta
203900	204067	4	SAMPLE	120832001	B2L7X0		Gross Alpha/Gross Beta
203900	204067	5	SAMPLE	120832001	B2L7X0		Gross Alpha/Gross Beta
203900	204067	6	SAMPLE	120832002	B2L7X4		Gross Alpha/Gross Beta
203900	204067	7	SAMPLE	120832002	B2L7X4		Gross Alpha/Gross Beta
203900	204067	8	SAMPLE	120832003	B2L7W6		Gross Alpha/Gross Beta
203900	204067	9	SAMPLE	120832003	B2L7W6		Gross Alpha/Gross Beta
204051	204079	1	BLANK	77667	BLANK		Strontium 89/90 (GPC/GEA)
204051	204079	2	LCS	77668	LCS		Strontium 89/90 (GPC/GEA)
204051	204079	3	DUP	77669	B2L7X0(120832001DUP)	120832001	Strontium 89/90 (GPC/GEA)
204051	204079	4	SAMPLE	120832001	B2L7X0		Strontium 89/90 (GPC/GEA)
204051	204079	5	SAMPLE	120832002	B2L7X4		Strontium 89/90 (GPC/GEA)
204051	204079	6	SAMPLE	120832003	B2L7W6		Strontium 89/90 (GPC/GEA)

Batch QC List

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120832

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
204874	204874	1	DUP	78104	B2LRC8(120827001DUP)	120827001	Dry Weight/Percent Moisture
204874	204874	2	LCS	78105	LCS		Dry Weight/Percent Moisture
204874	204874	5	SAMPLE	120832001	B2L7X0		Dry Weight/Percent Moisture
204874	204874	6	SAMPLE	120832002	B2L7X4		Dry Weight/Percent Moisture
204874	204874	7	SAMPLE	120832003	B2L7W6		Dry Weight/Percent Moisture
204874	204874	8	SAMPLE	120832004	B2L7W7		Dry Weight/Percent Moisture
204874	204874	9	SAMPLE	120832005	B2L7X1		Dry Weight/Percent Moisture
204874	204874	10	SAMPLE	120832006	B2L7X5		Dry Weight/Percent Moisture

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120832

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-505-412	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.
LA-533-410	Anion Analysis by Ion Chromatography		
	EPA-600/R-94-111	300.0	Determination of Inorganic Anions by Ion Chromatography
	HEIS	300.0_ANIONS_IC	Determination of Inorganic Anions by Ion Chromatography

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

Method Reference

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

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-523-456	Semivolatile Sample Analysis by SW-846 Method 8270D		
	EPA SW-846	8000B	Determinative Chromagraphic Separations
	EPA SW-846	3510C	Separatory Funnel Liquid-Liquid Extraction
	EPA SW-846	8270D	Semivolatile Organic Compounds by Gas
	EPA SW-846	3545	Pressurized Fluid Extraction (PFE)
			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	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 Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

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)
LA-523-494	Nonhalogenated Organics Using Gas Chromatography/Flame Ionization Detector		
	HEIS	8015_VOA_GC	Volatile Organic Analysis

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 Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

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-220-406	Strontium-89 and 90 in Aqueous Samples by SR-SPEC Separation		
	HEIS	SRTOT_SEP_PRECIP_GPC	Strontium 89/90, by Sr-Spec Sep.
LA-508-471	Thorium, Neptunium, Plutonium, Americium, and Uranium In Soil and Water Using Eichrom Column Separation (Prep)		
	HEIS	PUISO_IE_PRECIP_AEA	Isotopic Plutonium, Alpha Spec
LA-508-471	Determination Of Uranium, Plutonium, And Americium		
	HEIS	UISO_IE_PRECIP_AEA	Uranium Iso, Alpha Spec
LA-904-400	Thorium, Neptunium, Plutonium, Americium, and Uranium In Soil and Water Using Eichrom Column Separation		
	HEIS	NP237_IE_PRECIP_AEA	Neptunium-237, Iso, Alpha Spec.
LA-508-421	Operation of the Tri-Carb Model 2500TR Liquid Scintillation Analyzer		
	HEIS	ALPHA_LSC	A/B Liquid Scintillation
	HEIS	BETA_LSC	A/B Liquid Scintillation
	HEIS	TC99_3MDSK_LSC	TC99 by Liquid Scintillation
	HEIS	TRITIUM_EIE_LSC	Tritium, by Eichrome ion exchange, LSC
LA-508-415	Operation Of The Protean 2-Inch Alpha/Beta Counting System For Gross Alpha/ Beta Samples		
	HEIS	ALPHA_GPC	Gross Alpha by GPC
	HEIS	BETA_GPC	Gross Beta by GPC
	HEIS	SRTOT_SEP_PRECIP_GPC	Strontium beta isotopic, GPC

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 Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120832

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-519-412 Total Residual Percent Solids Dried at 103 - 105 Degrees C

EPA-600/4-79-020	160.3	Total Residue
Standard Methods	2540B	Total Solids Dried at 103-105 C
HEIS	%SOLIDS	Dry Weight, Percent Solids

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

JULY 18, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120832

Sample # 120832001
SAF# F12-019
Sample ID B2L7X0

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anion Prep (S)										**06/27/12**
Anions by Ion Chromatography (Solid)										
Nitrite-N	NO2-N	LA-533-410	U	<1.0		mg/kg	1	1.0	5.1	06/27/12
Sulfate	14808-79-8	LA-533-410	U	<5.8		mg/kg	1	5.8	55	06/27/12
ICPMS Prep (S)										**07/09/12**
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	N	4320		mg/kg	1	5.4	54	07/16/12
Manganese	7439-96-5	LA-505-412		117		mg/kg	1	0.11	1.1	07/16/12
Antimony	7440-36-0	LA-505-412	B	0.424		mg/kg	1	0.32	3.2	07/16/12
Barium	7440-39-3	LA-505-412		29.0		mg/kg	1	0.22	2.2	07/16/12
Chromium	7440-47-3	LA-505-412		12.2		mg/kg	1	0.11	1.1	07/16/12
Lead	7439-92-1	LA-505-412		1.64		mg/kg	1	0.054	0.54	07/16/12
Arsenic	7440-38-2	LA-505-412	B	0.335		mg/kg	1	0.22	2.2	07/16/12
Boron	7440-42-8	LA-505-412	B	0.789		mg/kg	1	0.54	5.4	07/16/12

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

B - Analyte < the PQL(or EQL)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 recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120832

Sample # 120832002
SAF# F12-019
Sample ID B2L7X4

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anion Prep (S)										**06/27/12**
Anions by Ion Chromatography (Solid)										
Nitrite-N	NO2-N	LA-533-410	U	<0.98		mg/kg	1	0.98	5.0	06/27/12
Sulfate	14808-79-8	LA-533-410	U	<5.6		mg/kg	1	5.6	54	06/27/12
ICPMS Prep (S)										**07/09/12**
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	N	4230		mg/kg	1	5.4	54	07/16/12
Manganese	7439-96-5	LA-505-412		171		mg/kg	1	0.11	1.1	07/16/12
Antimony	7440-36-0	LA-505-412	U	<0.32		mg/kg	1	0.32	3.2	07/16/12
Barium	7440-39-3	LA-505-412		34.9		mg/kg	1	0.22	2.2	07/16/12
Chromium	7440-47-3	LA-505-412		11.4		mg/kg	1	0.11	1.1	07/16/12
Lead	7439-92-1	LA-505-412		3.20		mg/kg	1	0.054	0.54	07/16/12
Arsenic	7440-38-2	LA-505-412	B	1.28		mg/kg	1	0.22	2.2	07/16/12
Boron	7440-42-8	LA-505-412	B	1.06		mg/kg	1	0.54	5.4	07/16/12

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

B - Analyte < the PQL(or EQL)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 recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120832

Sample # 120832003
SAF# F12-019
Sample ID B2L7W6

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (S)										**07/09/12**
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	N	9140		mg/kg	1	6.0	60	07/16/12
Manganese	7439-96-5	LA-505-412		346		mg/kg	1	0.12	1.2	07/16/12
Antimony	7440-36-0	LA-505-412	U	<0.36		mg/kg	1	0.36	3.6	07/16/12
Barium	7440-39-3	LA-505-412		97.7		mg/kg	1	0.24	2.4	07/16/12
Chromium	7440-47-3	LA-505-412		23.1		mg/kg	1	0.12	1.2	07/16/12
Lead	7439-92-1	LA-505-412		7.21		mg/kg	1	0.060	0.60	07/16/12
Arsenic	7440-38-2	LA-505-412	B	1.16		mg/kg	1	0.24	2.4	07/16/12
Boron	7440-42-8	LA-505-412	B	0.929		mg/kg	1	0.60	6.0	07/16/12

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

B - Analyte < the PQL(or EQL)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 recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

Sample # 120832001
SAF# F12-019
Sample ID B2L7X0

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8270 (S) ASE										**06/27/12**
SW-846 8270D Semivolatiles										
Phenol	108-95-2	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Pyrene	129-00-0	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Naphthalene	91-20-3	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
2-Methylphenol	95-48-7	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
3 & 4 Methylphenol, Total	65794-96-9	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
n-Dodecane	112-40-3	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Benzyl alcohol	100-51-6	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
2-Butoxyethanol	111-76-2	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Cyclohexanone	108-94-1	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Total Petroleum Hydrocarbons (Solid) ASE										**06/27/12**
Extractable Diesel and Petroleum										
Diesel	TPHDIESEL	LA-523-493	U	<4		mg/kg	1	4	5	07/02/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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 - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

