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

December 10, 2012

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

Dear Scot Fitzgerald,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF121439

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 WSCF121439

* 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 # WSCF121439
Data Deliverable Date 12/10/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
I13-007	B2MXM3	121439001	WATER	11/07/12	11/07/12
I13-007	B2MXL9	121439002	WATER	11/07/12	11/07/12

ATTACHMENT 2

NARRATIVE

Consisting of 8 pages
Including cover page

Attachment 2
Narrative
WSCF121439

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.

- Sample Issue Resolution Form SDR13-012 regarding cancellation of Hexachlorophene analysis is attached to this report.
- Sample Issue Resolution Form SDR13-030 regarding clarification of VOA appendix IX list is attached to this report.
- Sample Issue Resolution Form SDR13-044 regarding Boron LCS failure is attached to this report.

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.

Attachment 2
Narrative
WSCF121439

Analytical Methodology for Requested Analyses

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

Inorganic Comments

Cyanide – 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.

ICP-AES 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):

- Copper and Zinc were detected in the Blank and evaluated.
- Sodium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
- All other 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):

- Boron was detected in the Blank and evaluated.
- Sample Issue Resolution Form SDR13-044 regarding Boron LCS failure is attached to this report.
- 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):

- The Methanol analysis was performed by GC-MS.
- All applicable QC controls are within the established limits.

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

Attachment 2
Narrative
WSCF121439

- 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):

- 3,3'-Dichlorobenzidine did not meet the MS / MSD RPD acceptance limits. Sample results for this analyte were not flagged. The quality control report was flagged for RPD failure.

- All other 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.

TPHG-WA – 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.

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 Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

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

Gamma Energy Analysis:

- All applicable QC controls are within the established limits.

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 below 5X the minimum detectable activity. No flags issued.

Attachment 2
Narrative
WSCF121439

- All other applicable QC controls are within the established limits.

Isotopic Plutonium analysis:

- Plutonium-239/240 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.

- All other applicable QC controls are within the established limits.

Isotopic Uranium analysis:

- Uranium-235 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.

- All other applicable QC controls are within the established limits.

Strontium-89/90:

- Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.

- All other applicable QC controls are within the established limits.

Tritium:

- 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 2
Narrative
WSCF121439

SAMPLE ISSUE RESOLUTION

SIR NUM	SDR13-012
REV NUM	1
DATE INITIATED	10/15/2012

SAMPLE EVENT INFORMATION

SAF NUM(S)	W13-010
OPERABLE UNIT(S)	
PROJECT(S)	RCRA13
SAMPLE EVENT TITLE(S)	RCRA13
LABORATORY	Waste Sampling & Characterization

SAMPLING INFORMATION

NUMBER OF SAMPLES	18
SAMPLE NUMBERS	B2M171, B2M129, B2M135, B2M165, B2M123, B2M177, B2M9W6, B2M0Y3, B2M0Y9, B2M141, B2M147, B2M153, B2M159, B2M111, B2M194, B2M105, B2M117, B2M1B0, B2M183, B2MN99, B2MNB5, B2MN81, B2MN82, B2MN94, B2MN71, B2MN57, B2MN32, B2MN52, B2MN89, B2MNC0, B2MXL9, B2MN75, B2MN47, B2MN42, B2MXM8, B2MXN9, B2MXN8, B2MXM7, B2MN63, B2MN64
SAMPLE MATRIX	WATER
COLLECTION DATE	10/3/2012 - 11/30/2012
SDG NUM	WSCF121223, WSCF121226, WSCF121230, WSCF121232, WSCF121239, WSCF121241, WSCF121242, WSCF121274, WSCF121275, WSCF121284, WSCF121303, WSCF121398, WSCF121401, WSCF121402, WSCF121404, WSCF121439, WSCF121448, WSCF121450, WSCF121456

ISSUE BACKGROUND

CLASS	Laboratory Issue
TYPE	Cancellation of Analyses
DESCRIPTION	WSCF is not currently calibrated for Hexachlorophene by 8270. The compound is polar thus it sticks to the columns. Therefore, it is not able to be routinely measure in the extract. In order to be able to report the compound it would need to be derivatized. WSCF is currently not setup to derivatize Hexachlorophene.

DISPOSITION

DESCRIPTION	PROPOSED DISPOSITION: Report the data without Hexachlorophene and note issue in narrative.
JUSTIFICATION	ACCEPTED DISPOSITION: Accept proposed resolution and request that WSCF send a weekly update of any further SDGs that are affected to be added to this SIR. SUBMITTED BY: Heather Medley/WSCF DATE: 10/15/12 ACCEPTED BY: Karen Waters-Husted/CHPRC DATE: 10/16/12

A-6003-640 (03/30)

PAGE 1 of 1

Attachment 2
Narrative
WSCF121439

SAMPLE ISSUE RESOLUTION

SIR NUM	SDR13-030
REV NUM	0
DATE INITIATED	11/2/2012

SAMPLE EVENT INFORMATION

SAF NUM(S)	W13-011
OPERABLE UNIT(S)	NONE
PROJECT(S)	RCRA13
SAMPLE EVENT TITLE(S)	RCRA13
LABORATORY	Waste Sampling & Characterization

SAMPLING INFORMATION

NUMBER OF SAMPLES	11
SAMPLE NUMBERS	B2MN32, B2MN52, B2MN57, B2MN71, B2MN81, B2MN82, B2MN89, B2MN94, B2MN99, B2MNB5, B2MNC0, B2MNX8, B2MNX9, B2MP16, B2MP30, B2MP41, B2MP22, B2MP23, B2MXL9, B2MN75, B2MN47, B2MN42, B2MXM8, B2MXN9, B2MXN8, B2MXM7, B2MN63, B2MN64, B2MP06, B2MP07
SAMPLE MATRIX	WATER
COLLECTION DATE	-
SDG NUM	WSCF121398, WSCF121401, WSCF121402, WSCF121404, WSCF121411, WSCF121419, WSCF121437, WSCF121439, WSCF121448, WSCF121450, WSCF121456

ISSUE BACKGROUND

CLASS	General Laboratory Direction
TYPE	Clarification of Direction
DESCRIPTION	The chain of custodies requested service 8260_VOA_GCMS_IX: COMMON. The SAF also requests some of the add-on for 8260_VOA_GCMS_IX: COMMON Add-ons

DISPOSITION

DESCRIPTION	PROPOSED DISPOSITION: Please confirm the service lists/analytes that need to be reported.
JUSTIFICATION	ACCEPTED DISPOSITION: Use the full list under the "COMMON" service list and add ons, as provided by Doris

SUBMITTED BY: Heather Medley/WSCF DATE: 11/2/12

A-6003-640 (03/30) PAGE 1 of 1

Attachment 2
Narrative
WSCF121439

SAMPLE ISSUE RESOLUTION

SIR NUM	SDR13-044
REV NUM	0
DATE INITIATED	12/3/2012

SAMPLE EVENT INFORMATION

SAF NUM(S)	I13-007
OPERABLE UNIT(S)	100-NR-2
PROJECT(S)	CERC13
SAMPLE EVENT TITLE(S)	CERC13
LABORATORY	Waste Sampling & Characterization

SAMPLING INFORMATION

NUMBER OF SAMPLES	2
SAMPLE NUMBERS	B2MXL9, B2MXM3
SAMPLE MATRIX	WATER
COLLECTION DATE	11/7/2012 - 11/7/2012
SDG NUM	WSCF121439

ISSUE BACKGROUND

CLASS	Laboratory Issue
TYPE	Quality Control Failure
DESCRIPTION	The 200.8 Boron LCS was slightly high at 119.8% with control limits of 85-115%. The MS (104%) and MSD (111.2%) were both within the control limits of 70-130%. The blank was non-detect.

DISPOSITION

DESCRIPTION	PROPOSED DISPOSITION: Report the data as-is and note the LCS failure in the case narrative.
JUSTIFICATION	ACCEPTED DISPOSITION: Accept the proposed resolution.

SUBMITTED BY: Marisol Avila/WSCF DATE: 12/3/12
ACCEPTED BY: Scot Fitzgerald/CHPRC DATE: 12/4/12
Karen Waters-Husted/CHPRC DATE: 12/4/12

A-6003-640 (03/30)

PAGE 1 of 1

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 93 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 #	WSCF121439
Report Date	December 10, 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 # WSCF121439

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210638	210817	5	BLANK	85340	BLANK		ICP-6010 - All possible metals
210638	210817	7	LCS	85342	LCS		ICP-6010 - All possible metals
210638	210817	9	MS	85343	B2MR83(121423005MS)	121423005	ICP-6010 - All possible metals
210638	210817	10	MSD	85344	B2MR83(121423005MSD	121423005	ICP-6010 - All possible metals
210638	210817	28	SAMPLE	121439001	B2MXM3		ICP-6010 - All possible metals
210638	210817	29	SAMPLE	121439002	B2MXL9		ICP-6010 - All possible metals
210827	211022	4	BLANK	85614	BLANK		ICP-2008 MS All possible metal
210827	211022	5	LCS	85615	LCS		ICP-2008 MS All possible metal
210827	211022	7	MS	85616	B2MNT0(121436001MS)	121436001	ICP-2008 MS All possible metal
210827	211022	8	MSD	85617	B2MNT0(121436001MSD	121436001	ICP-2008 MS All possible metal
210827	211022	20	SAMPLE	121439001	B2MXM3		ICP-2008 MS All possible metal
210827	211022	21	SAMPLE	121439002	B2MXL9		ICP-2008 MS All possible metal

Batch QC List

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210317	210333	1	BLANK	84996	BLANK		Extractable Diesel and Petroleum
210317	210333	2	LCS	84997	LCS		Extractable Diesel and Petroleum
210317	210333	3	MS	84998	B2MPD0(121411001MS)	121411001	Extractable Diesel and Petroleum
210317	210333	4	MSD	84999	B2MPD0(121411001MSD	121411001	Extractable Diesel and Petroleum
210317	210333	8	SAMPLE	121439002	B2MXL9		Extractable Diesel and Petroleum
210318	210418	1	BLANK	85000	BLANK		SW-846 8270D Semivolatiles
210318	210418	2	LCS	85001	LCS		SW-846 8270D Semivolatiles
210318	210418	3	LCSD	85004	LCSD		SW-846 8270D Semivolatiles
210318	210418	4	MS	85002	B2MXL9(121439002MS)	121439002	SW-846 8270D Semivolatiles
210318	210418	5	MSD	85003	B2MXL9(121439002MSD	121439002	SW-846 8270D Semivolatiles
210318	210418	6	SAMPLE	121439002	B2MXL9		SW-846 8270D Semivolatiles
211213	211214	1	BLANK	85887	BLANK		PCBs by EPA SW-846 Method 8082
211213	211214	2	LCS	85888	LCS		PCBs by EPA SW-846 Method 8082
211213	211214	3	MS	85889	B2MXL9(121439002MS)	121439002	PCBs by EPA SW-846 Method 8082
211213	211214	4	MSD	85890	B2MXL9(121439002MSD	121439002	PCBs by EPA SW-846 Method 8082
211213	211214	5	SAMPLE	121439002	B2MXL9		PCBs by EPA SW-846 Method 8082

Batch QC List

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
209923	209926	1	BLANK	84696	BLANK		Gasoline Range (W)
209923	209926	2	LCS	84697	LCS		Gasoline Range (W)
209923	209926	3	MS	84698	B2MPF7(121390015MS)	121390015	Gasoline Range (W)
209923	209926	4	MSD	84699	B2MPF7(121390015MSD	121390015	Gasoline Range (W)
209923	209926	5	DUP	84700	B2MPF7(121390015DUP)	121390015	Gasoline Range (W)
209923	209926	13	SAMPLE	121439002	B2MXL9		Gasoline Range (W)
210313	210314	1	BLANK	84986	BLANK		SW-846 8260B Volatiles
210313	210314	2	LCS	84987	LCS		SW-846 8260B Volatiles
210313	210314	3	MS	84988	B2MNX8(121411014MS)	121411014	SW-846 8260B Volatiles
210313	210314	4	MSD	84989	B2MNX8(121411014MSD	121411014	SW-846 8260B Volatiles
210313	210314	12	SAMPLE	121439002	B2MXL9		SW-846 8260B Volatiles
210358	210419	1	BLANK	85141	BLANK		SW-846 Method 8015 for GPP
210358	210419	2	LCS	85142	LCS		SW-846 Method 8015 for GPP
210358	210419	3	MS	85143	B2MXL9(121439002MS)	121439002	SW-846 Method 8015 for GPP
210358	210419	4	MSD	85144	B2MXL9(121439002MSD	121439002	SW-846 Method 8015 for GPP
210358	210419	5	SAMPLE	121439002	B2MXL9		SW-846 Method 8015 for GPP