Sample # 120832002
SAF# F12-019
Sample ID B2L7X4

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8270 (S) ASE										**06/27/12**
SW-846 8270D Semivolatiles										
Phenol	108-95-2	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Pyrene	129-00-0	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Naphthalene	91-20-3	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
2-Methylphenol	95-48-7	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
3 & 4 Methylphenol, Total	65794-96-9	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
n-Dodecane	112-40-3	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Benzyl alcohol	100-51-6	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
2-Butoxyethanol	111-76-2	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Cyclohexanone	108-94-1	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Total Petroleum Hydrocarbons (Solid) ASE										**06/27/12**
Extractable Diesel and Petroleum										
Diesel	TPHDIESEL	LA-523-493	U	<4		mg/kg	1	4	5	07/02/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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 - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

Sample # 120832003
SAF# F12-019
Sample ID B2L7W6

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8270 (S) ASE										**06/27/12**
SW-846 8270D Semivolatiles										
Phenol	108-95-2	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Pyrene	129-00-0	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Naphthalene	91-20-3	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
2-Methylphenol	95-48-7	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
3 & 4 Methylphenol, Total	65794-96-9	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
n-Dodecane	112-40-3	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Benzyl alcohol	100-51-6	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
2-Butoxyethanol	111-76-2	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Cyclohexanone	108-94-1	LA-523-456	U	<200		ug/kg	1	200	300	07/02/12
Total Petroleum Hydrocarbons (Solid) ASE										**06/27/12**
Extractable Diesel and Petroleum										
Diesel	TPHDIESEL	LA-523-493	U	<4		mg/kg	1	4	5	07/02/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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 - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Sample # 120832001
SAF# F12-019
Sample ID B2L7X0

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8015 (S)										**06/28/12**
SW-846 Method 8015 for GPP										
Diethyl ether	60-29-7	LA-523-494	U	<430		ug/kg	1	430	1100	06/28/12
Methanol	67-56-1	LA-523-494	U	<430		ug/kg	1	430	1100	06/28/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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 < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Sample # 120832002
SAF# F12-019
Sample ID B2L7X4

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8015 (S)										**06/28/12**
SW-846 Method 8015 for GPP										
Diethyl ether	60-29-7	LA-523-494	U	<370		ug/kg	1	370	910	06/28/12
Methanol	67-56-1	LA-523-494	U	<370		ug/kg	1	370	910	06/28/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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 < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Sample # 120832003
SAF# F12-019
Sample ID B2L7W6

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8015 (S)										**06/28/12**
SW-846 Method 8015 for GPP										
Diethyl ether	60-29-7	LA-523-494	U	<430		ug/kg	1	430	1100	06/28/12
Methanol	67-56-1	LA-523-494	U	<430		ug/kg	1	430	1100	06/28/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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 < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Sample # 120832004
SAF# F12-019
Sample ID B2L7W7

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (S)										**06/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Bromodichloromethane	75-27-4	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
n-Hexane	110-54-3	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
n-Butylbenzene	104-51-8	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Acetonitrile	75-05-8	LA-523-455	U	<2		ug/kg	1	2	10	06/27/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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 < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Sample # 120832005
SAF# F12-019
Sample ID B2L7X1

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (S)										**06/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Bromodichloromethane	75-27-4	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
n-Hexane	110-54-3	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
n-Butylbenzene	104-51-8	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Acetonitrile	75-05-8	LA-523-455	U	<2		ug/kg	1	2	10	06/27/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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 < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Sample # 120832006
SAF# F12-019
Sample ID B2L7X5

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (S)										**06/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Bromodichloromethane	75-27-4	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
n-Hexane	110-54-3	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
n-Butylbenzene	104-51-8	LA-523-455	U	<1		ug/kg	1	1	5	06/27/12
Acetonitrile	75-05-8	LA-523-455	U	<2		ug/kg	1	2	10	06/27/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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 < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Sample # 120832001
SAF# F12-019
Sample ID B2L7X0

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) S										**07/03/12**
Plutonium (AEA)										
Plutonium-238	13981-16-3	LA-508-471	U	-0.011	.02	pCi/g	1	0.045		07/03/12
Plutonium-239_240	PU-239/240	LA-508-471	U	2.1E-3	.004	pCi/g	1	5.8E-3		07/03/12
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		0.061	.024	pCi/g	1	0.012		07/03/12
Uranium-235	15117-96-1	LA-508-471	U	4.1E-3	.0054	pCi/g	1	5.5E-3		07/03/12
Uranium-238	U-238	LA-508-471		0.066	.025	pCi/g	1	4.5E-3		07/03/12
Np Prep Solid (AEA) S										**06/29/12**
Neptunium (AEA)										
Neptunium-237	13994-20-2	LA-904-400	U	-0.0080	.026	pCi/g	1	0.074		06/29/12
Preparation for Alpha/Beta (Gross) (S)										**07/02/12**
Gross Alpha/Gross Beta										
Gross Alpha	12587-46-1	LA-508-415		0.55	.3	pCi/g	1	0.41		07/10/12
Gross Beta	12587-47-2	LA-508-415		3.1	.66	pCi/g	1	0.84		07/10/12
Strontium 89/90 SOLID/SOIL PREP										**07/02/12**
Strontium 89/90 (GPC/GEA)										
Strontium-89_90	SR-RAD	LA-220-406		1.8	.48	pCi/g	1	0.75		07/10/12
TC99 by Liquid Scin. SOLID/SOIL PREP										**06/27/12**

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

B - Analyte was detected in both the BLANK and SAMPLE
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.

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Sample # 120832001
SAF# F12-019
Sample ID B2L7X0

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TC99 by Liquid Scintillation										
Technetium-99	14133-76-7	LA-508-421		3.4	.64	pCi/g	1	0.22		06/29/12

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

B - Analyte was detected in both the BLANK and SAMPLE
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.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Sample # 120832002
SAF# F12-019
Sample ID B2L7X4

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) S										**07/03/12**
Plutonium (AEA)										
Plutonium-238	13981-16-3	LA-508-471	U	-5.8E-3	.013	pCi/g	1	0.031		07/03/12
Plutonium-239_240	PU-239/240	LA-508-471		5.8E-3	.0065	pCi/g	1	5.2E-3		07/03/12
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		0.069	.026	pCi/g	1	0.011		07/03/12
Uranium-235	15117-96-1	LA-508-471	U	7.3E-3	.0086	pCi/g	1	0.013		07/03/12
Uranium-238	U-238	LA-508-471		0.072	.026	pCi/g	1	0.011		07/03/12
Np Prep Solid (AEA) S										**06/29/12**
Neptunium (AEA)										
Neptunium-237	13994-20-2	LA-904-400	U	-3.6E-3	.015	pCi/g	1	0.039		06/29/12
Preparation for Alpha/Beta (Gross) (S)										**07/02/12**
Gross Alpha/Gross Beta										
Gross Alpha	12587-46-1	LA-508-415		0.42	.26	pCi/g	1	0.37		07/10/12
Gross Beta	12587-47-2	LA-508-415		3.4	.64	pCi/g	1	0.73		07/10/12
Strontium 89/90 SOLID/SOIL PREP										**07/02/12**
Strontium 89/90 (GPC/GEA)										
Strontium-89_90	SR-RAD	LA-220-406	U	0.30	.3	pCi/g	1	0.61		07/10/12
TC99 by Liquid Scin. SOLID/SOIL PREP										**06/27/12**

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

B - Analyte was detected in both the BLANK and SAMPLE
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.

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Sample # 120832002
SAF# F12-019
Sample ID B2L7X4

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TC99 by Liquid Scintillation										
Technetium-99	14133-76-7	LA-508-421		1.6	.34	pCi/g	1	0.21		06/29/12

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

B - Analyte was detected in both the BLANK and SAMPLE
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.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Sample # 120832003
SAF# F12-019
Sample ID B2L7W6

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) S										**07/03/12**
Plutonium (AEA)										
Plutonium-238	13981-16-3	LA-508-471		0.018	.014	pCi/g	1	0.017		07/03/12
Plutonium-239_240	PU-239/240	LA-508-471	U	2.3E-3	.0041	pCi/g	1	6.2E-3		07/03/12
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		0.14	.043	pCi/g	1	0.012		07/03/12
Uranium-235	15117-96-1	LA-508-471	U	4.2E-3	.0054	pCi/g	1	5.7E-3		07/03/12
Uranium-238	U-238	LA-508-471		0.16	.047	pCi/g	1	0.018		07/03/12
Np Prep Solid (AEA) S										**06/29/12**
Neptunium (AEA)										
Neptunium-237	13994-20-2	LA-904-400	U	3.2E-3	.0058	pCi/g	1	8.7E-3		06/29/12
Preparation for Alpha/Beta (Gross) (S)										**07/02/12**
Gross Alpha/Gross Beta										
Gross Alpha	12587-46-1	LA-508-415		1.8	.51	pCi/g	1	0.49		07/10/12
Gross Beta	12587-47-2	LA-508-415		5.7	.89	pCi/g	1	0.94		07/10/12
Strontium 89/90 SOLID/SOIL PREP										**07/02/12**
Strontium 89/90 (GPC/GEA)										
Strontium-89_90	SR-RAD	LA-220-406	U	-0.14	.27	pCi/g	1	0.65		07/10/12
TC99 by Liquid Scin. SOLID/SOIL PREP										**06/27/12**

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

B - Analyte was detected in both the BLANK and SAMPLE
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.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Sample # 120832003
SAF# F12-019
Sample ID B2L7W6

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TC99 by Liquid Scintillation										
Technetium-99	14133-76-7	LA-508-421		1.1	.25	pCi/g	1	0.22		06/29/12

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

B - Analyte was detected in both the BLANK and SAMPLE
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.