Batch QC List

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
209935	210032	1	IBLANK	84747	IBLANK		Gamma Energy Analysis-general
209935	210032	2	LCS	84748	LCS		Gamma Energy Analysis-general
209935	210032	3	DUP	84749	B2MR83(121423005DUP)	121423005	Gamma Energy Analysis-general
209935	210032	5	SAMPLE	121439002	B2MXL9		Gamma Energy Analysis-general
210027	210350	1	BLANK	84798	BLANK		Plutonium (AEA)
210027	210350	2	LCS	84799	LCS		Plutonium (AEA)
210027	210350	3	SAMPLE	121439002	B2MXL9		Plutonium (AEA)
210027	210350	4	DUP	84800	B2MXL9(121439002DUP)	121439002	Plutonium (AEA)
210027	210351	1	DUP	84800	B2MXL9(121439002DUP)	121439002	Uranium (AEA)
210027	210351	2	SAMPLE	121439002	B2MXL9		Uranium (AEA)
210027	210351	7	BLANK	84798	BLANK		Uranium (AEA)
210027	210351	8	LCS	84799	LCS		Uranium (AEA)
210114	210415	1	BLANK	84806	BLANK		Tritium by LSC
210114	210415	2	LCS	84807	LCS		Tritium by LSC
210114	210415	4	DUP	84808	B2MP50(121432006DUP)	121432006	Tritium by LSC
210114	210415	5	MS	84809	B2MP50(121432006MS)	121432006	Tritium by LSC
210114	210415	11	SAMPLE	121439002	B2MXL9		Tritium by LSC
210115	210330	1	BLANK	84810	BLANK		TC99 by Liquid Scintillation
210115	210330	2	LCS	84811	LCS		TC99 by Liquid Scintillation
210115	210330	3	SAMPLE	121439002	B2MXL9		TC99 by Liquid Scintillation
210115	210330	4	DUP	84812	B2MXL9(121439002DUP)	121439002	TC99 by Liquid Scintillation
210115	210330	5	MS	84813	B2MXL9(121439002MS)	121439002	TC99 by Liquid Scintillation
210217	210373	1	BLANK	84845	BLANK		GAB Discrete analysis Alpha only

Batch QC List

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210217	210373	2	LCS	84846	LCS		GAB Discrete analysis Alpha only
210217	210373	4	DUP	84847	B2MR83(121423005DUP)	121423005	GAB Discrete analysis Alpha only
210217	210373	8	SAMPLE	121439002	B2MXL9		GAB Discrete analysis Alpha only
210217	210378	1	BLANK	84845	BLANK		GAB Discrete analysis Beta only
210217	210378	2	LCS	84846	LCS		GAB Discrete analysis Beta only
210217	210378	4	DUP	84847	B2MR83(121423005DUP)	121423005	GAB Discrete analysis Beta only
210217	210378	8	SAMPLE	121439002	B2MXL9		GAB Discrete analysis Beta only
210240	211239	1	BLANK	84911	BLANK		Strontium 89/90 (GPC/GEA)
210240	211239	2	LCS	84912	LCS		Strontium 89/90 (GPC/GEA)
210240	211239	3	DUP	84913	B2MKK8(121430005DUP	121430005	Strontium 89/90 (GPC/GEA)
210240	211239	7	SAMPLE	121439002	B2MXL9		Strontium 89/90 (GPC/GEA)

Batch QC List

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121439

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210348	210349	1	BLANK	85130	BLANK		Cyanide (W) by Midi/Spectrophotometer
210348	210349	3	LCS	85132	LCS		Cyanide (W) by Midi/Spectrophotometer
210348	210349	4	MS	85133	B2MMC9(121393001MS)	121393001	Cyanide (W) by Midi/Spectrophotometer
210348	210349	5	MSD	85134	B2MMC9(121393001MS	121393001	Cyanide (W) by Midi/Spectrophotometer
210348	210349	23	SAMPLE	121439002	B2MXL9		Cyanide (W) by Midi/Spectrophotometer

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

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

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

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

Method Reference

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

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

LA-523-427	Polychlorinated Biphenyls (PCB'S) by Gas Chromatography		
	EPA SW-846	3510C	Separatory Funnel Liquid-Liquid Extraction
	EPA SW-846	3545	Pressurized Fluid Extraction (PFE)
	EPA SW-846	3665A	Sulfuric Acid/Permanganate Cleanup
	EPA SW-846	8000B	Determinative Chromatographic Separations
	EPA SW-846	8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography
	HEIS	8082_PCB_GC	Polychlorinated Biphenyls (PCBs) by Gas Chromatography
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 Chromatography/Mass Spectrometry (GC/MS)
	EPA SW-846	3545	Pressurized Fluid Extraction (PFE)
	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 # WSCF121439

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-523-443	Gas Chromatography Analysis of Gasoline Range Total Petroleum Hydrocarbons in Water		
	EPA	NWTPH-G	"Analytical Methods for Petroleum Hydrocarbons, June 1997, NWTPH-G, Volatile Petroleum Products Method for Soil and Water
	HEIS	WTPH_GASOLINE	Total Petroleum Hydrocarbons, Gasoline
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 # WSCF121439

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-508-481	Gamma Energy Analysis using the Canberra Genie Ssystem		
	HEIS	GAMMA_GS	Gamma Energy Analysis
LA-508-471	Determination Of Uranium, Plutonium, And Americium		
	HEIS	UISO_IE_PRECIP_AEA	Uranium 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 # WSCF121439

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-695-402	Determination of Cyanide by Mididistillation and		
	EPA	SW-846 Method 9014/9010	Determination of Cyanide by Midi-Distillation and Spectrophotometric Analysis
	SM	4500 CNE	Cyanide, Total
	HEIS	4500E_CN	Cyanide, Total

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

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Sample # 121439001
SAF# I13-007
Sample ID B2MXM3

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**11/26/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	11/28/12
Magnesium	7439-95-4	LA-505-411		19200		ug/L	1	4.0	20	11/28/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Potassium	7440-09-7	LA-505-411		4420		ug/L	1	76	380	11/28/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Sodium	7440-23-5	LA-505-411		8870		ug/L	1	10	50	11/28/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	11/28/12
Barium	7440-39-3	LA-505-411		92.4		ug/L	1	4.0	20	11/28/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Chromium	7440-47-3	LA-505-411	B	5.20		ug/L	1	5.0	25	11/28/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	11/28/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	11/28/12
Calcium	7440-70-2	LA-505-411		1.11E5		ug/L	1	49	240	11/28/12
Strontium	7440-24-6	LA-505-411		456		ug/L	1	9.0	45	11/28/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.
o - LCS recovery outside established laboratory acceptance limits.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Sample # 121439001
SAF# I13-007
Sample ID B2MXM3

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
ICPMS Prep (W)										**11/29/12**
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	11/30/12
Manganese	7439-96-5	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	11/30/12
Silver	7440-22-4	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/30/12
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	11/30/12
Barium	7440-39-3	LA-505-412	D	102		ug/L	2	0.40	4.0	11/30/12
Beryllium	7440-41-7	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	11/30/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/30/12
Chromium	7440-47-3	LA-505-412	D	4.63		ug/L	2	0.20	2.0	11/30/12
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	11/30/12
Copper	7440-50-8	LA-505-412	BD	0.404		ug/L	2	0.20	2.0	11/30/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/30/12
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	11/30/12
Molybdenum	7439-98-7	LA-505-412	D	1.92		ug/L	2	0.10	1.0	11/30/12
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/30/12
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/30/12
Arsenic	7440-38-2	LA-505-412	BD	0.986		ug/L	2	0.40	4.0	11/30/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.
o - LCS recovery outside established laboratory acceptance limits.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Sample # 121439001
SAF# I13-007
Sample ID B2MXM3

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Selenium	7782-49-2	LA-505-412	UD	<2.0		ug/L	2	2.0	20	11/30/12
Boron	7440-42-8	LA-505-412	DCo	19.6		ug/L	2	1.0	10	11/30/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.
o - LCS recovery outside established laboratory acceptance limits.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**11/26/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	11/28/12
Magnesium	7439-95-4	LA-505-411		18800		ug/L	1	4.0	20	11/28/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Potassium	7440-09-7	LA-505-411		4410		ug/L	1	76	380	11/28/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Sodium	7440-23-5	LA-505-411		8740		ug/L	1	10	50	11/28/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	11/28/12
Barium	7440-39-3	LA-505-411		90.6		ug/L	1	4.0	20	11/28/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Chromium	7440-47-3	LA-505-411	B	5.50		ug/L	1	5.0	25	11/28/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	11/28/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	11/28/12
Calcium	7440-70-2	LA-505-411		1.09E5		ug/L	1	49	240	11/28/12
Strontium	7440-24-6	LA-505-411		453		ug/L	1	9.0	45	11/28/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.
o - LCS recovery outside established laboratory acceptance limits.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/28/12
ICPMS Prep (W)										**11/29/12**
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	11/30/12
Manganese	7439-96-5	LA-505-412	BD	0.338		ug/L	2	0.20	2.0	11/30/12
Silver	7440-22-4	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/30/12
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	11/30/12
Barium	7440-39-3	LA-505-412	D	101		ug/L	2	0.40	4.0	11/30/12
Beryllium	7440-41-7	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	11/30/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/30/12
Chromium	7440-47-3	LA-505-412	D	4.53		ug/L	2	0.20	2.0	11/30/12
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	11/30/12
Copper	7440-50-8	LA-505-412	BD	0.402		ug/L	2	0.20	2.0	11/30/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/30/12
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	11/30/12
Molybdenum	7439-98-7	LA-505-412	D	1.82		ug/L	2	0.10	1.0	11/30/12
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/30/12
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/30/12
Arsenic	7440-38-2	LA-505-412	BD	0.904		ug/L	2	0.40	4.0	11/30/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.
o - LCS recovery outside established laboratory acceptance limits.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Selenium	7782-49-2	LA-505-412	UD	<2.0		ug/L	2	2.0	20	11/30/12
Boron	7440-42-8	LA-505-412	DCo	19.3		ug/L	2	1.0	10	11/30/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.
o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8082 (W) SPE										**12/03/12**
PCBs by EPA SW-846 Method 8082										
Aroclor-1016	12674-11-2	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	12/04/12
Aroclor-1221	11104-28-2	LA-523-427	U	<0.2		ug/L	1	0.2	0.4	12/04/12
Aroclor-1232	11141-16-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	12/04/12
Aroclor-1242	53469-21-9	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	12/04/12
Aroclor-1248	12672-29-6	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	12/04/12
Aroclor-1254	11097-69-1	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	12/04/12
Aroclor-1260	11096-82-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	12/04/12
Preparation for 8270 (W) CLE										**11/13/12**
SW-846 8270D Semivolatiles										
4-Nitrophenol	100-02-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Phenol	108-95-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Pyrene	129-00-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
n-Nitroso-di-n-propylamine	621-64-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Acenaphthene	83-32-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Pentachlorophenol	87-86-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2-Chlorophenol	95-57-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
4-Nitroaniline	100-01-6	LA-523-456	U	<0.9		ug/L	1	0.9	2	11/15/12
4-Bromophenyl-phenylether	101-55-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2,4-Dimethylphenol	105-67-9	LA-523-456	U	<1		ug/L	1	1	2	11/15/12
4-Chloroaniline	106-47-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Bis(1-Chloro-2-propyl)ether	108-60-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Bis-(2-Chloroethyl) ether	111-44-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Bis-(2-Chloroethoxy)methane	111-91-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Di-n-octylphthalate	117-84-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Hexachlorobenzene	118-74-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Anthracene	120-12-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2,4-Dichlorophenol	120-83-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Dimethylphthalate	131-11-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Dibenzofuran	132-64-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Benzo(g,h,i)perylene	191-24-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Indeno(1,2,3-cd)pyrene	193-39-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Benzo(b)fluoranthene	205-99-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Fluoranthene	206-44-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Benzo(k)fluoranthene	207-08-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Acenaphthylene	208-96-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Chrysene	218-01-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Benzo(a)pyrene	50-32-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2,4-Dinitrophenol	51-28-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Dibenzo(a,h)anthracene	53-70-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
4,6-Dinitro-2-methylphenol	534-52-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
1,3-Dichlorobenzene	541-73-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Benzo(a)anthracene	56-55-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2,6-Dinitrotoluene	606-20-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
4-Chlorophenyl-phenylether	7005-72-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Hexachlorocyclopentadiene	77-47-4	LA-523-456	U	<0.9		ug/L	1	0.9	2	11/15/12
Isophorone	78-59-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Diethyl phthalate	84-66-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Di-n-butylphthalate	84-74-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Phenanthrene	85-01-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Butylbenzylphthalate	85-68-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Fluorene	86-73-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Carbazole	86-74-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Hexachlorobutadiene	87-68-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2-Nitroaniline	88-74-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2-Nitrophenol	88-75-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Naphthalene	91-20-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2-Methylnaphthalene	91-57-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2-Chloronaphthalene	91-58-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
3,3-Dichlorobenzidine	91-94-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2-Methylphenol	95-48-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
1,2-Dichlorobenzene	95-50-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2,4,5-Trichlorophenol	95-95-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Nitrobenzene	98-95-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
3-Nitroaniline	99-09-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
3 & 4 Methylphenol, Total	65794-96-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Hexachloroethane	67-72-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2,4,6-Trichlorophenol	88-06-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Benzyl alcohol	100-51-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Tributyl phosphate	126-73-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2-Naphthylamine	91-59-8	LA-523-456	U	<1		ug/L	1	1	2	11/15/12
Pyridine	110-86-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
n-Nitrosopiperidine	100-75-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
n-Nitrosomethylethylamine	10595-95-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
p-Phenylenediamine	106-50-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2-Picoline	109-06-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
3,3-Dimethylbenzidine	119-93-7	LA-523-456	U	<4		ug/L	1	4	6	11/15/12
Isosafrole	120-58-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Phentermine	122-09-8	LA-523-456	U	<5		ug/L	1	5	9	11/15/12
1,4-Naphthoquinone	130-15-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
1-Naphthylamine	134-32-7	LA-523-456	U	<1		ug/L	1	1	2	11/15/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Aramite	140-57-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Kepone	143-50-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Hexachloropropene	1888-71-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Diallate	2303-16-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Pronamide	23950-58-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Isodrin	465-73-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Chlorobenzilate	510-15-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2-Acetylaminofluorene	53-96-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
n-Nitrosodiethylamine	55-18-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
3-Methylcholanthrene	56-49-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
4-Nitroquinoline-1-oxide	56-57-5	LA-523-456	U	<0.9		ug/L	1	0.9	2	11/15/12
7,12-Dimethylbenz(a)anthracene	57-97-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2,3,4,6-Tetrachlorophenol	58-90-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
n-Nitrosomorpholine	59-89-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Pentachlorobenzene	608-93-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Phenacetin	62-44-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Ethyl methanesulfonate	62-50-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Aniline	62-53-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
n-Nitrosodimethylamine	62-75-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Methyl methanesulfonate	66-27-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Pentachloroethane	76-01-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Pentachloronitrobenzene	82-68-8	LA-523-456	U	<1		ug/L	1	1	2	11/15/12
2,6-Dichlorophenol	87-65-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Dinoseb(..dinitromethylphenol)	88-85-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
4-Aminobiphenyl	92-67-1	LA-523-456	U	<1		ug/L	1	1	2	11/15/12
n-Nitrosodibutylamine	924-16-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
n-Nitrosopyrolidine	930-55-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Safrole	94-59-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
o-Toluidine	95-53-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
1,2,4,5-Tetrachlorobenzene	95-94-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Acetophenone	98-86-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
1,3,5-Trinitrobenzene	99-35-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
2-Methyl-5-nitroaniline	99-55-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
1,3-Dinitrobenzene	99-65-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
O,O,O-Triethylthiophosphate	126-68-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Parathion	56-38-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Dimethylaminoazobenzene	60-11-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Dimethoate	60-51-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Thionazin	297-97-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Methyl parathion	298-00-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Phorate	298-02-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Disulfoton	298-04-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Sulfotep	3689-24-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Famfur	52-85-7	LA-523-456	U	<5		ug/L	1	5	9	11/15/12
N-Nitrosodiphenylamin/Diphenyl	DPA+NNDPA	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Methapyrilene	91-80-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/15/12
Total Petroleum Hydrocarbons (Water Prep										**11/12/12**
Extractable Diesel and Petroleum										
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	11/14/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Gasoline Range Prep (W)										**11/08/12**
Gasoline Range (W)										
Gasoline	TPHGASOLIN	LA-523-443	U	<50		ug/L	1	50	200	11/12/12
Preparation for 8015 (W)										**11/15/12**
SW-846 Method 8015 for GPP										
Methanol	67-56-1	LA-523-494	U	<100		ug/L	1	100	300	11/15/12
Preparation for 8260B (W)										**11/14/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	11/14/12

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 dilution 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 - GC/MS or N - Non GC/MS - MS/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)
o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
2-Hexanone	591-78-6	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Chloromethane	74-87-3	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Chloroethane	75-00-3	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Bromodichloromethane	75-27-4	LA-523-455	U	<1		ug/L	1	1	5	11/14/12

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 dilution 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 - GC/MS or N - Non GC/MS - MS/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)
o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/14/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/14/12
Trichlorofluoromethane	75-69-4	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Acetonitrile	75-05-8	LA-523-455	U	<2		ug/L	1	2	10	11/14/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/14/12
Isobutyl alcohol	78-83-1	LA-523-455	U	<200		ug/L	1	200	1.E3	11/14/12
Iodomethane	74-88-4	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
1,1,1,2-Tetrachloroethane	630-20-6	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
1,2,3-Trichloropropane	96-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
1,2-Dibromo-3-chloropropane	96-12-8	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
1,2-Dibromoethane	106-93-4	LA-523-455	U	<1		ug/L	1	1	5	11/14/12

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 dilution 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 - GC/MS or N - Non GC/MS - MS/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)
o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Acrolein	107-02-8	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Acrylonitrile	107-13-1	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Allyl chloride	107-05-1	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Methylene bromide	74-95-3	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Dichlorodifluoromethane	75-71-8	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Ethyl methacrylate	97-63-2	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Methacrylonitrile	126-98-7	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Methyl methacrylate	80-62-6	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Trans-1,4-dichloro-2-butene	110-57-6	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Vinyl acetate	108-05-4	LA-523-455	U	<1		ug/L	1	1	5	11/14/12
Chloroprene	126-99-8	LA-523-455	U	<1		ug/L	1	1	5	11/14/12

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 dilution 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 - GC/MS or N - Non GC/MS - MS/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)
o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) W										**11/15/12**
Plutonium (AEA)										
Plutonium-238	13981-16-3	LA-508-471	U	-9.7E-3	.089	pCi/L	1	0.18		11/16/12
Plutonium-239_240	PU-239/240	LA-508-471	U	9.7E-3	.034	pCi/L	1	0.072		11/16/12
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		1.3	.4	pCi/L	1	0.091		11/15/12
Uranium-235	15117-96-1	LA-508-471	U	0.064	.063	pCi/L	1	0.079		11/15/12
Uranium-238	U-238	LA-508-471		1.2	.38	pCi/L	1	0.091		11/15/12
GAB Prep for Discrete Analysis (W)										**11/16/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415	U	1.0	2.9	pCi/L	1	5.1		11/26/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		1300	130	pCi/L	1	7.1		11/26/12
Preparation for GEA (W)										**11/08/12**
Gamma Energy Analysis-general										
Antimony-125	14234-35-6	LA-508-481	U	2.7	15	pCi/L	1	27		11/12/12
Cesium-134	13967-70-9	LA-508-481	U	7.3	33	pCi/L	1	60		11/12/12
Cesium-137	10045-97-3	LA-508-481	U	3.8	5.6	pCi/L	1	9.5		11/12/12
Cobalt-60	10198-40-0	LA-508-481	U	-1.7	5	pCi/L	1	8.8		11/12/12

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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Europium-152	14683-23-9	LA-508-481	U	9.2	16	pCi/L	1	30		11/12/12
Europium-154	15585-10-1	LA-508-481	U	-4.8	14	pCi/L	1	25		11/12/12
Europium-155	14391-16-3	LA-508-481	U	7.4	18	pCi/L	1	32		11/12/12
Potassium-40	13966-00-2	LA-508-481	U	4.4	85	pCi/L	1	180		11/12/12
Ruthenium-106	13967-48-1	LA-508-481	U	4.1	46	pCi/L	1	81		11/12/12
Beryllium-7	13966-02-4	LA-508-481	U	-13	42	pCi/L	1	72		11/12/12
Strontium 89/90 WATER/LIQUID PREP										**12/04/12**
Strontium 89/90 (GPC/GEA)										
Strontium-89_90	SR-RAD	LA-220-406		680	140	pCi/L	1	0.88		12/05/12
TC99 by Liquid Scin. WATER/LIQUID PREP										**11/13/12**
TC99 by Liquid Scintillation										
Technetium-99	14133-76-7	LA-508-421		34	7.9	pCi/L	1	5.6		11/14/12
Tritium by LSC EICHROM WA/LIQ PREP										**11/13/12**
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		3.1E4	6300	pCi/L	1	300		11/16/12

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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

WSCF Analytical Results Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121439

Sample # 121439002
SAF# I13-007
Sample ID B2MXL9

Matrix WATER
Sampled 11/07/12
Received 11/07/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for Cyanide (W)										**11/13/12**
Cyanide (W) by Midi/Spectrophotometer										
Cyanide	57-12-5	LA-695-402	U	<4.0		ug/L	1	4.0	20	11/13/12

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 dilution 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)
o - LCS recovery outside established laboratory acceptance limits.

Quality Control Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analytical Batch 209926 (QC Batch: 209923)
Associated Samples 121439002

Test Gasoline Range (W)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #84696**								
Gasoline	TPHGASOLI		<50	ug/L						U	11/12/12
LCS			**QC Sample #84697**								
Gasoline	TPHGASOLI		2500	ug/L	99.1	80 - 120					11/12/12
MS			**QC Sample #84698**								
			Original 121390015								
Gasoline	TPHGASOLI		2000	ug/L	79.7	75 - 125					11/12/12
MSD			**QC Sample #84699**								
			Original 121390015						**Paired**	**84698**	
Gasoline	TPHGASOLI		2100	ug/L	84.8	75 - 125	6.20	20			11/12/12
DUP			**QC Sample #84700**								
			Original 121390015								
Gasoline	TPHGASOLI		<50	ug/L			0.00	20		U	11/12/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analytical Batch 210032 (QC Batch: 209935)
Associated Samples 121439002

Test Gamma Energy Analysis-general

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
IBLANK			**QC Sample #84747**								
Antimony-125	14234-35-6		-0.44	pCi/L						U	11/13/12
Cesium-134	13967-70-9		-1.1	pCi/L						U	11/13/12
Cesium-137	10045-97-3		-1.0	pCi/L						U	11/13/12
Cobalt-60	10198-40-0		1.2	pCi/L						U	11/13/12
Europium-152	14683-23-9		15	pCi/L						U	11/13/12
Europium-154	15585-10-1		17	pCi/L						U	11/13/12
Europium-155	14391-16-3		8.4	pCi/L						U	11/13/12
Potassium-40	13966-00-2		-63	pCi/L						U	11/13/12
Ruthenium-106	13967-48-1		-10	pCi/L						U	11/13/12
Beryllium-7	13966-02-4		-12	pCi/L						U	11/13/12
LCS			**QC Sample #84748**								
Cesium-137	10045-97-3		6300	pCi/sample	104.2	80 - 120					11/13/12
Cobalt-60	10198-40-0		10000	pCi/sample	102.6	80 - 120					11/13/12
DUP			**QC Sample #84749**								
			Original 121423005								
Antimony-125	14234-35-6		-6.5	pCi/L			1768.40	20	*	U	11/12/12
Cesium-134	13967-70-9		0.39	pCi/L			-210.40	20	*	U	11/12/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit		RQ	Analyzed
Cesium-137	10045-97-3		-4.1	pCi/L		-302.40	20	*	U	11/12/12
Cobalt-60	10198-40-0		-1.7	pCi/L		-435.50	20	*	U	11/12/12
Europium-152	14683-23-9		2.2	pCi/L		-430.90	20	*	U	11/12/12
Europium-154	15585-10-1		-4.8	pCi/L		-52.80	20	*	U	11/12/12
Europium-155	14391-16-3		11	pCi/L		216.60	20	*	U	11/12/12
Potassium-40	13966-00-2		-43	pCi/L		-2.00	20		U	11/12/12
Ruthenium-106	13967-48-1		-0.31	pCi/L		222.20	20	*	U	11/12/12
Beryllium-7	13966-02-4		-7.8	pCi/L		-130.50	20	*	U	11/12/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analytical Batch 210314 (QC Batch: 210313)
Associated Samples 121439002