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120832

Sample # 120832001
SAF# F12-019
Sample ID B2L7X0

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										07/16/12
Dry Weight/Percent Moisture										
Percent Solids	%SOLIDS	LA-519-412		92		percent	1			07/16/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120832

Sample # 120832002
SAF# F12-019
Sample ID B2L7X4

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										07/16/12
Dry Weight/Percent Moisture										
Percent Solids	%SOLIDS	LA-519-412		94		percent	1			07/16/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120832

Sample # 120832003
SAF# F12-019
Sample ID B2L7W6

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										07/16/12
Dry Weight/Percent Moisture										
Percent Solids	%SOLIDS	LA-519-412		90		percent	1			07/16/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120832

Sample # 120832004
SAF# F12-019
Sample ID B2L7W7

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										07/16/12
Dry Weight/Percent Moisture										
Percent Solids	%SOLIDS	LA-519-412		93		percent	1			07/16/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120832

Sample # 120832005
SAF# F12-019
Sample ID B2L7X1

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										07/16/12
Dry Weight/Percent Moisture										
Percent Solids	%SOLIDS	LA-519-412		93		percent	1			07/16/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120832

Sample # 120832006
SAF# F12-019
Sample ID B2L7X5

Matrix SOIL
Sampled 06/26/12
Received 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										07/16/12
Dry Weight/Percent Moisture										
Percent Solids	%SOLIDS	LA-519-412		94		percent	1			07/16/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Analytical Batch 203902 (QC Batch: 203752)
Associated Samples 120832001, 120832002, 120832003

Test TC99 by Liquid Scintillation

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77418**							
Technetium-99	14133-76-7		0.10	pCi/g					U	06/29/12
LCS			**QC Sample #77419**							
Technetium-99	14133-76-7		8.1	pCi/g	95.4	80 - 120				06/29/12
DUP			**QC Sample #77420**							
			Original 120832001							
Technetium-99	14133-76-7	3.4	3.1	pCi/g			6.70	30		06/29/12
MS			**QC Sample #77421**							
			Original 120832001							
Technetium-99	14133-76-7	3.4	31	pCi/g	96.3	75 - 125				06/29/12

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Analytical Batch 203957 (QC Batch: 203856)
Associated Samples 120832001, 120832002, 120832003

Test Neptunium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #77444**								
Neptunium-237	13994-20-2		3.1E-3	pCi/g						U	06/29/12
LCS			**QC Sample #77445**								
Neptunium-237	13994-20-2		5.9	pCi/sample	102.6	80 - 120					06/29/12
NpSPK			**QC Sample #77446**								
Neptunium-237	13994-20-2		5.6	pCi/g	98.7	75 - 125					06/29/12
NpDUP			**QC Sample #77447**								
			Original 120832001								
Neptunium-237	13994-20-2	-0.0080	-3.3E-3	pCi/g			-81.90	30	*	U	07/02/12
NDUPSK			**QC Sample #77448**								
Neptunium-237	13994-20-2		5.5	pCi/g	105.5	75 - 125					07/02/12
NpSPK			**QC Sample #77449**								
Neptunium-237	13994-20-2		6.1	pCi/g	109.6	75 - 125					06/29/12
NpSPK			**QC Sample #77450**								
Neptunium-237	13994-20-2		4.4	pCi/g	87.5	75 - 125					06/29/12

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Analytical Batch 204151 (QC Batch: 203857)
Associated Samples 120832001, 120832002, 120832003

Test Plutonium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #77451**								
Plutonium-238	13981-16-3		-5.2E-3	pCi/g						U	07/03/12
Uranium-234	U-233/234		0.016	pCi/g						X	07/03/12
Plutonium-239_240	PU-239/240		-8.6E-3	pCi/g						U	07/03/12
Uranium-235	15117-96-1		8.7E-3	pCi/g						U	07/03/12
Uranium-238	U-238		9.9E-3	pCi/g						U	07/03/12
LCS			**QC Sample #77452**								
Uranium-234	U-233/234		8.8	pCi/sample	107.4	80 - 120					07/03/12
Plutonium-239_240	PU-239/240		5.8	pCi/sample	100.6	80 - 120					07/03/12
DUP			**QC Sample #77453**								
			Original 120832001								
Plutonium-238	13981-16-3	-0.011	0.021	pCi/g			556.80	30	*	X	07/03/12
Uranium-234	U-233/234	0.061	0.056	pCi/g			1.80	30			07/03/12
Plutonium-239_240	PU-239/240	2.1E-3	9.6E-3	pCi/g			131.00	30	*	U	07/03/12
Uranium-235	15117-96-1	4.1E-3	0.0090	pCi/g			81.20	30	*	X	07/03/12
Uranium-238	U-238	0.066	0.036	pCi/g			51.50	30	*	X	07/03/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Analytical Batch 203866 (QC Batch: 203865)
Associated Samples 120832004, 120832005, 120832006

Test SW-846 8260B Volatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77466**							
1,1-Dichloroethene	75-35-4		<1	ug/kg					U	06/27/12
Trichloroethene	79-01-6		<1	ug/kg					U	06/27/12
Benzene	71-43-2		<1	ug/kg					U	06/27/12
Toluene	108-88-3		<1	ug/kg					U	06/27/12
Chlorobenzene	108-90-7		<1	ug/kg					U	06/27/12
Methyl isobutyl ketone	108-10-1		<1	ug/kg					U	06/27/12
Tetrachloroethene	127-18-4		<1	ug/kg					U	06/27/12
Total Xylenes	1330-20-7		<1	ug/kg					U	06/27/12
Carbon tetrachloride	56-23-5		<1	ug/kg					U	06/27/12
Acetone	67-64-1		<1	ug/kg					U	06/27/12
1,1,1-Trichloroethane	71-55-6		<1	ug/kg					U	06/27/12
Methylene chloride	75-09-2		<1	ug/kg					U	06/27/12
Bromodichloromethane	75-27-4		<1	ug/kg					U	06/27/12
Methyl ethyl ketone	78-93-3		<1	ug/kg					U	06/27/12
n-Hexane	110-54-3		<1	ug/kg					U	06/27/12
n-Butylbenzene	104-51-8		<1	ug/kg					U	06/27/12
Acetonitrile	75-05-8		<2	ug/kg					U	06/27/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #77467**							
1,1-Dichloroethene	75-35-4		23	ug/kg	91.2	50 - 131				06/27/12
Trichloroethene	79-01-6		22	ug/kg	86.5	66 - 119				06/27/12
Benzene	71-43-2		24	ug/kg	95.8	73 - 123				06/27/12
Toluene	108-88-3		24	ug/kg	96.2	77 - 128				06/27/12
Chlorobenzene	108-90-7		24	ug/kg	97	81 - 126				06/27/12
1,1,1-Trichloroethane	71-55-6		24	ug/kg	97.3	75 - 125				06/27/12
Bromodichloromethane	75-27-4		23	ug/kg	92.1	75 - 125				06/27/12
MS			**QC Sample #77468**							
			Original 120832004							
1,1-Dichloroethene	75-35-4	<1	22	ug/kg	87.3	70 - 130				06/27/12
Trichloroethene	79-01-6	<1	22	ug/kg	87.7	70 - 130				06/27/12
Benzene	71-43-2	<1	24	ug/kg	97.8	70 - 130				06/27/12
Toluene	108-88-3	<1	24	ug/kg	95.7	70 - 130				06/27/12
Chlorobenzene	108-90-7	<1	24	ug/kg	97	70 - 130				06/27/12
1,1,1-Trichloroethane	71-55-6	<1	25	ug/kg	98.4	70 - 130				06/27/12
Bromodichloromethane	75-27-4	<1	24	ug/kg	97.8	70 - 130				06/27/12
MSD			**QC Sample #77469**							
			Original 120832004						**Paired 77468**	
1,1-Dichloroethene	75-35-4	<1	22	ug/kg	87	70 - 130	0.00	30		06/27/12
Trichloroethene	79-01-6	<1	22	ug/kg	87	70 - 130	0.00	30		06/27/12
Benzene	71-43-2	<1	25	ug/kg	101	70 - 130	4.10	30		06/27/12
Toluene	108-88-3	<1	25	ug/kg	99.7	70 - 130	4.10	30		06/27/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chlorobenzene	108-90-7	<1	26	ug/kg	103.1	70 - 130	8.00	30		06/27/12
1,1,1-Trichloroethane	71-55-6	<1	26	ug/kg	103.3	70 - 130	3.90	30		06/27/12
Bromodichloromethane	75-27-4	<1	26	ug/kg	103.3	70 - 130	8.00	30		06/27/12

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120832

Analytical Batch 203895 (QC Batch: 203893)
Associated Samples 120832001, 120832002

Test Anions by Ion Chromatography (Solid)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77571**							
Nitrite-N	NO2-N		<0.019	ug/mL					U	06/27/12
Sulfate	14808-79-8		<0.11	ug/mL					U	06/27/12
LCS			**QC Sample #77572**							
Nitrite-N	NO2-N		1.04	ug/mL	106.2	90 - 110				06/27/12
Sulfate	14808-79-8		3.73	ug/mL	95.1	90 - 110				06/27/12
MS			**QC Sample #77573**							
			Original 120832001							
Nitrite-N	NO2-N	<1.0	21.9	mg/kg	90.3	80 - 120				06/27/12
Sulfate	14808-79-8	<5.8	86.5	mg/kg	89.2	80 - 120				06/27/12
MSD			**QC Sample #77574**							
			Original 120832001					**Paired**	**77573**	
Nitrite-N	NO2-N	<1.0	21.6	mg/kg	90.2	80 - 120	1.40	30		06/27/12
Sulfate	14808-79-8	<5.8	85.0	mg/kg	88.6	80 - 120	1.70	30		06/27/12
DUP			**QC Sample #77575**							
			Original 120832001							
Nitrite-N	NO2-N	<1.0	<1.0	mg/kg			0.00	30	U	06/27/12
Sulfate	14808-79-8	<5.8	<5.9	mg/kg			14.50	30	U	06/27/12

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Analytical Batch 204067 (QC Batch: 203900)
Associated Samples 120832001, 120832002, 120832003

Test Gross Alpha/Gross Beta

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #77596**								
Gross Alpha	12587-46-1		0.064	pCi/g						U	07/10/12
Gross Beta	12587-47-2		0.11	pCi/g						U	07/10/12
LCS			**QC Sample #77597**								
Gross Alpha	12587-46-1		0.96	pCi/g	90.7	80 - 120					07/10/12
Gross Beta	12587-47-2		4.6	pCi/g	100.7	80 - 120					07/10/12
DUP			**QC Sample #77598**								
			Original 120832001								
Gross Alpha	12587-46-1	0.55	0.50	pCi/g			10.30	30			07/10/12
Gross Beta	12587-47-2	3.1	2.1	pCi/g			36.70	30	*	X	07/10/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Analytical Batch 203913 (QC Batch: 203912)
Associated Samples 120832001, 120832002, 120832003

Test SW-846 Method 8015 for GPP

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77639**							
Diethyl ether	60-29-7		<440	ug/kg					U	06/28/12
Methanol	67-56-1		<440	ug/kg					U	06/28/12
LCS			**QC Sample #77640**							
Diethyl ether	60-29-7		13300	ug/kg	81.8	70 - 130				06/28/12
Methanol	67-56-1		14000	ug/kg	77.5	70 - 130				06/28/12
MS			**QC Sample #77641**							
			Original 120832001							
Diethyl ether	60-29-7	<430	15100	ug/kg	105.8	70 - 130				06/28/12
Methanol	67-56-1	<430	16100	ug/kg	101.7	70 - 130				06/28/12
MSD			**QC Sample #77642**							
			Original 120832001						**Paired 77641**	
Diethyl ether	60-29-7	<430	15300	ug/kg	105.5	70 - 130	1.30	30		06/28/12
Methanol	67-56-1	<430	16500	ug/kg	102.7	70 - 130	2.50	30		06/28/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

Analytical Batch 204160 (QC Batch: 203954)
Associated Samples 120832001, 120832002, 120832003

Test SW-846 8270D Semivolatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77655**							
Phenol	108-95-2		<200	ug/kg					U	07/02/12
Pyrene	129-00-0		<200	ug/kg					U	07/02/12
Naphthalene	91-20-3		<200	ug/kg					U	07/02/12
2-Methylphenol	95-48-7		<200	ug/kg					U	07/02/12
3 & 4 Methylphenol, Total	65794-96-9		<200	ug/kg					U	07/02/12
n-Dodecane	112-40-3		<200	ug/kg					U	07/02/12
Benzyl alcohol	100-51-6		<200	ug/kg					U	07/02/12
2-Butoxyethanol	111-76-2		<200	ug/kg					U	07/02/12
Cyclohexanone	108-94-1		<200	ug/kg					U	07/02/12
LCS			**QC Sample #77656**							
Phenol	108-95-2		7400	ug/kg	95.3	70 - 119				07/02/12
Pyrene	129-00-0		8600	ug/kg	109.8	53 - 136				07/02/12
2-Butoxyethanol	111-76-2		7300	ug/kg	93.2	62 - 126				07/02/12
Benzyl alcohol	100-51-6		7300	ug/kg	93.3	71 - 121				07/02/12
2-Methylphenol	95-48-7		7400	ug/kg	94.8	73 - 122				07/02/12
n-Dodecane	112-40-3		8300	ug/kg	106.7	78 - 129				07/02/12
Naphthalene	91-20-3		7200	ug/kg	92.7	69 - 119				07/02/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MS			**QC Sample #77657**							
			Original	**120832001**						
Phenol	108-95-2	<200	7800	ug/kg	101.5	55 - 132				07/02/12
Pyrene	129-00-0	<200	9500	ug/kg	123.4	52 - 135				07/02/12
2-Butoxyethanol	111-76-2	<200	7500	ug/kg	98.2	47 - 139				07/02/12
Benzyl alcohol	100-51-6	<200	7400	ug/kg	96.1	55 - 135				07/02/12
2-Methylphenol	95-48-7	<200	8000	ug/kg	103.6	61 - 129				07/02/12
n-Dodecane	112-40-3	<200	8800	ug/kg	114.7	49 - 152				07/02/12
Naphthalene	91-20-3	<200	7400	ug/kg	96.8	56 - 131				07/02/12
MSD			**QC Sample #77658**							
			Original	**120832001**					**Paired**	**77657**
Phenol	108-95-2	<200	7200	ug/kg	91.8	55 - 132	8.00	30		07/02/12
Pyrene	129-00-0	<200	8600	ug/kg	110.1	52 - 135	9.90	30		07/02/12
2-Butoxyethanol	111-76-2	<200	6800	ug/kg	87.2	47 - 139	9.80	30		07/02/12
Benzyl alcohol	100-51-6	<200	6600	ug/kg	84.2	55 - 135	11.40	30		07/02/12
2-Methylphenol	95-48-7	<200	7200	ug/kg	92.8	61 - 129	10.50	30		07/02/12
n-Dodecane	112-40-3	<200	8300	ug/kg	106.7	49 - 152	5.80	30		07/02/12
Naphthalene	91-20-3	<200	7100	ug/kg	90.5	56 - 131	4.10	30		07/02/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

Analytical Batch 204165 (QC Batch: 203956)
Associated Samples 120832001, 120832002, 120832003

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77663**							
Diesel	TPHDIESEL		<4	mg/kg					U	07/02/12
LCS			**QC Sample #77664**							
Diesel	TPHDIESEL		100	mg/kg	104	70 - 130				07/02/12
MS			**QC Sample #77665**							
			Original 120832001							
Diesel	TPHDIESEL	<4	110	mg/kg	115.2	70 - 130				07/02/12
MSD			**QC Sample #77666**							
			Original 120832001					**Paired**	**77665**	
Diesel	TPHDIESEL	<4	110	mg/kg	113.6	70 - 130	0.00	30		07/02/12

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Analytical Batch 204079 (QC Batch: 204051)
Associated Samples 120832001, 120832002, 120832003

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #77667**								
Strontium-89_90	SR-RAD		0.12	pCi/g						U	07/10/12
LCS			**QC Sample #77668**								
Strontium-89_90	SR-RAD		21	pCi/g	109.5	80 - 120					07/10/12
DUP			**QC Sample #77669**								
			Original 120832001								
Strontium-89_90	SR-RAD	1.8	0.41	pCi/g			124.90	30	*	U	07/10/12

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120832

Analytical Batch 204757 (QC Batch: 204274)
Associated Samples 120832001, 120832002, 120832003

Test ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77886**							
Aluminum	7429-90-5		<5.0	ug/L					U	07/16/12
Manganese	7439-96-5		<0.10	ug/L					U	07/16/12
Antimony	7440-36-0		<0.30	ug/L					U	07/16/12
Barium	7440-39-3		<0.20	ug/L					U	07/16/12
Chromium	7440-47-3		<0.10	ug/L					U	07/16/12
Lead	7439-92-1		<0.050	ug/L					U	07/16/12
Arsenic	7440-38-2		<0.20	ug/L					U	07/16/12
LCS			**QC Sample #77887**							
Aluminum	7429-90-5		7650	mg/kg	85.2	49 - 124				07/16/12
Manganese	7439-96-5		243	mg/kg	85	75 - 121				07/16/12
Antimony	7440-36-0		128	mg/kg	105.3	62 - 205				07/16/12
Barium	7440-39-3		153	mg/kg	90.5	78 - 118				07/16/12
Chromium	7440-47-3		62.9	mg/kg	88.2	68 - 119				07/16/12
Lead	7439-92-1		83.8	mg/kg	90.7	79 - 124				07/16/12
Arsenic	7440-38-2		85.6	mg/kg	92.4	79 - 125				07/16/12
MS			**QC Sample #77888**							
			Original 120832001							
Aluminum	7429-90-5	4320	1830	mg/kg	166.7	70 - 130			N	07/16/12