Test SW-846 8260B Volatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #84986**							
1,1-Dichloroethene	75-35-4		<1	ug/L					U	11/14/12
Trichloroethene	79-01-6		<1	ug/L					U	11/14/12
Benzene	71-43-2		<1	ug/L					U	11/14/12
Toluene	108-88-3		<1	ug/L					U	11/14/12
Chlorobenzene	108-90-7		<1	ug/L					U	11/14/12
1,1-Dichloroethane	75-34-3		<1	ug/L					U	11/14/12
Ethylbenzene	100-41-4		<1	ug/L					U	11/14/12
Styrene	100-42-5		<1	ug/L					U	11/14/12
cis-1,3-Dichloropropene	10061-01-5		<1	ug/L					U	11/14/12
trans-1,3-Dichloropropene	10061-02-6		<1	ug/L					U	11/14/12
1,2-Dichloroethane	107-06-2		<1	ug/L					U	11/14/12
Methyl isobutyl ketone	108-10-1		<1	ug/L					U	11/14/12
Dibromochloromethane	124-48-1		<1	ug/L					U	11/14/12
Tetrachloroethene	127-18-4		<1	ug/L					U	11/14/12
Total Xylenes	1330-20-7		<1	ug/L					U	11/14/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Total 1,2-Dichloroethene	540-59-0		<1	ug/L					U	11/14/12
Carbon tetrachloride	56-23-5		<1	ug/L					U	11/14/12
2-Hexanone	591-78-6		<1	ug/L					U	11/14/12
Acetone	67-64-1		<1	ug/L					U	11/14/12
Chloroform	67-66-3		<1	ug/L					U	11/14/12
1,1,1-Trichloroethane	71-55-6		<1	ug/L					U	11/14/12
Bromomethane	74-83-9		<1	ug/L					U	11/14/12
Chloromethane	74-87-3		<1	ug/L					U	11/14/12
Chloroethane	75-00-3		<1	ug/L					U	11/14/12
Vinyl chloride	75-01-4		<1	ug/L					U	11/14/12
Methylene chloride	75-09-2		<1	ug/L					U	11/14/12
Carbon disulfide	75-15-0		<1	ug/L					U	11/14/12
Bromoform	75-25-2		<1	ug/L					U	11/14/12
Bromodichloromethane	75-27-4		<1	ug/L					U	11/14/12
1,2-Dichloropropane	78-87-5		<1	ug/L					U	11/14/12
Methyl ethyl ketone	78-93-3		<1	ug/L					U	11/14/12
1,1,2-Trichloroethane	79-00-5		<1	ug/L					U	11/14/12
1,1,2,2-Tetrachloroethane	79-34-5		<1	ug/L					U	11/14/12
1-Butanol	71-36-3		<100	ug/L					U	11/14/12
Tetrahydrofuran	109-99-9		<2	ug/L					U	11/14/12
Trichlorofluoromethane	75-69-4		<1	ug/L					U	11/14/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
trans-1,2-Dichloroethene	156-60-5		<1	ug/L					U	11/14/12
Acetonitrile	75-05-8		<2	ug/L					U	11/14/12
cis-1,2-Dichloroethene	156-59-2		<1	ug/L					U	11/14/12
Propionitrile	107-12-0		<2	ug/L					U	11/14/12
Isobutyl alcohol	78-83-1		<200	ug/L					U	11/14/12
Iodomethane	74-88-4		<1	ug/L					U	11/14/12
1,1,1,2-Tetrachloroethane	630-20-6		<1	ug/L					U	11/14/12
1,2,3-Trichloropropane	96-18-4		<1	ug/L					U	11/14/12
1,2-Dibromo-3-chloropropane	96-12-8		<1	ug/L					U	11/14/12
1,2-Dibromoethane	106-93-4		<1	ug/L					U	11/14/12
Acrolein	107-02-8		<1	ug/L					U	11/14/12
Acrylonitrile	107-13-1		<1	ug/L					U	11/14/12
Allyl chloride	107-05-1		<1	ug/L					U	11/14/12
Methylene bromide	74-95-3		<1	ug/L					U	11/14/12
Dichlorodifluoromethane	75-71-8		<1	ug/L					U	11/14/12
Ethyl methacrylate	97-63-2		<1	ug/L					U	11/14/12
Methacrylonitrile	126-98-7		<1	ug/L					U	11/14/12
Methyl methacrylate	80-62-6		<1	ug/L					U	11/14/12
Trans-1,4-dichloro-2-butene	110-57-6		<1	ug/L					U	11/14/12
Vinyl acetate	108-05-4		<1	ug/L					U	11/14/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chloroprene	126-99-8		<1	ug/L					U	11/14/12
LCS			**QC Sample #84987**							
1,1-Dichloroethene	75-35-4		23	ug/L	91	75 - 125				11/14/12
Trichloroethene	79-01-6		26	ug/L	102.8	75 - 125				11/14/12
Benzene	71-43-2		27	ug/L	106.5	75 - 125				11/14/12
Toluene	108-88-3		27	ug/L	107.3	75 - 125				11/14/12
Chlorobenzene	108-90-7		26	ug/L	105	75 - 125				11/14/12
1,1-Dichloroethane	75-34-3		25	ug/L	98.7	75 - 125				11/14/12
Ethylbenzene	100-41-4		28	ug/L	112.7	75 - 125				11/14/12
Styrene	100-42-5		28	ug/L	112.3	75 - 125				11/14/12
trans-1,3-Dichloropropene	10061-02-6		27	ug/L	108.5	75 - 125				11/14/12
1,2-Dichloroethane	107-06-2		25	ug/L	98.3	75 - 125				11/14/12
1,1,1-Trichloroethane	71-55-6		27	ug/L	109.6	75 - 125				11/14/12
Dibromochloromethane	124-48-1		25	ug/L	101.7	75 - 125				11/14/12
Carbon disulfide	75-15-0		21	ug/L	84	75 - 125				11/14/12
Bromoform	75-25-2		26	ug/L	105	75 - 125				11/14/12
Bromodichloromethane	75-27-4		28	ug/L	110.4	75 - 125				11/14/12
1,2-Dichloropropane	78-87-5		26	ug/L	104.1	75 - 125				11/14/12
1,1,2-Trichloroethane	79-00-5		26	ug/L	103	75 - 125				11/14/12
1,1,2,2-Tetrachloroethane	79-34-5		24	ug/L	94.8	75 - 125				11/14/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
trans-1,2-Dichloroethene	156-60-5		25	ug/L	101.4	75 - 125				11/14/12
cis-1,2-Dichloroethene	156-59-2		25	ug/L	100.3	75 - 125				11/14/12
MS			**QC Sample #84988**							
			Original 121411014							
1,1-Dichloroethene	75-35-4		24	ug/L	94.2	75 - 125				11/14/12
Trichloroethene	79-01-6		27	ug/L	108.1	75 - 125				11/14/12
Benzene	71-43-2		27	ug/L	108.8	75 - 125				11/14/12
Toluene	108-88-3		28	ug/L	110.2	75 - 125				11/14/12
Chlorobenzene	108-90-7		27	ug/L	107.4	75 - 125				11/14/12
1,1-Dichloroethane	75-34-3		26	ug/L	102.2	75 - 125				11/14/12
Ethylbenzene	100-41-4		29	ug/L	116.5	75 - 125				11/14/12
Styrene	100-42-5		29	ug/L	114.9	75 - 125				11/14/12
trans-1,3-Dichloropropene	10061-02-6		28	ug/L	113	75 - 125				11/14/12
1,2-Dichloroethane	107-06-2		26	ug/L	105.9	75 - 125				11/14/12
1,1,1-Trichloroethane	71-55-6		28	ug/L	113	75 - 125				11/14/12
Dibromochloromethane	124-48-1		27	ug/L	109	75 - 125				11/14/12
Carbon disulfide	75-15-0		22	ug/L	86	75 - 125				11/14/12
Bromoform	75-25-2		29	ug/L	114.2	75 - 125				11/14/12
Bromodichloromethane	75-27-4		29	ug/L	115.1	75 - 125				11/14/12
1,2-Dichloropropane	78-87-5		27	ug/L	108.8	75 - 125				11/14/12
1,1,2-Trichloroethane	79-00-5		27	ug/L	107.4	75 - 125				11/14/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,1,2,2-Tetrachloroethane	79-34-5		26	ug/L	105.3	75 - 125				11/14/12
trans-1,2-Dichloroethene	156-60-5		26	ug/L	105.2	75 - 125				11/14/12
cis-1,2-Dichloroethene	156-59-2		26	ug/L	105.1	75 - 125				11/14/12
MSD			**QC Sample #84989**							
			Original 121411014						**Paired 84988**	
1,1-Dichloroethene	75-35-4		24	ug/L	95.5	75 - 125	1.40	20		11/14/12
Trichloroethene	79-01-6		27	ug/L	109.8	75 - 125	1.40	20		11/14/12
Benzene	71-43-2		28	ug/L	110.4	75 - 125	1.40	20		11/14/12
Toluene	108-88-3		28	ug/L	110.2	75 - 125	0.10	20		11/14/12
Chlorobenzene	108-90-7		27	ug/L	107.2	75 - 125	0.10	20		11/14/12
1,1-Dichloroethane	75-34-3		26	ug/L	104.7	75 - 125	2.50	20		11/14/12
Ethylbenzene	100-41-4		29	ug/L	115	75 - 125	1.20	20		11/14/12
Styrene	100-42-5		28	ug/L	113.3	75 - 125	1.40	20		11/14/12
trans-1,3-Dichloropropene	10061-02-6		28	ug/L	112.8	75 - 125	0.20	20		11/14/12
1,2-Dichloroethane	107-06-2		26	ug/L	104.2	75 - 125	1.60	20		11/14/12
1,1,1-Trichloroethane	71-55-6		29	ug/L	114.4	75 - 125	1.30	20		11/14/12
Dibromochloromethane	124-48-1		27	ug/L	107.9	75 - 125	1.00	20		11/14/12
Carbon disulfide	75-15-0		22	ug/L	86.1	75 - 125	0.10	20		11/14/12
Bromoform	75-25-2		28	ug/L	111.7	75 - 125	2.30	20		11/14/12
Bromodichloromethane	75-27-4		29	ug/L	115.7	75 - 125	0.50	20		11/14/12
1,2-Dichloropropane	78-87-5		28	ug/L	110.8	75 - 125	1.80	20		11/14/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,1,2-Trichloroethane	79-00-5		27	ug/L	107.8	75 - 125	0.30	20		11/14/12
1,1,2,2-Tetrachloroethane	79-34-5		26	ug/L	104	75 - 125	1.20	20		11/14/12
trans-1,2-Dichloroethene	156-60-5		27	ug/L	107.9	75 - 125	2.60	20		11/14/12
cis-1,2-Dichloroethene	156-59-2		27	ug/L	107.6	75 - 125	2.30	20		11/14/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analytical Batch 210330 (QC Batch: 210115)
Associated Samples 121439002

Test TC99 by Liquid Scintillation

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK				**QC Sample #84810**						
Technetium-99	14133-76-7		1.5	pCi/L					U	11/14/12
LCS				**QC Sample #84811**						
Technetium-99	14133-76-7		220	pCi/L	101.6	80 - 120				11/14/12
DUP				**QC Sample #84812**						
				Original 121439002						
Technetium-99	14133-76-7	34	34	pCi/L			0.00	20		11/14/12
MS				**QC Sample #84813**						
				Original 121439002						
Technetium-99	14133-76-7	34	850	pCi/L	98.2	75 - 125				11/14/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analytical Batch 210333 (QC Batch: 210317)
Associated Samples 121439002

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #84996**							
Diesel	TPHDIESEL		<80	ug/L					U	11/14/12
LCS			**QC Sample #84997**							
Diesel	TPHDIESEL		2500	ug/L	99.9	65 - 128				11/14/12
MS			**QC Sample #84998**							
			Original 121411001							
Diesel	TPHDIESEL		2300	ug/L	96.6	73 - 123				11/14/12
MSD			**QC Sample #84999**							
			Original 121411001					**Paired**	**84998**	
Diesel	TPHDIESEL		2500	ug/L	106	73 - 123	9.30	20		11/14/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121439

Analytical Batch 210349 (QC Batch: 210348)
Associated Samples 121439002

Test Cyanide (W) by Midi/Spectrophotometer

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85130**							
Cyanide	57-12-5		<4.0	ug/L					U	11/13/12
LCS			**QC Sample #85132**							
Cyanide	57-12-5		49.3	ug/L	98.7	85 - 115				11/13/12
MS			**QC Sample #85133**							
			Original 121393001							
Cyanide	57-12-5		37.9	ug/L	94.8	75 - 125				11/13/12
MSD			**QC Sample #85134**							
			Original 121393001					**Paired**	**85133**	
Cyanide	57-12-5		41.0	ug/L	102.4	75 - 125	7.70	20		11/13/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analytical Batch 210350 (QC Batch: 210027)
Associated Samples 121439002

Test Plutonium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #84798**								
Plutonium-238	13981-16-3		0.11	pCi/L						U	11/16/12
Plutonium-239_240	PU-239/240		9.7E-3	pCi/L						U	11/16/12
LCS			**QC Sample #84799**								
Plutonium-239_240	PU-239/240		5.5	pCi/sample	95.5	80 - 120					11/16/12
DUP			**QC Sample #84800**								
			Original 121439002								
Plutonium-238	13981-16-3	-9.7E-3	0.11	pCi/L			239.40	20	*	U	11/16/12
Plutonium-239_240	PU-239/240	9.7E-3	0.34	pCi/L			189.00	20	*	X	11/16/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analytical Batch 210351 (QC Batch: 210027)
Associated Samples 121439002

Test Uranium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #84798**								
Uranium-234	U-233/234		0.063	pCi/L						U	11/15/12
Uranium-235	15117-96-1		0.030	pCi/L						U	11/15/12
Uranium-238	U-238		0.036	pCi/L						U	11/15/12
LCS			**QC Sample #84799**								
Uranium-238	U-238		8.7	pCi/sample	102.6	80 - 120					11/15/12
DUP			**QC Sample #84800**								
			Original 121439002								
Uranium-234	U-233/234	1.3	1.5	pCi/L			13.70	20			11/15/12
Uranium-235	15117-96-1	0.064	0.11	pCi/L			53.90	20	*	X	11/15/12
Uranium-238	U-238	1.2	1.2	pCi/L			4.60	20			11/15/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analytical Batch 210373 (QC Batch: 210217)
Associated Samples 121439002

Test GAB Discrete analysis Alpha only

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #84845**								
Gross Alpha	12587-46-1		0.089	pCi/L						U	11/26/12
LCS			**QC Sample #84846**								
Gross Alpha	12587-46-1		59	pCi/L	99.5	80 - 120					11/26/12
DUP			**QC Sample #84847**								
			Original 121423005								
Gross Alpha	12587-46-1		1.3	pCi/L			25.60	20	*	U	11/26/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analytical Batch 210378 (QC Batch: 210217)
Associated Samples 121439002

Test GAB Discrete analysis Beta only

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #84845**								
Gross Beta	12587-47-2		1.1	pCi/L						U	11/26/12
LCS			**QC Sample #84846**								
Gross Beta	12587-47-2		250	pCi/L	98.4	80 - 120					11/26/12
DUP			**QC Sample #84847**								
			Original 121423005								
Gross Beta	12587-47-2		5.3	pCi/L			51.70	20	*	X	11/26/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analytical Batch 210415 (QC Batch: 210114)
Associated Samples 121439002

Test Tritium by LSC

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #84806**							
Tritium	10028-17-8		61	pCi/L					U	11/16/12
LCS			**QC Sample #84807**							
Tritium	10028-17-8		3600	pCi/L	115.4	80 - 120				11/16/12
DUP			**QC Sample #84808**							
			Original 121432006							
Tritium	10028-17-8		510	pCi/L			18.80	20		11/16/12
MS			**QC Sample #84809**							
			Original 121432006							
Tritium	10028-17-8		20000	pCi/L	94.1	75 - 125				11/16/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analytical Batch 210418 (QC Batch: 210318)
Associated Samples 121439002