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120832

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Manganese	7439-96-5	117	104	mg/kg	94.5	70 - 130				07/16/12
Antimony	7440-36-0	0.424	101	mg/kg	91.8	70 - 130				07/16/12
Barium	7440-39-3	29.0	116	mg/kg	105.8	70 - 130				07/16/12
Chromium	7440-47-3	12.2	106	mg/kg	96.4	70 - 130				07/16/12
Lead	7439-92-1	1.64	108	mg/kg	97.8	70 - 130				07/16/12
Arsenic	7440-38-2	0.335	109	mg/kg	99.3	70 - 130				07/16/12
MSD			**QC Sample #77889**							
			Original	**120832001**				**Paired**	**77888**	
Aluminum	7429-90-5	4320	1790	mg/kg	161.9	70 - 130	0.90	30	N	07/16/12
Manganese	7439-96-5	117	108	mg/kg	98.1	70 - 130	1.90	30		07/16/12
Antimony	7440-36-0	0.424	99.3	mg/kg	90	70 - 130	1.30	30		07/16/12
Barium	7440-39-3	29.0	109	mg/kg	98.4	70 - 130	5.80	30		07/16/12
Chromium	7440-47-3	12.2	106	mg/kg	96	70 - 130	0.00	30		07/16/12
Lead	7439-92-1	1.64	106	mg/kg	95.9	70 - 130	1.90	30		07/16/12
Arsenic	7440-38-2	0.335	105	mg/kg	95.4	70 - 130	3.70	30		07/16/12

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120832

Analytical Batch 204874 (QC Batch: 204874) **Test** Dry Weight/Percent Moisture
Associated Samples 120832001, 120832002, 120832003, 120832004, 120832005, 120832006

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
DUP			**QC Sample #78104**							
			Original 120827001							
Percent Solids	%SOLIDS		93	percent			2.10	5		07/16/12
LCS			**QC Sample #78105**							
Percent Solids	%SOLIDS		84.0	percent	87.8	80 - 120				07/16/12

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Analytical Batch 204152 (QC Batch: 203857)
Associated Samples 120832001, 120832002, 120832003

Test Uranium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #120832001**							
Uranium-232 Tracer	14158-29-3				89.3	25 - 105				07/03/12
Plutonium-242 Tracer	13982-10-0				82.9	25 - 105				07/03/12
SAMPLE			**Sample #120832002**							
Uranium-232 Tracer	14158-29-3				85.1	25 - 105				07/03/12
Plutonium-242 Tracer	13982-10-0				81	25 - 105				07/03/12
SAMPLE			**Sample #120832003**							
Uranium-232 Tracer	14158-29-3				91.1	25 - 105				07/03/12
Plutonium-242 Tracer	13982-10-0				75.1	25 - 105				07/03/12
BLANK			**QC Sample #77451**							
Uranium-232 Tracer	14158-29-3				84.3	25 - 105				07/03/12
Plutonium-242 Tracer	13982-10-0				90.1	25 - 105				07/03/12
LCS			**QC Sample #77452**							
Uranium-232 Tracer	14158-29-3				69.6	25 - 105				07/03/12
Plutonium-242 Tracer	13982-10-0				85.2	25 - 105				07/03/12
DUP			**QC Sample #77453**							
			Original 120832001							

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Uranium-232 Tracer	14158-29-3				84.3	25 - 105	n/a			07/03/12
Plutonium-242 Tracer	13982-10-0				86.8	25 - 105	n/a			07/03/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Analytical Batch 203866 (QC Batch: 203865)
Associated Samples 120832004, 120832005, 120832006

Test SW-846 8260B Volatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #120832004**							
1,2-Dichloroethane-d4	17060-07-0				104.7	77 - 137				06/27/12
Toluene-d8	2037-26-5				100.2	78 - 122				06/27/12
4-Bromofluorobenzene	460-00-4				95.2	66 - 125				06/27/12
SAMPLE			**Sample #120832005**							
1,2-Dichloroethane-d4	17060-07-0				103.5	77 - 137				06/27/12
Toluene-d8	2037-26-5				99.6	78 - 122				06/27/12
4-Bromofluorobenzene	460-00-4				95.5	66 - 125				06/27/12
SAMPLE			**Sample #120832006**							
1,2-Dichloroethane-d4	17060-07-0				103.6	77 - 137				06/27/12
Toluene-d8	2037-26-5				101.3	78 - 122				06/27/12
4-Bromofluorobenzene	460-00-4				94.4	66 - 125				06/27/12
BLANK			**QC Sample #77466**							
1,2-Dichloroethane-d4	17060-07-0				101.8	77 - 137				06/27/12
Toluene-d8	2037-26-5				100.4	78 - 122				06/27/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
4-Bromofluorobenzene	460-00-4				98.8	66 - 125				06/27/12
LCS			**QC Sample #77467**							
1,2-Dichloroethane-d4	17060-07-0				101.8	77 - 137				06/27/12
Toluene-d8	2037-26-5				104	78 - 122				06/27/12
4-Bromofluorobenzene	460-00-4				103	66 - 125				06/27/12
MS			**QC Sample #77468**							
			Original	**120832004**						
1,2-Dichloroethane-d4	17060-07-0				101.6	77 - 137				06/27/12
Toluene-d8	2037-26-5				103.4	78 - 122				06/27/12
4-Bromofluorobenzene	460-00-4				102.3	66 - 125				06/27/12
MSD			**QC Sample #77469**							
			Original	**120832004**				**Paired**	**77468**	
1,2-Dichloroethane-d4	17060-07-0				101.6	77 - 137	n/a			06/27/12
Toluene-d8	2037-26-5				104.4	78 - 122	n/a			06/27/12
4-Bromofluorobenzene	460-00-4				101.9	66 - 125	n/a			06/27/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Analytical Batch 203913 (QC Batch: 203912)
Associated Samples 120832001, 120832002, 120832003

Test SW-846 Method 8015 for GPP

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #120832001**							
Methyl Acetate	79-20-9			ug/kg	112.8	70 - 130				06/28/12
SAMPLE			**Sample #120832002**							
Methyl Acetate	79-20-9			ug/kg	106.2	70 - 130				06/28/12
SAMPLE			**Sample #120832003**							
Methyl Acetate	79-20-9			ug/kg	112.8	70 - 130				06/28/12
BLANK			**QC Sample #77639**							
Methyl Acetate	79-20-9			ug/kg	112.6	70 - 130				06/28/12
LCS			**QC Sample #77640**							
Methyl Acetate	79-20-9			ug/kg	84.8	70 - 130				06/28/12
MS			**QC Sample #77641**							
			Original 120832001							
Methyl Acetate	79-20-9	20800		ug/kg	99.9	70 - 130				06/28/12
MSD			**QC Sample #77642**							
			Original 120832001					**Paired**	**77641**	
Methyl Acetate	79-20-9	20800		ug/kg	103.2	70 - 130	n/a			06/28/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

Analytical Batch 204160 (QC Batch: 203954)
Associated Samples 120832001, 120832002, 120832003

Test SW-846 8270D Semivolatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #120832001**							
2-Fluorophenol	367-12-4				83.8	44 - 135				07/02/12
Phenol-d5	4165-62-2				91.8	41 - 136				07/02/12
Nitrobenzene-d5	4165-60-0				106.2	53 - 129				07/02/12
2-Methylnaphthalene-d10	7297-45-2				89.3	50 - 140				07/02/12
2-Fluorobiphenyl	321-60-8				94.2	36 - 141				07/02/12
2,4,6-Tribromophenol	118-79-6				66.5	17 - 142				07/02/12
Fluoranthene-d10	93951-69-0				81.3	50 - 140				07/02/12
Terphenyl-d14	98904-43-9				117.2	61 - 142				07/02/12
SAMPLE			**Sample #120832002**							
2-Fluorophenol	367-12-4				84.7	44 - 135				07/02/12
Phenol-d5	4165-62-2				94.3	41 - 136				07/02/12
Nitrobenzene-d5	4165-60-0				106.2	53 - 129				07/02/12
2-Methylnaphthalene-d10	7297-45-2				90	50 - 140				07/02/12
2-Fluorobiphenyl	321-60-8				93.9	36 - 141				07/02/12
2,4,6-Tribromophenol	118-79-6				63.9	17 - 142				07/02/12
Fluoranthene-d10	93951-69-0				85.6	50 - 140				07/02/12
Terphenyl-d14	98904-43-9				105.5	61 - 142				07/02/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #120832003**							
2-Fluorophenol	367-12-4				82.8	44 - 135				07/02/12
Phenol-d5	4165-62-2				93.2	41 - 136				07/02/12
Nitrobenzene-d5	4165-60-0				105.7	53 - 129				07/02/12
2-Methylnaphthalene-d10	7297-45-2				90.8	50 - 140				07/02/12
2-Fluorobiphenyl	321-60-8				95.5	36 - 141				07/02/12
2,4,6-Tribromophenol	118-79-6				58.7	17 - 142				07/02/12
Fluoranthene-d10	93951-69-0				84.6	50 - 140				07/02/12
Terphenyl-d14	98904-43-9				112.7	61 - 142				07/02/12
BLANK			**QC Sample #77655**							
2-Fluorophenol	367-12-4				88.3	44 - 135				07/02/12
Phenol-d5	4165-62-2				95.2	41 - 136				07/02/12
Nitrobenzene-d5	4165-60-0				107	53 - 129				07/02/12
2-Methylnaphthalene-d10	7297-45-2				95.6	50 - 140				07/02/12
2-Fluorobiphenyl	321-60-8				98.8	36 - 141				07/02/12
2,4,6-Tribromophenol	118-79-6				77.3	17 - 142				07/02/12
Fluoranthene-d10	93951-69-0				89.3	50 - 140				07/02/12
Terphenyl-d14	98904-43-9				110.2	61 - 142				07/02/12
LCS			**QC Sample #77656**							
2-Fluorophenol	367-12-4			ug/kg	89.9	38 - 151				07/02/12
Phenol-d5	4165-62-2			ug/kg	97.6	38 - 153				07/02/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Nitrobenzene-d5	4165-60-0			ug/kg	106.7	42 - 153				07/02/12
2,4,6-Tribromophenol	118-79-6			ug/kg	83.9	21 - 147				07/02/12
2-Fluorobiphenyl	321-60-8			ug/kg	97.3	34 - 160				07/02/12
Terphenyl-d14	98904-43-9			ug/kg	108.3	51 - 155				07/02/12
2-Methylnaphthalene-d10	7297-45-2			ug/kg	94.7	27 - 197				07/02/12
Fluoranthene-d10	93951-69-0			ug/kg	88.8	39 - 168				07/02/12
MS			**QC Sample #77657**							
			Original 120832001							
2-Fluorophenol	367-12-4			ug/kg	94.2	38 - 151				07/02/12
Phenol-d5	4165-62-2			ug/kg	102.9	38 - 153				07/02/12
Nitrobenzene-d5	4165-60-0			ug/kg	113.4	42 - 153				07/02/12
2,4,6-Tribromophenol	118-79-6			ug/kg	90.1	21 - 147				07/02/12
2-Fluorobiphenyl	321-60-8			ug/kg	103.8	34 - 160				07/02/12
Terphenyl-d14	98904-43-9			ug/kg	122	51 - 155				07/02/12
2-Methylnaphthalene-d10	7297-45-2			ug/kg	99.3	27 - 197				07/02/12
Fluoranthene-d10	93951-69-0			ug/kg	91.8	39 - 168				07/02/12
MSD			**QC Sample #77658**							
			Original 120832001					**Paired**	**77657**	
2-Fluorophenol	367-12-4			ug/kg	86	38 - 151	n/a			07/02/12
Phenol-d5	4165-62-2			ug/kg	92.6	38 - 153	n/a			07/02/12
Nitrobenzene-d5	4165-60-0			ug/kg	106	42 - 153	n/a			07/02/12
2,4,6-Tribromophenol	118-79-6			ug/kg	81.7	21 - 147	n/a			07/02/12
2-Fluorobiphenyl	321-60-8			ug/kg	96	34 - 160	n/a			07/02/12
Terphenyl-d14	98904-43-9			ug/kg	109.2	51 - 155	n/a			07/02/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
2-Methylnaphthalene-d10	7297-45-2			ug/kg	92.2	27 - 197	n/a			07/02/12
Fluoranthene-d10	93951-69-0			ug/kg	85.3	39 - 168	n/a			07/02/12