Test SW-846 8270D Semivolatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85000**							
4-Nitrophenol	100-02-7		<1	ug/L					U	11/15/12
1,4-Dichlorobenzene	106-46-7		<1	ug/L					U	11/15/12
2,4-Dinitrotoluene	121-14-2		<1	ug/L					U	11/15/12
1,2,4-Trichlorobenzene	120-82-1		<1	ug/L					U	11/15/12
Phenol	108-95-2		<1	ug/L					U	11/15/12
Pyrene	129-00-0		<1	ug/L					U	11/15/12
4-Chloro-3-methylphenol	59-50-7		<1	ug/L					U	11/15/12
n-Nitroso-di-n-propylamine	621-64-7		<1	ug/L					U	11/15/12
Acenaphthene	83-32-9		<1	ug/L					U	11/15/12
Pentachlorophenol	87-86-5		<1	ug/L					U	11/15/12
2-Chlorophenol	95-57-8		<1	ug/L					U	11/15/12
4-Nitroaniline	100-01-6		<1	ug/L					U	11/15/12
4-Bromophenyl-phenylether	101-55-3		<1	ug/L					U	11/15/12
2,4-Dimethylphenol	105-67-9		<2	ug/L					U	11/15/12
4-Chloroaniline	106-47-8		<1	ug/L					U	11/15/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Bis(1-Chloro-2-propyl)ether	108-60-1		<1	ug/L					U	11/15/12
Bis-(2-Chloroethyl) ether	111-44-4		<1	ug/L					U	11/15/12
Bis-(2-Chloroethoxy)methane	111-91-1		<1	ug/L					U	11/15/12
Bis-(2-Ethylhexyl)phthalate	117-81-7		<1	ug/L					U	11/15/12
Di-n-octylphthalate	117-84-0		<1	ug/L					U	11/15/12
Hexachlorobenzene	118-74-1		<1	ug/L					U	11/15/12
Anthracene	120-12-7		<1	ug/L					U	11/15/12
2,4-Dichlorophenol	120-83-2		<1	ug/L					U	11/15/12
Dimethylphthalate	131-11-3		<1	ug/L					U	11/15/12
Dibenzofuran	132-64-9		<1	ug/L					U	11/15/12
Benzo(g,h,i)perylene	191-24-2		<1	ug/L					U	11/15/12
Indeno(1,2,3-cd)pyrene	193-39-5		<1	ug/L					U	11/15/12
Benzo(b)fluoranthene	205-99-2		<1	ug/L					U	11/15/12
Fluoranthene	206-44-0		<1	ug/L					U	11/15/12
Benzo(k)fluoranthene	207-08-9		<1	ug/L					U	11/15/12
Acenaphthylene	208-96-8		<1	ug/L					U	11/15/12
Chrysene	218-01-9		<1	ug/L					U	11/15/12
Benzo(a)pyrene	50-32-8		<1	ug/L					U	11/15/12
2,4-Dinitrophenol	51-28-5		<1	ug/L					U	11/15/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Dibenzo(a,h)anthracene	53-70-3		<1	ug/L					U	11/15/12
4,6-Dinitro-2-methylphenol	534-52-1		<1	ug/L					U	11/15/12
1,3-Dichlorobenzene	541-73-1		<1	ug/L					U	11/15/12
Benzo(a)anthracene	56-55-3		<1	ug/L					U	11/15/12
2,6-Dinitrotoluene	606-20-2		<1	ug/L					U	11/15/12
4-Chlorophenyl-phenylether	7005-72-3		<1	ug/L					U	11/15/12
Hexachlorocyclopentadiene	77-47-4		<1	ug/L					U	11/15/12
Isophorone	78-59-1		<1	ug/L					U	11/15/12
Diethyl phthalate	84-66-2		<1	ug/L					U	11/15/12
Di-n-butylphthalate	84-74-2		<1	ug/L					U	11/15/12
Phenanthrene	85-01-8		<1	ug/L					U	11/15/12
Butylbenzylphthalate	85-68-7		<1	ug/L					U	11/15/12
Fluorene	86-73-7		<1	ug/L					U	11/15/12
Carbazole	86-74-8		<1	ug/L					U	11/15/12
Hexachlorobutadiene	87-68-3		<1	ug/L					U	11/15/12
2-Nitroaniline	88-74-4		<1	ug/L					U	11/15/12
2-Nitrophenol	88-75-5		<1	ug/L					U	11/15/12
Naphthalene	91-20-3		<1	ug/L					U	11/15/12
2-Methylnaphthalene	91-57-6		<1	ug/L					U	11/15/12
2-Chloronaphthalene	91-58-7		<1	ug/L					U	11/15/12
3,3-Dichlorobenzidine	91-94-1		<1	ug/L					U	11/15/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
2-Methylphenol	95-48-7		<1	ug/L					U	11/15/12
1,2-Dichlorobenzene	95-50-1		<1	ug/L					U	11/15/12
2,4,5-Trichlorophenol	95-95-4		<1	ug/L					U	11/15/12
Nitrobenzene	98-95-3		<1	ug/L					U	11/15/12
3-Nitroaniline	99-09-2		<1	ug/L					U	11/15/12
3 & 4 Methylphenol, Total	65794-96-9		<1	ug/L					U	11/15/12
Hexachloroethane	67-72-1		<1	ug/L					U	11/15/12
2,4,6-Trichlorophenol	88-06-2		<1	ug/L					U	11/15/12
Benzyl alcohol	100-51-6		<1	ug/L					U	11/15/12
Tributyl phosphate	126-73-8		<1	ug/L					U	11/15/12
2-Naphthylamine	91-59-8		<2	ug/L					U	11/15/12
Pyridine	110-86-1		<1	ug/L					U	11/15/12
n-Nitrosopiperidine	100-75-4		<1	ug/L					U	11/15/12
n-Nitrosomethylethylamine	10595-95-6		<1	ug/L					U	11/15/12
p-Phenylenediamine	106-50-3		<1	ug/L					U	11/15/12
2-Picoline	109-06-8		<1	ug/L					U	11/15/12
3,3-Dimethylbenzidine	119-93-7		<4	ug/L					U	11/15/12
Isosafrole	120-58-1		<1	ug/L					U	11/15/12
Phentermine	122-09-8		<5	ug/L					U	11/15/12
1,4-Naphthoquinone	130-15-4		<1	ug/L					U	11/15/12
1-Naphthylamine	134-32-7		<2	ug/L					U	11/15/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Aramite	140-57-8		<1	ug/L					U	11/15/12
Kepone	143-50-0		<1	ug/L					U	11/15/12
Hexachloropropene	1888-71-7		<1	ug/L					U	11/15/12
Diallate	2303-16-4		<1	ug/L					U	11/15/12
Pronamide	23950-58-5		<1	ug/L					U	11/15/12
Isodrin	465-73-6		<1	ug/L					U	11/15/12
Chlorobenzilate	510-15-6		<1	ug/L					U	11/15/12
2-Acetylaminofluorene	53-96-3		<1	ug/L					U	11/15/12
n-Nitrosodiethylamine	55-18-5		<1	ug/L					U	11/15/12
3-Methylcholanthrene	56-49-5		<1	ug/L					U	11/15/12
4-Nitroquinoline-1-oxide	56-57-5		<1	ug/L					U	11/15/12
7,12-Dimethylbenz(a)anthracene	57-97-6		<1	ug/L					U	11/15/12
2,3,4,6-Tetrachlorophenol	58-90-2		<1	ug/L					U	11/15/12
n-Nitrosomorpholine	59-89-2		<1	ug/L					U	11/15/12
Pentachlorobenzene	608-93-5		<1	ug/L					U	11/15/12
Phenacetin	62-44-2		<1	ug/L					U	11/15/12
Ethyl methanesulfonate	62-50-0		<1	ug/L					U	11/15/12
Aniline	62-53-3		<1	ug/L					U	11/15/12
n-Nitrosodimethylamine	62-75-9		<1	ug/L					U	11/15/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Methyl methanesulfonate	66-27-3		<1	ug/L					U	11/15/12
Pentachloroethane	76-01-7		<1	ug/L					U	11/15/12
Pentachloronitrobenzene	82-68-8		<2	ug/L					U	11/15/12
2,6-Dichlorophenol	87-65-0		<1	ug/L					U	11/15/12
Dinoseb(..dinitromethylphenol)	88-85-7		<1	ug/L					U	11/15/12
4-Aminobiphenyl	92-67-1		<2	ug/L					U	11/15/12
n-Nitrosodibutylamine	924-16-3		<1	ug/L					U	11/15/12
n-Nitrosopyrolidine	930-55-2		<1	ug/L					U	11/15/12
Safrole	94-59-7		<1	ug/L					U	11/15/12
o-Toluidine	95-53-4		<1	ug/L					U	11/15/12
1,2,4,5-Tetrachlorobenzene	95-94-3		<1	ug/L					U	11/15/12
Acetophenone	98-86-2		<1	ug/L					U	11/15/12
1,3,5-Trinitrobenzene	99-35-4		<1	ug/L					U	11/15/12
2-Methyl-5-nitroaniline	99-55-8		<1	ug/L					U	11/15/12
1,3-Dinitrobenzene	99-65-0		<1	ug/L					U	11/15/12
O,O,O-Triethylthiophosphate	126-68-1		<1	ug/L					U	11/15/12
Parathion	56-38-2		<1	ug/L					U	11/15/12
Dimethylaminoazobenzene	60-11-7		<1	ug/L					U	11/15/12
Dimethoate	60-51-5		<1	ug/L					U	11/15/12
Thionazin	297-97-2		<1	ug/L					U	11/15/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Methyl parathion	298-00-0		<1	ug/L					U	11/15/12
Phorate	298-02-2		<1	ug/L					U	11/15/12
Disulfoton	298-04-4		<1	ug/L					U	11/15/12
Sulfotep	3689-24-5		<1	ug/L					U	11/15/12
Famfur	52-85-7		<5	ug/L					U	11/15/12
N-Nitrosodiphenylamin/ Diphenyl	DPA+NNDPA		<1	ug/L					U	11/15/12
Methapyrilene	91-80-5		<1	ug/L					U	11/15/12
LCS			**QC Sample #85001**							
4-Nitrophenol	100-02-7		15	ug/L	50.9	5 - 88				11/15/12
1,2,4-Trichlorobenzene	120-82-1		21	ug/L	70.3	50 - 105				11/15/12
Phenol	108-95-2		14	ug/L	48.1	18 - 89				11/15/12
1,4-Dichlorobenzene	106-46-7		15	ug/L	73.2	47 - 115				11/15/12
2,4-Dinitrotoluene	121-14-2		24	ug/L	79.8	59 - 110				11/15/12
Pyrene	129-00-0		22	ug/L	73.6	64 - 116				11/15/12
4-Chloro-3-methylphenol	59-50-7		24	ug/L	81.5	62 - 109				11/15/12
n-Nitroso-di-n-propylamine	621-64-7		22	ug/L	74.9	61 - 110				11/15/12
Acenaphthene	83-32-9		23	ug/L	76.9	59 - 113				11/15/12
Pentachlorophenol	87-86-5		24	ug/L	81.5	17 - 125				11/15/12
2-Chlorophenol	95-57-8		22	ug/L	74.1	55 - 109				11/15/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
n-Nitrosodimethylamine	62-75-9		22	ug/L	71.7	40 - 103				11/15/12
Benzyl alcohol	100-51-6		24	ug/L	78.8	58 - 108				11/15/12
2-Methylphenol	95-48-7		22	ug/L	74.2	59 - 107				11/15/12
Hexachloroethane	67-72-1		19	ug/L	61.7	43 - 105				11/15/12
2-Nitrophenol	88-75-5		23	ug/L	75.1	48 - 113				11/15/12
2,4-Dimethylphenol	105-67-9		24	ug/L	79.8	58 - 113				11/15/12
2,4-Dichlorophenol	120-83-2		22	ug/L	74.3	52 - 110				11/15/12
Anthracene	120-12-7		24	ug/L	81.3	67 - 113				11/15/12
Naphthalene	91-20-3		21	ug/L	71.5	55 - 110				11/15/12
2-Nitroaniline	88-74-4		26	ug/L	85.2	57 - 114				11/15/12
Dibenzofuran	132-64-9		24	ug/L	79.3	61 - 113				11/15/12
Fluorene	86-73-7		24	ug/L	80	64 - 115				11/15/12
Tributyl phosphate	126-73-8		24	ug/L	79.8	65 - 108				11/15/12
Hexachlorobenzene	118-74-1		24	ug/L	78.4	60 - 117				11/15/12
Dimethoate	60-51-5		13	ug/L	87.8	64 - 108				11/15/12
Carbazole	86-74-8		28	ug/L	92.5	35 - 129				11/15/12
Di-n-butylphthalate	84-74-2		25	ug/L	82.2	70 - 116				11/15/12
3,3-Dichlorobenzidine	91-94-1		18	ug/L	59.6	16 - 117				11/15/12
Bis-(2-Ethylhexyl)phthalate	117-81-7		24	ug/L	79.6	64 - 133				11/15/12
Di-n-octylphthalate	117-84-0		24	ug/L	79	57 - 134				11/15/12
Benzo(a)pyrene	50-32-8		25	ug/L	82.9	63 - 115				11/15/12
2-Picoline	109-06-8		24	ug/L	81	59 - 102				11/15/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Bis(1-Chloro-2-propyl)ether	108-60-1		21	ug/L	71.2	58 - 111				11/15/12
4-Chloroaniline	106-47-8		27	ug/L	89.7	43 - 125				11/15/12
MS			**QC Sample #85002**							
			Original 121439002							
4-Nitrophenol	100-02-7	<0.9	12	ug/L	42.2	15 - 57				11/15/12
1,2,4-Trichlorobenzene	120-82-1	<0.9	21	ug/L	74	51 - 104				11/15/12
Phenol	108-95-2	<0.9	11	ug/L	39.1	24 - 65				11/15/12
1,4-Dichlorobenzene	106-46-7	<0.9	14	ug/L	75.9	52 - 114				11/15/12
2,4-Dinitrotoluene	121-14-2	<0.9	22	ug/L	77.6	57 - 112				11/15/12
Pyrene	129-00-0	<0.9	20	ug/L	71.5	58 - 119				11/15/12
4-Chloro-3-methylphenol	59-50-7	<0.9	23	ug/L	81	56 - 115				11/15/12
n-Nitroso-di-n-propylamine	621-64-7	<0.9	22	ug/L	76	60 - 112				11/15/12
Acenaphthene	83-32-9	<0.9	22	ug/L	76	60 - 113				11/15/12
Pentachlorophenol	87-86-5	<0.9	24	ug/L	84.4	32 - 127				11/15/12
2-Chlorophenol	95-57-8	<0.9	21	ug/L	73.5	52 - 113				11/15/12
n-Nitrosodimethylamine	62-75-9	<0.9	19	ug/L	65.6	41 - 92				11/15/12
Benzyl alcohol	100-51-6	<0.9	22	ug/L	76.6	56 - 107				11/15/12
2-Methylphenol	95-48-7	<0.9	21	ug/L	73.1	46 - 114				11/15/12
Hexachloroethane	67-72-1	<0.9	18	ug/L	64.9	48 - 102				11/15/12
2-Nitrophenol	88-75-5	<0.9	21	ug/L	75.2	51 - 114				11/15/12
2,4-Dimethylphenol	105-67-9	<1	23	ug/L	79.8	46 - 124				11/15/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
2,4-Dichlorophenol	120-83-2	<0.9	21	ug/L	74.7	50 - 114				11/15/12
Anthracene	120-12-7	<0.9	23	ug/L	79.9	64 - 116				11/15/12
Naphthalene	91-20-3	<0.9	21	ug/L	73	57 - 110				11/15/12
2-Nitroaniline	88-74-4	<0.9	24	ug/L	84.4	60 - 114				11/15/12
Dibenzofuran	132-64-9	<0.9	23	ug/L	79.8	61 - 114				11/15/12
Fluorene	86-73-7	<0.9	23	ug/L	80.4	63 - 116				11/15/12
Tributyl phosphate	126-73-8	<0.9	23	ug/L	79.6	59 - 113				11/15/12
Hexachlorobenzene	118-74-1	<0.9	22	ug/L	76.8	58 - 119				11/15/12
Dimethoate	60-51-5	<0.9	12	ug/L	86.3	53 - 119				11/15/12
Carbazole	86-74-8	<0.9	26	ug/L	90.2	41 - 122				11/15/12
Di-n-butylphthalate	84-74-2	<0.9	23	ug/L	81.4	67 - 118				11/15/12
3,3-Dichlorobenzidine	91-94-1	<0.9	14	ug/L	49.9	16 - 121				11/15/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	<0.9	23	ug/L	79.5	64 - 134				11/15/12
Di-n-octylphthalate	117-84-0	<0.9	23	ug/L	82.7	40 - 143				11/15/12
Benzo(a)pyrene	50-32-8	<0.9	23	ug/L	81.4	61 - 117				11/15/12
2-Picoline	109-06-8	<0.9	23	ug/L	81.7	50 - 104				11/15/12
Bis(1-Chloro-2-propyl)ether	108-60-1	<0.9	21	ug/L	73.1	58 - 112				11/15/12
4-Chloroaniline	106-47-8	<0.9	26	ug/L	91	43 - 118				11/15/12
MSD			**QC Sample #85003**							
			Original	**121439002**				**Paired**	**85002**	
4-Nitrophenol	100-02-7	<0.9	13	ug/L	45.9	15 - 57	8.50	20		11/15/12
1,2,4-Trichlorobenzene	120-82-1	<0.9	21	ug/L	75.6	51 - 104	2.10	20		11/15/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Phenol	108-95-2	<0.9	12	ug/L	41.1	24 - 65	5.00	20		11/15/12
1,4-Dichlorobenzene	106-46-7	<0.9	15	ug/L	78.4	52 - 114	3.30	20		11/15/12
2,4-Dinitrotoluene	121-14-2	<0.9	23	ug/L	79.8	57 - 112	2.80	20		11/15/12
Pyrene	129-00-0	<0.9	21	ug/L	75.4	58 - 119	5.30	20		11/15/12
4-Chloro-3-methylphenol	59-50-7	<0.9	23	ug/L	81.4	56 - 115	0.50	20		11/15/12
n-Nitroso-di-n-propylamine	621-64-7	<0.9	22	ug/L	77.5	60 - 112	2.00	20		11/15/12
Acenaphthene	83-32-9	<0.9	22	ug/L	79.3	60 - 113	4.20	20		11/15/12
Pentachlorophenol	87-86-5	<0.9	25	ug/L	89.4	32 - 127	5.70	20		11/15/12
2-Chlorophenol	95-57-8	<0.9	22	ug/L	76.5	52 - 113	4.00	20		11/15/12
n-Nitrosodimethylamine	62-75-9	<0.9	20	ug/L	69.5	41 - 92	5.70	20		11/15/12
Benzyl alcohol	100-51-6	<0.9	22	ug/L	79.3	56 - 107	3.50	20		11/15/12
2-Methylphenol	95-48-7	<0.9	21	ug/L	75.4	46 - 114	3.10	20		11/15/12
Hexachloroethane	67-72-1	<0.9	19	ug/L	67.4	48 - 102	3.70	20		11/15/12
2-Nitrophenol	88-75-5	<0.9	22	ug/L	76.2	51 - 114	1.30	20		11/15/12
2,4-Dimethylphenol	105-67-9	<1	23	ug/L	81.2	46 - 124	1.80	20		11/15/12
2,4-Dichlorophenol	120-83-2	<0.9	22	ug/L	76.8	50 - 114	2.70	20		11/15/12
Anthracene	120-12-7	<0.9	24	ug/L	83.2	64 - 116	4.10	20		11/15/12
Naphthalene	91-20-3	<0.9	21	ug/L	74.7	57 - 110	2.30	20		11/15/12
2-Nitroaniline	88-74-4	<0.9	24	ug/L	85.8	60 - 114	1.70	20		11/15/12
Dibenzofuran	132-64-9	<0.9	23	ug/L	82.3	61 - 114	3.10	20		11/15/12
Fluorene	86-73-7	<0.9	23	ug/L	81.9	63 - 116	1.90	20		11/15/12
Tributyl phosphate	126-73-8	<0.9	23	ug/L	80.2	59 - 113	0.80	20		11/15/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Hexachlorobenzene	118-74-1	<0.9	23	ug/L	82.2	58 - 119	6.80	20		11/15/12
Dimethoate	60-51-5	<0.9	12	ug/L	86.6	53 - 119	0.30	20		11/15/12
Carbazole	86-74-8	<0.9	27	ug/L	93.7	41 - 122	3.90	20		11/15/12
Di-n-butylphthalate	84-74-2	<0.9	23	ug/L	82.8	67 - 118	1.70	20		11/15/12
3,3-Dichlorobenzidine	91-94-1	<0.9	15	ug/L	53.4	16 - 121	6.80	20		11/15/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	<0.9	23	ug/L	82.9	64 - 134	4.20	20		11/15/12
Di-n-octylphthalate	117-84-0	<0.9	22	ug/L	77.9	40 - 143	6.00	20		11/15/12
Benzo(a)pyrene	50-32-8	<0.9	24	ug/L	83.1	61 - 117	2.10	20		11/15/12
2-Picoline	109-06-8	<0.9	24	ug/L	85.9	50 - 104	5.10	20		11/15/12
Bis(1-Chloro-2-propyl)ether	108-60-1	<0.9	21	ug/L	74.5	58 - 112	1.90	20		11/15/12
4-Chloroaniline	106-47-8	<0.9	25	ug/L	89.4	43 - 118	1.80	20		11/15/12
LCSD			**QC Sample #85004**							
									Paired	**85001**
4-Nitrophenol	100-02-7		13	ug/L	43.2	5 - 88	16.40	20		11/15/12
1,2,4-Trichlorobenzene	120-82-1		20	ug/L	68.2	50 - 105	3.00	20		11/15/12
Phenol	108-95-2		14	ug/L	45.4	18 - 89	5.80	20		11/15/12
1,4-Dichlorobenzene	106-46-7		14	ug/L	69.2	47 - 115	5.60	20		11/15/12
2,4-Dinitrotoluene	121-14-2		22	ug/L	73.3	59 - 110	8.60	20		11/15/12
Pyrene	129-00-0		20	ug/L	67.7	64 - 116	8.40	20		11/15/12
4-Chloro-3-methylphenol	59-50-7		23	ug/L	77.2	62 - 109	5.50	20		11/15/12
n-Nitroso-di-n-propylamine	621-64-7		22	ug/L	73.6	61 - 110	1.70	20		11/15/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
Acenaphthene	83-32-9		22	ug/L	72.6	59 - 113	5.80	20			11/15/12
Pentachlorophenol	87-86-5		22	ug/L	72.3	17 - 125	12.00	20			11/15/12
2-Chlorophenol	95-57-8		21	ug/L	69.7	55 - 109	6.10	20			11/15/12
n-Nitrosodimethylamine	62-75-9		20	ug/L	67.4	40 - 103	6.10	20			11/15/12
Benzyl alcohol	100-51-6		23	ug/L	76.2	58 - 108	3.30	20			11/15/12
2-Methylphenol	95-48-7		22	ug/L	72.2	59 - 107	2.80	20			11/15/12
Hexachloroethane	67-72-1		18	ug/L	60	43 - 105	2.80	20			11/15/12
2-Nitrophenol	88-75-5		21	ug/L	70.1	48 - 113	6.90	20			11/15/12
2,4-Dimethylphenol	105-67-9		23	ug/L	77.5	58 - 113	2.90	20			11/15/12
2,4-Dichlorophenol	120-83-2		21	ug/L	70.1	52 - 110	5.80	20			11/15/12
Anthracene	120-12-7		23	ug/L	77.8	67 - 113	4.40	20			11/15/12
Naphthalene	91-20-3		21	ug/L	68.5	55 - 110	4.30	20			11/15/12
2-Nitroaniline	88-74-4		24	ug/L	79.4	57 - 114	7.00	20			11/15/12
Dibenzofuran	132-64-9		22	ug/L	74.9	61 - 113	5.80	20			11/15/12
Fluorene	86-73-7		23	ug/L	76	64 - 115	5.10	20			11/15/12
Tributyl phosphate	126-73-8		22	ug/L	74.9	65 - 108	6.40	20			11/15/12
Hexachlorobenzene	118-74-1		22	ug/L	74.4	60 - 117	5.20	20			11/15/12
Dimethoate	60-51-5		12	ug/L	80.9	64 - 108	8.20	20			11/15/12
Carbazole	86-74-8		26	ug/L	85.7	35 - 129	7.50	20			11/15/12
Di-n-butylphthalate	84-74-2		23	ug/L	76.9	70 - 116	6.70	20			11/15/12
3,3-Dichlorobenzidine	91-94-1		13	ug/L	42.9	16 - 117	32.50	20	*	X	11/15/12
Bis-(2-Ethylhexyl)phthalate	117-81-7		23	ug/L	75.3	64 - 133	5.60	20			11/15/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Di-n-octylphthalate	117-84-0		22	ug/L	74.4	57 - 134	6.10	20		11/15/12
Benzo(a)pyrene	50-32-8		23	ug/L	78.3	63 - 115	5.70	20		11/15/12
2-Picoline	109-06-8		22	ug/L	74.2	59 - 102	8.70	20		11/15/12
Bis(1-Chloro-2-propyl)ether	108-60-1		20	ug/L	67	58 - 111	6.10	20		11/15/12
4-Chloroaniline	106-47-8		25	ug/L	83.8	43 - 125	6.80	20		11/15/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analytical Batch 210419 (QC Batch: 210358)
Associated Samples 121439002

Test SW-846 Method 8015 for GPP

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85141**							
Methanol	67-56-1		<100	ug/L					U	11/15/12
LCS			**QC Sample #85142**							
Methanol	67-56-1		4540	ug/L	90.9	70 - 130				11/15/12
MS			**QC Sample #85143**							
			Original 121439002							
Methanol	67-56-1	<100	4190	ug/L	83.7	70 - 130				11/15/12
MSD			**QC Sample #85144**							
			Original 121439002					**Paired**	**85143**	
Methanol	67-56-1	<100	4520	ug/L	90.3	70 - 130	7.60	20		11/15/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Analytical Batch 210817 (QC Batch: 210638)
Associated Samples 121439001, 121439002

Test ICP-6010 - All possible metals

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85340**							
Iron	7439-89-6		<19	ug/L					U	11/28/12
Magnesium	7439-95-4		<4.0	ug/L					U	11/28/12
Manganese	7439-96-5		<4.0	ug/L					U	11/28/12
Nickel	7440-02-0		<4.0	ug/L					U	11/28/12
Potassium	7440-09-7		<76	ug/L					U	11/28/12
Silver	7440-22-4		<4.0	ug/L					U	11/28/12
Sodium	7440-23-5		<10	ug/L					U	11/28/12
Antimony	7440-36-0		<36	ug/L					U	11/28/12
Barium	7440-39-3		<4.0	ug/L					U	11/28/12
Cadmium	7440-43-9		<4.0	ug/L					U	11/28/12
Chromium	7440-47-3		<5.0	ug/L					U	11/28/12
Cobalt	7440-48-4		<4.0	ug/L					U	11/28/12
Copper	7440-50-8		5.90	ug/L					B	11/28/12
Vanadium	7440-62-2		<5.0	ug/L					U	11/28/12
Zinc	7440-66-6		7.60	ug/L					B	11/28/12
Calcium	7440-70-2		<49	ug/L					U	11/28/12
Strontium	7440-24-6		<9.0	ug/L					U	11/28/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Beryllium	7440-41-7		<4.0	ug/L					U	11/28/12
LCS			**QC Sample #85342**							
Iron	7439-89-6		996	ug/L	99.6	80 - 120				11/28/12
Magnesium	7439-95-4		10200	ug/L	101.5	80 - 120				11/28/12
Manganese	7439-96-5		1010	ug/L	100.7	80 - 120				11/28/12
Nickel	7440-02-0		957	ug/L	95.7	80 - 120				11/28/12
Potassium	7440-09-7		10800	ug/L	108	80 - 120				11/28/12
Silver	7440-22-4		1020	ug/L	102.3	80 - 120				11/28/12
Sodium	7440-23-5		10000	ug/L	100	80 - 120				11/28/12
Antimony	7440-36-0		1020	ug/L	101.5	80 - 120				11/28/12
Barium	7440-39-3		1010	ug/L	101.2	80 - 120				11/28/12
Cadmium	7440-43-9		988	ug/L	98.8	80 - 120				11/28/12
Chromium	7440-47-3		1000	ug/L	100.2	80 - 120				11/28/12
Cobalt	7440-48-4		976	ug/L	97.6	80 - 120				11/28/12
Copper	7440-50-8		1010	ug/L	101.1	80 - 120				11/28/12
Vanadium	7440-62-2		1010	ug/L	101	80 - 120				11/28/12
Zinc	7440-66-6		1020	ug/L	101.5	80 - 120				11/28/12
Calcium	7440-70-2		20500	ug/L	102.4	80 - 120				11/28/12
Strontium	7440-24-6		989	ug/L	98.9	80 - 120				11/28/12
Beryllium	7440-41-7		1000	ug/L	100	80 - 120				11/28/12
MS			**QC Sample #85343**							
			Original 121423005							
Iron	7439-89-6		1000	ug/L	100.1	75 - 125				11/28/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Magnesium	7439-95-4		9950	ug/L	99.5	75 - 125				11/28/12
Manganese	7439-96-5		1000	ug/L	100.4	75 - 125				11/28/12
Nickel	7440-02-0		948	ug/L	94.8	75 - 125				11/28/12
Potassium	7440-09-7		10500	ug/L	105.5	75 - 125				11/28/12
Silver	7440-22-4		1000	ug/L	100.5	75 - 125				11/28/12
Sodium	7440-23-5		8650	ug/L	86.5	75 - 125			X	11/28/12
Antimony	7440-36-0		1030	ug/L	102.8	75 - 125				11/28/12
Barium	7440-39-3		1000	ug/L	100	75 - 125				11/28/12
Cadmium	7440-43-9		995	ug/L	99.5	75 - 125				11/28/12
Chromium	7440-47-3		994	ug/L	99.4	75 - 125				11/28/12
Cobalt	7440-48-4		974	ug/L	97.4	75 - 125				11/28/12
Copper	7440-50-8		986	ug/L	98.6	75 - 125				11/28/12
Vanadium	7440-62-2		1000	ug/L	100.1	75 - 125				11/28/12
Zinc	7440-66-6		1030	ug/L	102.7	75 - 125				11/28/12
Calcium	7440-70-2		20000	ug/L	100.1	75 - 125				11/28/12
Strontium	7440-24-6		983	ug/L	98.3	75 - 125				11/28/12
Beryllium	7440-41-7		1000	ug/L	100	75 - 125				11/28/12
MSD			**QC Sample #85344**							
			Original	**121423005**				**Paired**	**85343**	
Iron	7439-89-6		1020	ug/L	102.3	75 - 125	2.20	20		11/28/12
Magnesium	7439-95-4		10200	ug/L	101.9	75 - 125	1.20	20		11/28/12
Manganese	7439-96-5		1030	ug/L	102.7	75 - 125	2.30	20		11/28/12
Nickel	7440-02-0		970	ug/L	97	75 - 125	2.30	20		11/28/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7		10800	ug/L	108.1	75 - 125	1.70	20		11/28/12
Silver	7440-22-4		1020	ug/L	101.7	75 - 125	1.20	20		11/28/12
Sodium	7440-23-5		8790	ug/L	87.9	75 - 125	0.30	20	X	11/28/12
Antimony	7440-36-0		1050	ug/L	105.3	75 - 125	2.40	20		11/28/12
Barium	7440-39-3		1020	ug/L	101.9	75 - 125	1.80	20		11/28/12
Cadmium	7440-43-9		1010	ug/L	101.4	75 - 125	1.90	20		11/28/12
Chromium	7440-47-3		1020	ug/L	102.1	75 - 125	2.70	20		11/28/12
Cobalt	7440-48-4		992	ug/L	99.2	75 - 125	1.80	20		11/28/12
Copper	7440-50-8		1010	ug/L	100.8	75 - 125	2.20	20		11/28/12
Vanadium	7440-62-2		1020	ug/L	102.3	75 - 125	2.10	20		11/28/12
Zinc	7440-66-6		1040	ug/L	104.5	75 - 125	1.70	20		11/28/12
Calcium	7440-70-2		20600	ug/L	102.9	75 - 125	1.00	20		11/28/12
Strontium	7440-24-6		1010	ug/L	101	75 - 125	2.20	20		11/28/12
Beryllium	7440-41-7		1020	ug/L	102.4	75 - 125	2.40	20		11/28/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Analytical Batch 211022 (QC Batch: 210827)
Associated Samples 121439001, 121439002