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120832

Analytical Batch 204165 (QC Batch: 203956)
Associated Samples 120832001, 120832002, 120832003

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #120832001**							
o-Terphenyl	84-15-1				114.2	70 - 130				07/02/12
SAMPLE			**Sample #120832002**							
o-Terphenyl	84-15-1				111.8	70 - 130				07/02/12
SAMPLE			**Sample #120832003**							
o-Terphenyl	84-15-1				107.4	70 - 130				07/02/12
BLANK			**QC Sample #77663**							
o-Terphenyl	84-15-1				110.3	70 - 130				07/02/12
LCS			**QC Sample #77664**							
o-Terphenyl	84-15-1				106.7	50 - 150				07/02/12
MS			**QC Sample #77665**							
			Original 120832001							
o-Terphenyl	84-15-1				111.7	50 - 150				07/02/12
MSD			**QC Sample #77666**							
			Original 120832001					**Paired**	**77665**	
o-Terphenyl	84-15-1				107.1	50 - 150	n/a			07/02/12

Quality Control Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120832

Analytical Batch 204079 (QC Batch: 204051)
Associated Samples 120832001, 120832002, 120832003

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #120832001**							
Strontium-85	13967-73-2			pCi/sample	54	25 - 105				07/10/12
SAMPLE			**Sample #120832002**							
Strontium-85	13967-73-2			pCi/sample	57.3	25 - 105				07/10/12
SAMPLE			**Sample #120832003**							
Strontium-85	13967-73-2			pCi/sample	60.2	25 - 105				07/10/12
BLANK			**QC Sample #77667**							
Strontium-85	13967-73-2			pCi/sample	63.3	25 - 105				07/10/12
LCS			**QC Sample #77668**							
Strontium-85	13967-73-2			pCi/sample	63.7	25 - 105				07/10/12
DUP			**QC Sample #77669**							
			Original 120832001							
Strontium-85	13967-73-2	28		pCi/sample	67.8	25 - 105	n/a			07/10/12

Tentatively Identified Peak Report

JULY 18, 2012

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120832

Peak Name		CAS #	RT	RQ	Result	Units
120832004	**B2L7W7**					
T		1000163-09-3 2	4.0446		7.8	ug/kg
Unknown		UNKNOWN-02	5.8484		22	ug/kg
120832005	**B2L7X1**					
Unknown		UNKNOWN-01	4.2827		.63	ug/kg
Unknown		UNKNOWN-02	5.691		1.3	ug/kg
Unknown		UNKNOWN-03	9.0735		.74	ug/kg
120832006	**B2L7X5**					
2,4-Dichlorophenoxyace		19810-30-1	5.7036		.26	ug/kg
Unknown		UNKNOWN-02	5.7551		.25	ug/kg
Unknown		UNKNOWN-03	9.0572		.2	ug/kg

Attention: Scot Fitzgerald

Group # WSCF120832

Quality Control Comments

Department Radiochemistry

77451 BLANK for HBN 203857 [RADP/683

Analyte Uranium-234 - Uranium (AEA)

[1] The blank is less than 2X the MDC and is acceptable.

77453 B2L7X0(120832001DUP)

Analyte Plutonium-238 - Plutonium (AEA)

[1] Duplicate RPD out-of-limits. RPD limit does not apply to results near the Minimum Detectable Concentration.

Analyte Uranium-235 - Uranium (AEA)

[1] Duplicate RPD out-of-limits. RPD limit does not apply to results near the Minimum Detectable Concentration.

Analyte Uranium-238 - Uranium (AEA)

[1] Duplicate RPD out-of-limits. RPD limit does not apply to results near the Minimum Detectable Concentration.

77598 B2L7X0(120832001DUP)

Analyte Gross Beta - Gross Alpha/Gross Beta

[1] Duplicate RPD out-of-limits. RPD limit does not apply to results near the Minimum Detectable Concentration.

JULY 18, 2012

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 18 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 650 S3-30
Richland, WA 99352

ATTN: Scot Fitzgerald

Customer Code: CHPRC
PO #: 401586
Work Order #: 120832
Profile #: F12-019-006
Proj. Mgr.:
Phone:

The following samples were received from you on 6/26/2012 11:00:00 AM. 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		
120832001	B2L7X0	SOIL	6/26/2012 09:30	6/26/2012 11:00
		2008-S; 8015-S; 8270SV-S; AEA-NP-S; AEA-PU-S; AEA-U-S; DRY-WEIGHT; GAB-AO-S; GAB-BO-S; IC-S; SR89/90-S; TC99-S; TPHDWA-S		
120832002	B2L7X4	SOIL	6/26/2012 09:57	6/26/2012 11:00
		2008-S; 8015-S; 8270SV-S; AEA-NP-S; AEA-PU-S; AEA-U-S; DRY-WEIGHT; GAB-AO-S; GAB-BO-S; IC-S; SR89/90-S; TC99-S; TPHDWA-S		
120832003	B2L7W6	SOIL	6/26/2012 08:55	6/26/2012 11:00
		2008-S; 8015-S; 8270SV-S; AEA-NP-S; AEA-PU-S; AEA-U-S; DRY-WEIGHT; GAB-AO-S; GAB-BO-S; SR89/90-S; TC99-S; TPHDWA-S		
120832004	B2L7W7	SOIL	6/26/2012 08:55	6/26/2012 11:00
		8260V-S; DRY-WEIGHT		
120832005	B2L7X1	SOIL	6/26/2012 09:30	6/26/2012 11:00
		8260V-S; DRY-WEIGHT		
120832006	B2L7X5	SOIL	6/26/2012 09:57	6/26/2012 11:00
		8260V-S; DRY-WEIGHT		

Test Acronym Description

Test Acronym	Description
2008-S	ICP-MS (S)
8015-S	8015 (S)
8260V-S	Volatiles by 8260B (S)
8270SV-S	Semivolatiles by 8270D (S)
AEA-NP-S	Neptunium (AEA) (Solid)

JULY 18, 2012

Waste Sampling and Characterization Facility
P.O. Box 1970 S3-30, Richland WA 99352
Phone: (509) 373-7004/FAX: (509) 373-7134

AEA-PU-S	Plutonium (AEA) (S)
AEA-U-S	Uranium Isotopic (AEA) (S)
DRY-WEIGHT	Dry Weight as Pct Moisture
GAB-AO-S	Gross Alpha/Beta (A only)(S)
GAB-BO-S	Gross Alpha/Beta (B only)(S)
IC-S	Anions by IC (S)
SR89/90-S	Strontium 89/90 (GPC) (S)
TC99-S	Technetium-99 (S)
TPHDWA-S	TPHD-WA (S)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-019-006	PAGE 1 OF 2
COLLECTOR: JC Fulton CHPRC	COMPANY CONTACT: TODAK, D	TELEPHONE NO.: 376-6427	PROJECT COORDINATOR: TODAK, D	PRICE CODE: 8C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: C8096; UP1-11-079 (0077312)	PROJECT DESIGNATION: 200-UP-1 Waste Sampling - Soil		SAF NO.: F12-019	AIR QUALITY: ☐	
ICE CHEST NO.: (N/A)	FIELD LOGBOOK NO.: HNF-N-585-6	ACTUAL SAMPLE DEPTH: 228' - 240'	COA: 300058ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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: 120832

PRESERVATION	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None
HOLDING TIME	14 Days	14/40 Days	6 Months	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G	aG	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1	1
VOLUME	250mL	250mL	250mL	60mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS 8015	SEE ITEM (2) IN SPECIAL INSTRUCTIONS ~~SVOA~~ TPH-D	SEE ITEM (3) IN SPECIAL INSTRUCTIONS 8082	SEE ITEM (4) IN SPECIAL INSTRUCTIONS ~~TC~~	SEE ITEM (5) IN SPECIAL INSTRUCTIONS A/B NP AU SR U TC

TP-12-058

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B2L7X0 1	SOIL	JUN 26 2012	0530	✓	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: JC Fulton CHPRC	DATE/TIME: JUN 26 2012 1100	RECEIVED BY/STORED IN: TA Finzi	DATE/TIME: JUN 26 2012 1100	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
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	

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

PRINTED ON 5/14/2012

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-019-006	PAGE 2 OF 2
COLLECTOR JC Fulton CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8C	DATA TURNAROUND
SAMPLING LOCATION CB096; UP1-11-079 (0077312)	PROJECT DESIGNATION 200-UP-1 Waste Sampling - Soil		SAF NO. F12-019	AIR QUALITY ☐	15 Days / 15 Days
ICE CHEST NO. (N/A)	FIELD LOGBOOK NO. HNF-N-585-6	ACTUAL SAMPLE DEPTH 228'-240'	COA 300058ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 401586ES20.☐** 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 and will include 5 bottles for low level analysis.☐** 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. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.
(1) Alcohols, Glycols, & Ketones - 8015 {Diethyl ether, Methanol};
(2) Semi-VOA - 8270 (TCL) {~~2-Methylphenol~~ (cresol, o-), Naphthalene, ~~Phenol~~, ~~Pyrene~~}; Semi-VOA - 8270 (Add-On) {~~2-Butoxyethanol~~, ~~3+4 Methylphenol~~ (cresol, m+p), ~~Benzyl alcohol~~, ~~Cyclohexanone~~, ~~Dodecane~~}; TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range};
(3) ICP/MS - 200.8 (TAL) {Aluminum, Antimony, Barium, Chromium, Manganese}; ICP/MS - 200.8 (Add-on) {Arsenic, Boron, Lead};
(4) IC Anions - 300.0 {Nitrogen in Nitrite, Sulfate};
(5) Gross Alpha {Gross alpha}; Gross Beta {Gross beta}; Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Strontium-89,90 -- Total Sr; Neptunium-237; Technetium-99;

TP-AL- 12- 058

PRINTED ON 5/14/2012

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-019-010	PAGE 1 OF 2
COLLECTOR: JC Fulton CHPRC	COMPANY CONTACT: TODAK, D	TELEPHONE NO.: 376-6427	PROJECT COORDINATOR: TODAK, D	PRICE CODE: 8C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: C8097; UP1-11-085 (0075642)	PROJECT DESIGNATION: 200-UP-1 Waste Sampling - Soil		SAF NO.: F12-019	AIR QUALITY: —	
ICE CHEST NO.: (N/A)	FIELD LOGBOOK NO.: HNF-N-585-6	ACTUAL SAMPLE DEPTH: 235' - 243'	COA: 300058FS10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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	Cool~4C	Cool~4C	Cool~4C	Cool~4C	None
HOLDING TIME	14 Days	14/40 Days	6 Months	28 Days/48 Hours	6 Months
TYPE OF CONTAINER	G	aG	G/P	G/P	G/P
NO. OF CONTAINER(S)	1	1	1	1	1
VOLUME	250mL	250mL	250mL	60mL	250mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	SEE ITEM (5) IN SPECIAL INSTRUCTIONS

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME					
B2L7X4	2 SOIL	JUN 26 2012	0957	✓	✓	✓	✓	✓

TF-12-058

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: JC Fulton CHPRC	DATE/TIME: JUN 26 2012 1100	RECEIVED BY/STORED IN: TA Franzinburgent	DATE/TIME: JUN 26 2012 1100	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
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	

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

PRINTED ON 5/14/2012

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-019-010	PAGE 2 OF 2
COLLECTOR JC Fulton CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8C	DATA TURNAROUND
SAMPLING LOCATION C8097; UP1-11-085 (0075642)	PROJECT DESIGNATION 200-UP-1 Waste Sampling - Soil		SAF NO. F12-019	AIR QUALITY	15 Days / 15 Days
ICE CHEST NO. (N/A)	FIELD LOGBOOK NO. HNF-N-585-6	ACTUAL SAMPLE DEPTH 23.5' - 24.3'	COA 300058ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 401586ES20.□** 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 and will include 5 bottles for low level analysis.□** 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. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.
(1) Alcohols, Glycols, & Ketones - 8015 {Diethyl ether, Methanol};
(2) Semi-VOA - 8270 (TCL) {2-Methylphenol (cresol, o-), Naphthalene, Phenol, Pyrene}; Semi-VOA - 8270 (Add-On) {2-Butoxyethanol, 3+4 Methylphenol (cresol, m+p), Benzyl alcohol, Cyclohexanone, Dodecane}; TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range};
(3) ICP/MS - 200.8 (TAL) {Aluminum, Antimony, Barium, Chromium, Manganese}; ICP/MS - 200.8 (Add-on) {Arsenic, Boron, Lead};
(4) IC Anions - 300.0 {Nitrogen in Nitrite, Sulfate};
(5) Gross Alpha {Gross alpha}; Gross Beta {Gross beta}; Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Strontium-89,90 -- Total Sr; Neptunium-237; Technetium-99;

TPA- 12- 058

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A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-019-002	PAGE 1 OF 2
COLLECTOR: JC Fulton CHPRC	COMPANY CONTACT: TODAK, D	TELEPHONE NO.: 376-6427	PROJECT COORDINATOR: TODAK, D	PRICE CODE: 8C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: C8095; UP1-11-013 (0078584)	PROJECT DESIGNATION: 200-UP-1 Waste Sampling - Soil		SAF NO.: F12-019	AIR QUALITY:	
ICE CHEST NO.: (N/A)	FIELD LOGBOOK NO.: HNF-N-585-6	ACTUAL SAMPLE DEPTH: 237'- 242'	COA: 300058ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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	Cool~4C	Cool~4C	Cool~4C	None	
HOLDING TIME	14 Days	14/40 Days	6 Months	6 Months	
TYPE OF CONTAINER	G	aG	G/P	G/P	
NO. OF CONTAINER(S)	1	1	1	1	
VOLUME	250mL	250mL	250mL	250mL	
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	SEE ITEM (4) IN SPECIAL INSTRUCTIONS	

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2L7W6 3	SOIL	JUN 26 2012	0855	✓	✓	✓	✓

TRVL- 12- 058

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: JC Fulton	DATE/TIME: JUN 26 2012 1100	RECEIVED BY/STORED IN: TA Frazier	DATE/TIME: JUN 26 2012 1100	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
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	

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

PRINTED ON 5/14/2012

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-019-002	PAGE 2 OF 2
COLLECTOR JC Fulton CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8C	DATA TURNAROUND
SAMPLING LOCATION C8095; UP1-11 013 (0078584)	PROJECT DESIGNATION 200-UP 1 Waste Sampling - Soil		SAF NO. F12-019	AIR QUALITY ☐	15 Days / 15 Days
ICE CHEST NO. (N/A)	FIELD LOGBOOK NO. HNF-N-585-6	ACTUAL SAMPLE DEPTH 237' - 242'	COA 300058ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 401586ES20.☐** 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 and will include 5 bottles for low level analysis.☐** 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. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.
(1) Alcohols, Glycols, & Ketones - 8015 {Diethyl ether, Methanol};
(2) Semi-VOA - 8270 (TCL) {2-Methylphenol (cresol, o-), Naphthalene, Phenol, Pyrene}; Semi-VOA - 8270 (Add-On) {2-Butoxyethanol, 3+4 Methylphenol (cresol, m+p), Benzyl alcohol, Cyclohexanone, Dodecane}; TPH-DieselKerosene Range - WTPH-D {Total petroleum hydrocarbons - diesel range};
(3) ICP/MS - 200.8 (TAL) {Aluminum, Antimony, Barium, Chromium, Manganese}; ICP/MS - 200.8 (Add-on) {Arsenic, Boron, Lead};
(4) Gross Alpha {Gross alpha}; Gross Beta {Gross beta}; Isotopic Plutonium {Plutonium-238, Plutonium-239/240}; Isotopic Uranium {Uranium-233/234, Uranium-235, Uranium-238}; Strontium-89,90 -- Total Sr; Neptunium-237; Technetium-99;

TRVL- 12- 058

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A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-019-003	PAGE 1 OF 2
COLLECTOR: JC Fulton CHPRC	COMPANY CONTACT: TODAK, D	TELEPHONE NO.: 376-6427	PROJECT COORDINATOR: TODAK, D	PRICE CODE: 8C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: C8095; UP1-11-013 (0078584)	PROJECT DESIGNATION: 200-UP-1 Waste Sampling - Soil		SAF NO.: F12-019	AIR QUALITY: ☐	
ICE CHEST NO.: (N/A)	FIELD LOGBOOK NO.: HNF-N-585-6	ACTUAL SAMPLE DEPTH: 237' - 242'	COA: 300058ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
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, SF=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	Frozen/Cool <-7C and >-20C
HOLDING TIME	14 Days
TYPE OF CONTAINER	aGs
NO. OF CONTAINER(S)	5
VOLUME	40mL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME
B2L7W7	4	SOIL	JUN 26 2012	0855

TRVL- 12- 058

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: JC Fulton CHPRC	DATE/TIME: JUN 26 2012 1100	RECEIVED BY/STORED IN: TA Frazier	DATE/TIME: JUN 26 2012 1100	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
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	

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

PRINTED ON 5/14/2012

A-6003-618 (REV 2)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-019-003	PAGE 2 OF 2
COLLECTOR JC Fulton CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8C	DATA TURNAROUND
SAMPLING LOCATION C8095; UP1-11-013 (0078584)	PROJECT DESIGNATION 200-UP-1 Waste Sampling - Soil		SAF NO. F12-019	AIR QUALITY [ ]	15 Days / 15 Days
ICE CHEST NO. (N/A)	FIELD LOGBOOK NO. HNF-N-585-6	ACTUAL SAMPLE DEPTH 237' - 242'	COA 3000S8ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 401586ES20.□** 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 and will include 5 bottles for low level analysis.□** 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. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.
(1) VOA - 5035/8260 (LOW LEVEL) {1,1,1-Trichloroethane, 1,1-Dichloroethene, 2-Butanone, 4-Methyl-2-pentanone, Acetone, Bromodichloromethane, Carbon tetrachloride, Chlorobenzene, Methylene chloride, Tetrachloroethene, Toluene, Xylenes (total)}; VOA - 5035/8260 (LOW LEVEL) - (Add-On) {Acetonitrile, Hexane, n-Butylbenzene};

TPVL- 12- 058

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A-6003-018 (REV 2)

Chain of Custody

SAMPLE RECORD SHEET FOR VOC SAMPLE COLLECTION				
Location:				
Sampler Initials and Date:				
Sample Number [1]	Sample Suffix	Initial Weight [2] (grams)	Total Weight [3] (grams)	Soil Weight [4] (grams)
B2L7W7	K	28.80	35.5	6.7
B2L7W7	L	28.98	34.4	5.5
B2L7W7	M	28.94	33.6	4.7
B2L7W7	N	28.92	33.9	5.0
B2L7W7	P	28.84	35.4	4.6

[1] Enter sample number associated with the sampling event.

[2] Initial weight is to include all labels, stickers, bags, 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.

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

[4] Soil weight is the vial with sample minus Initial Weight.

A-6005-526 (REV 0)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-019-007	PAGE 1 OF 2
COLLECTOR: JC Fulton CHPRC	COMPANY CONTACT: TODAK, D	TELEPHONE NO.: 376-6427	PROJECT COORDINATOR: TODAK, D	PRICE CODE: 8C	DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: C8096; UP1-11-079 (0077312)	PROJECT DESIGNATION: 200-UP-1 Waste Sampling - Soil		SAF NO.: F12-019	AIR QUALITY: ☐	
ICE CHEST NO.: (N/A)	FIELD LOGBOOK NO.: HNF-N-585-6	ACTUAL SAMPLE DEPTH: 228' - 240'	COA: 300058ES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO: Waste Sampling & Characterization	OFFSITE PROPERTY NO.: N/A		BILL OF LADING/AIR BILL NO.: N/A		

MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	Frozen/Cool <-7C and >-20C
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	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)	HOLDING TIME	14 Days
		TYPE OF CONTAINER	aGS
		NO. OF CONTAINER(S)	5
		VOLUME	40mL
	SPECIAL HANDLING AND/OR STORAGE	SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

TP/L- 12- 058

SAMPLE NO.		MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2L7X1	5	SOIL	JUN 2 6 2012	0430	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: JC Fulton CHPRC	DATE/TIME: JUN 2 6 2012 1100	RECEIVED BY/STORED IN: TA Frazier	DATE/TIME: JUN 2 6 2012 1100	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
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	

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

PRINTED ON 5/14/2012

A-6003-618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-019-007	PAGE 2 OF 2
COLLECTOR JC Fulton CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION C8096; UP1-11-079 (0077312)	PROJECT DESIGNATION 200-UP-1 Waste Sampling - Soil		SAF NO. F12-019	AIR QUALITY ☐	
ICE CHEST NO. (N/A)	FIELD LOGBOOK NO. HNF-N-585-6	ACTUAL SAMPLE DEPTH 228' - 240	COA 300058ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 401586ES20.☐** 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 and will include 5 bottles for low level analysis.☐** 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. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.
(1) VOA - 5035/8260 (LOW LEVEL) {1,1,1-Trichloroethane, 1,1-Dichloroethene, 2-Butanone, 4-Methyl-2-pentanone, Acetone, Bromodichloromethane, Carbon tetrachloride, Chlorobenzene, Methylene chloride, Tetrachloroethene, Toluene, Xylenes (total)}; VOA - 5035/8260 (LOW LEVEL) - (Add-On) {Acetonitrile, Hexane, n-Butylbenzene};

TP'/L- 12- 058

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A-6003-618 (REV 2)

Chain of Custody

SAMPLE RECORD SHEET FOR VOC SAMPLE COLLECTION

Location:

Sampler Initials and Date:

Sample Number [1]	Sample Suffix	Initial Weight [2] (grams)	Total Weight [3] (grams)	Soil Weight [4] (grams)
B2L7X1	K	28.73	39.3	10.6
B2L7X1	L	28.8	34.7	5.9
B2L7X1	M	28.9	35.1	4.2
B2L7X1	N	28.8	35.4	4.6
B2L7X1	P	28.6	34.9	6.3

[1] Enter sample number associated with the sampling event.

[2] Initial weight is to include all labels, stickers, bags, 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.

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

[4] Soil weight is the vial with sample minus Initial Weight.

A-6005-526 (REV 0)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		F12-019-011	PAGE 1 OF 2
COLLECTOR: Fulton	COMPANY CONTACT: TODAK, D	TELEPHONE NO.: 376-6427	PROJECT COORDINATOR: TODAK, D	PRICE CODE: 8C / AIR QUALITY: ☐ / DATA TURNAROUND: 15 Days / 15 Days
SAMPLING LOCATION: C8097; UP1-11-085 (0075642)	PROJECT DESIGNATION: 200-UP-1 Waste Sampling - Soil		SAF NO.: F12-019	
ICE CHEST NO.: (N/A)	FIELD LOGBOOK NO.: HNF-N-585-6	ACTUAL SAMPLE DEPTH: 243-235	COA: 30005BES10	METHOD OF SHIPMENT: GOVERNMENT VEHICLE / ORIGINAL
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	Frozen/Cool <-7C and >-20C
HOLDING TIME	14 Days
TYPE OF CONTAINER	aGs
NO. OF CONTAINER(S)	5
VOLUME	4OmL
SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS

TPIL- 12- 058

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2L7X5 6	SOIL	JUN 2 6 2012	0957	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS
RELINQUISHED BY/REMOVED FROM: JO Fulton CHPRC	DATE/TIME: JUN 2 6 2012 1100	RECEIVED BY/STORED IN: TA Fazimi	DATE/TIME: JUN 2 6 2012 1100	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
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	

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

PRINTED ON 5/14/2012

A-6003-618 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-019-011	PAGE 2 OF 2
COLLECTOR JC Fulton CHPRC	COMPANY CONTACT TODAK, D	TELEPHONE NO. 376-6427	PROJECT COORDINATOR TODAK, D	PRICE CODE 8C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION C8097; UP1-11-085 (C075642)	PROJECT DESIGNATION 200-UP-1 Waste Sampling - Soil		SAF NO. F12-019	AIR QUALITY ☐	
ICE CHEST NO. (N/A)	FIELD LOGBOOK NO. HNF-N-585-6	ACTUAL SAMPLE DEPTH 235' - 243'	COA 300058ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 401586ES20.☐** 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 and will include 5 bottles for low level analysis.☐** 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. These suffixes are for the purpose of providing bottle weights to the laboratories. These suffixes should not be included as part of the sample ID reported in the final data packages.
(1) VOA - 5035/8260 (LOW LEVEL) {1,1,1-Trichloroethane, 1,1-Dichloroethene, 2-Butanone, 4-Methyl-2-pentanone, Acetone, Bromodichloromethane, Carbon tetrachloride, Chlorobenzene, Methylene chloride, Tetrachloroethene, Toluene, Xylenes (total)}; VOA - 5035/8260 (LOW LEVEL) - (Add-On) {Acetonitrile, Hexane, n-Butylbenzene};

TRL- 12- 058

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A 6003 618 (REV 2)

Chain of Custody

SAMPLE RECORD SHEET FOR VOC SAMPLE COLLECTION				
Location:				
Sampler Initials and Date:				
Sample Number [1]	Sample Suffix	Initial Weight [2] (grams)	Total Weight [3] (grams)	Soil Weight [4] (grams)
B2L 7x5	K	29.1	36.5	7.4
B2L 7x5	L	29.2	36.8	7.6
B2L 7x5	M	28.8	35.4	4.6
B2L 7x5	N	28.9	33.6	4.7
B2L 7x5	P	28.9	37.9	9.1

[1] Enter sample number associated with the sampling event.

[2] Initial weight is to include all labels, stickers, bags, 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.

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

[4] Soil weight is the vial with sample minus Initial Weight.

A-6005-526 (REV 0)