Test ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85614**						
Aluminum	7429-90-5		<5.0	ug/L				U	11/30/12
Manganese	7439-96-5		<0.10	ug/L				U	11/30/12
Silver	7440-22-4		<0.050	ug/L				U	11/30/12
Antimony	7440-36-0		<0.30	ug/L				U	11/30/12
Barium	7440-39-3		<0.20	ug/L				U	11/30/12
Beryllium	7440-41-7		<0.10	ug/L				U	11/30/12
Cadmium	7440-43-9		<0.050	ug/L				U	11/30/12
Chromium	7440-47-3		<0.10	ug/L				U	11/30/12
Cobalt	7440-48-4		<0.050	ug/L				U	11/30/12
Copper	7440-50-8		<0.10	ug/L				U	11/30/12
Lead	7439-92-1		<0.050	ug/L				U	11/30/12
Mercury	7439-97-6		<0.050	ug/L				U	11/30/12
Molybdenum	7439-98-7		<0.050	ug/L				U	11/30/12
Thallium	7440-28-0		<0.050	ug/L				U	11/30/12
Tin	7440-31-5		<0.050	ug/L				U	11/30/12
Arsenic	7440-38-2		<0.20	ug/L				U	11/30/12
Selenium	7782-49-2		<1.0	ug/L				U	11/30/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Boron	7440-42-8		2.18	ug/L					Bo	11/30/12
LCS			**QC Sample #85615**							
Aluminum	7429-90-5		440	ug/L	109.9	85 - 115				11/30/12
Manganese	7439-96-5		43.6	ug/L	108.9	85 - 115				11/30/12
Silver	7440-22-4		44.2	ug/L	110.4	85 - 115				11/30/12
Antimony	7440-36-0		43.2	ug/L	108	85 - 115				11/30/12
Barium	7440-39-3		44.0	ug/L	110	85 - 115				11/30/12
Beryllium	7440-41-7		43.5	ug/L	108.8	85 - 115				11/30/12
Cadmium	7440-43-9		42.4	ug/L	106.1	85 - 115				11/30/12
Chromium	7440-47-3		42.9	ug/L	107.2	85 - 115				11/30/12
Cobalt	7440-48-4		43.3	ug/L	108.2	85 - 115				11/30/12
Copper	7440-50-8		43.0	ug/L	107.6	85 - 115				11/30/12
Lead	7439-92-1		44.9	ug/L	112.4	85 - 115				11/30/12
Mercury	7439-97-6		2.07	ug/L	103.6	85 - 115				11/30/12
Molybdenum	7439-98-7		43.5	ug/L	108.8	85 - 115				11/30/12
Thallium	7440-28-0		43.6	ug/L	108.9	85 - 115				11/30/12
Tin	7440-31-5		43.3	ug/L	108.2	85 - 115				11/30/12
Arsenic	7440-38-2		41.9	ug/L	104.7	85 - 115				11/30/12
Selenium	7782-49-2		39.2	ug/L	98	85 - 115				11/30/12
Boron	7440-42-8		47.9	ug/L	119.8	85 - 115			o	11/30/12
MS			**QC Sample #85616**							
			Original 121436001							
Aluminum	7429-90-5		410	ug/L	102.6	70 - 130				11/30/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Manganese	7439-96-5		40.3	ug/L	100.9	70 - 130				11/30/12
Silver	7440-22-4		41.6	ug/L	104	70 - 130				11/30/12
Antimony	7440-36-0		43.4	ug/L	108.5	70 - 130				11/30/12
Barium	7440-39-3		43.5	ug/L	108.8	70 - 130				11/30/12
Beryllium	7440-41-7		39.3	ug/L	98.2	70 - 130				11/30/12
Cadmium	7440-43-9		41.6	ug/L	103.9	70 - 130				11/30/12
Chromium	7440-47-3		39.8	ug/L	99.5	70 - 130				11/30/12
Cobalt	7440-48-4		39.7	ug/L	99.4	70 - 130				11/30/12
Copper	7440-50-8		38.5	ug/L	96.2	70 - 130				11/30/12
Lead	7439-92-1		44.3	ug/L	110.7	70 - 130				11/30/12
Mercury	7439-97-6		2.18	ug/L	109.2	70 - 130				11/30/12
Molybdenum	7439-98-7		43.9	ug/L	109.8	70 - 130				11/30/12
Thallium	7440-28-0		43.4	ug/L	108.5	70 - 130				11/30/12
Tin	7440-31-5		43.3	ug/L	108.2	70 - 130				11/30/12
Arsenic	7440-38-2		42.0	ug/L	105	70 - 130				11/30/12
Selenium	7782-49-2		38.7	ug/L	96.7	70 - 130				11/30/12
Boron	7440-42-8		41.6	ug/L	104	70 - 130			o	11/30/12
MSD			**QC Sample #85617**							
			Original 121436001					**Paired**	**85616**	
Aluminum	7429-90-5		424	ug/L	106	70 - 130	3.20	20		11/30/12
Manganese	7439-96-5		42.0	ug/L	104.9	70 - 130	3.90	20		11/30/12
Silver	7440-22-4		42.5	ug/L	106.3	70 - 130	2.10	20		11/30/12
Antimony	7440-36-0		44.1	ug/L	110.3	70 - 130	1.70	20		11/30/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Barium	7440-39-3		44.5	ug/L	111.2	70 - 130	1.50	20		11/30/12
Beryllium	7440-41-7		41.8	ug/L	104.5	70 - 130	6.20	20		11/30/12
Cadmium	7440-43-9		42.6	ug/L	106.4	70 - 130	2.40	20		11/30/12
Chromium	7440-47-3		40.9	ug/L	102.3	70 - 130	2.70	20		11/30/12
Cobalt	7440-48-4		41.1	ug/L	102.8	70 - 130	3.40	20		11/30/12
Copper	7440-50-8		39.3	ug/L	98.3	70 - 130	2.20	20		11/30/12
Lead	7439-92-1		45.1	ug/L	112.8	70 - 130	1.90	20		11/30/12
Mercury	7439-97-6		2.18	ug/L	108.8	70 - 130	0.40	20		11/30/12
Molybdenum	7439-98-7		44.5	ug/L	111.2	70 - 130	1.00	20		11/30/12
Thallium	7440-28-0		44.0	ug/L	110.1	70 - 130	1.50	20		11/30/12
Tin	7440-31-5		44.0	ug/L	110	70 - 130	1.60	20		11/30/12
Arsenic	7440-38-2		42.5	ug/L	106.3	70 - 130	1.10	20		11/30/12
Selenium	7782-49-2		40.0	ug/L	100	70 - 130	3.30	20		11/30/12
Boron	7440-42-8		44.5	ug/L	111.2	70 - 130	4.20	20	o	11/30/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analytical Batch 211214 (QC Batch: 211213)
Associated Samples 121439002

Test PCBs by EPA SW-846 Method 8082

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85887**							
Aroclor-1016	12674-11-2		<0.1	ug/L					U	12/04/12
Aroclor-1221	11104-28-2		<0.2	ug/L					U	12/04/12
Aroclor-1232	11141-16-5		<0.1	ug/L					U	12/04/12
Aroclor-1242	53469-21-9		<0.1	ug/L					U	12/04/12
Aroclor-1248	12672-29-6		<0.1	ug/L					U	12/04/12
Aroclor-1254	11097-69-1		<0.1	ug/L					U	12/04/12
Aroclor-1260	11096-82-5		<0.1	ug/L					U	12/04/12
LCS			**QC Sample #85888**							
Aroclor-1254	11097-69-1		1.8	ug/L	90	70 - 130				12/04/12
MS			**QC Sample #85889**							
			Original 121439002							
Aroclor-1254	11097-69-1	<0.09	1.7	ug/L	90.5	60 - 130				12/04/12
MSD			**QC Sample #85890**							
			Original 121439002					**Paired**	**85889**	
Aroclor-1254	11097-69-1	<0.09	1.7	ug/L	90.7	60 - 130	0.20	20		12/04/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analytical Batch 211239 (QC Batch: 210240)
Associated Samples 121439002

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK				**QC Sample #84911**							
Strontium-89_90	SR-RAD		0.39	pCi/L						U	12/05/12
LCS				**QC Sample #84912**							
Strontium-89_90	SR-RAD		87	pCi/L	98.1	80 - 120					12/05/12
DUP				**QC Sample #84913**							
				Original 121430005							
Strontium-89_90	SR-RAD		1.3	pCi/L			44.30	20	*	X	12/05/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analytical Batch 209926 (QC Batch: 209923)
Associated Samples 121439002

Test Gasoline Range (W)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121439002**							
4-Bromofluorobenzene	460-00-4				97.8	50 - 150				11/12/12
BLANK			**QC Sample #84696**							
4-Bromofluorobenzene	460-00-4				86.6	50 - 150				11/12/12
LCS			**QC Sample #84697**							
4-Bromofluorobenzene	460-00-4				98	50 - 150				11/12/12
MS			**QC Sample #84698**							
			Original 121390015							
4-Bromofluorobenzene	460-00-4				86	50 - 150				11/12/12
MSD			**QC Sample #84699**							
			Original 121390015					**Paired**	**84698**	
4-Bromofluorobenzene	460-00-4				85.8	50 - 150	n/a			11/12/12
DUP			**QC Sample #84700**							
			Original 121390015							

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
4-Bromofluorobenzene	460-00-4				86.6	50 - 150	n/a			11/12/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analytical Batch 210314 (QC Batch: 210313)
Associated Samples 121439002

Test SW-846 8260B Volatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121439002**							
1,2-Dichloroethane-d4	17060-07-0				104.6	75 - 125				11/14/12
Toluene-d8	2037-26-5				93.3	75 - 125				11/14/12
4-Bromofluorobenzene	460-00-4				103.7	75 - 125				11/14/12
BLANK			**QC Sample #84986**							
1,2-Dichloroethane-d4	17060-07-0				100.4	75 - 125				11/14/12
Toluene-d8	2037-26-5				94.3	75 - 125				11/14/12
4-Bromofluorobenzene	460-00-4				101	75 - 125				11/14/12
LCS			**QC Sample #84987**							
1,2-Dichloroethane-d4	17060-07-0				98.3	75 - 125				11/14/12
Toluene-d8	2037-26-5				94	75 - 125				11/14/12
4-Bromofluorobenzene	460-00-4				96.3	75 - 125				11/14/12
MS			**QC Sample #84988**							
			Original 121411014							
1,2-Dichloroethane-d4	17060-07-0				99	75 - 125				11/14/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Toluene-d8	2037-26-5				93.6	75 - 125				11/14/12
4-Bromofluorobenzene	460-00-4				96.5	75 - 125				11/14/12
MSD			**QC Sample #84989**							
			Original	**121411014**				**Paired**	**84988**	
1,2-Dichloroethane-d4	17060-07-0				98.4	75 - 125	n/a			11/14/12
Toluene-d8	2037-26-5				93.8	75 - 125	n/a			11/14/12
4-Bromofluorobenzene	460-00-4				96.4	75 - 125	n/a			11/14/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analytical Batch 210333 (QC Batch: 210317)
Associated Samples 121439002

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121439002**							
o-Terphenyl	84-15-1				91.6	70 - 130				11/14/12
BLANK			**QC Sample #84996**							
o-Terphenyl	84-15-1				91.3	70 - 130				11/14/12
LCS			**QC Sample #84997**							
o-Terphenyl	84-15-1				97.9	70 - 130				11/14/12
MS			**QC Sample #84998**							
			Original 121411001							
o-Terphenyl	84-15-1				92.5	70 - 130				11/14/12
MSD			**QC Sample #84999**							
			Original 121411001					**Paired**	**84998**	
o-Terphenyl	84-15-1				101.1	70 - 130	n/a			11/14/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analytical Batch 210350 (QC Batch: 210027)
Associated Samples 121439002

Test Plutonium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121439002**							
Plutonium-242 Tracer	13982-10-0				91.8	25 - 105				11/16/12
BLANK			**QC Sample #84798**							
Plutonium-242 Tracer	13982-10-0				84.8	25 - 105				11/16/12
LCS			**QC Sample #84799**							
Plutonium-242 Tracer	13982-10-0				88.3	25 - 105				11/16/12
DUP			**QC Sample #84800**							
			Original 121439002							
Plutonium-242 Tracer	13982-10-0				84.5	25 - 105	n/a			11/16/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analytical Batch 210351 (QC Batch: 210027)
Associated Samples 121439002

Test Uranium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121439002**							
Uranium-232 Tracer	14158-29-3				91.1	25 - 105				11/15/12
BLANK			**QC Sample #84798**							
Uranium-232 Tracer	14158-29-3				91.1	25 - 105				11/15/12
LCS			**QC Sample #84799**							
Uranium-232 Tracer	14158-29-3				61.4	25 - 105				11/15/12
DUP			**QC Sample #84800**							
			Original 121439002							
Uranium-232 Tracer	14158-29-3				89.6	25 - 105	n/a			11/15/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analytical Batch 210418 (QC Batch: 210318)
Associated Samples 121439002

Test SW-846 8270D Semivolatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121439002**							
2-Fluorophenol	367-12-4				56.8	34 - 103				11/15/12
Phenol-d5	4165-62-2				38.3	10 - 93				11/15/12
Nitrobenzene-d5	4165-60-0				77.3	49 - 133				11/15/12
2-Methylnaphthalene-d10	7297-45-2				77.2	60 - 135				11/15/12
2-Fluorobiphenyl	321-60-8				81.5	48 - 132				11/15/12
2,4,6-Tribromophenol	118-79-6				69	33 - 134				11/15/12
Fluoranthene-d10	93951-69-0				89	62 - 139				11/15/12
Terphenyl-d14	98904-43-9				74.1	56 - 138				11/15/12
BLANK			**QC Sample #85000**							
2-Fluorophenol	367-12-4				59.2	34 - 103				11/15/12
Phenol-d5	4165-62-2				43.1	10 - 93				11/15/12
Nitrobenzene-d5	4165-60-0				75.8	49 - 133				11/15/12
2-Methylnaphthalene-d10	7297-45-2				78	60 - 135				11/15/12
2-Fluorobiphenyl	321-60-8				78	48 - 132				11/15/12
2,4,6-Tribromophenol	118-79-6				74.5	33 - 134				11/15/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Fluoranthene-d10	93951-69-0				88.4	62 - 139				11/15/12
Terphenyl-d14	98904-43-9				75.6	56 - 138				11/15/12
LCS			**QC Sample #85001**							
2-Fluorophenol	367-12-4			ug/L	63.6	34 - 103				11/15/12
Phenol-d5	4165-62-2			ug/L	48	10 - 93				11/15/12
Nitrobenzene-d5	4165-60-0			ug/L	78.5	49 - 133				11/15/12
2,4,6-Tribromophenol	118-79-6			ug/L	84	33 - 134				11/15/12
2-Fluorobiphenyl	321-60-8			ug/L	80.4	48 - 132				11/15/12
Terphenyl-d14	98904-43-9			ug/L	78.6	56 - 138				11/15/12
2-Methylnaphthalene-d10	7297-45-2			ug/L	79.6	60 - 135				11/15/12
Fluoranthene-d10	93951-69-0			ug/L	92.4	62 - 139				11/15/12
MS			**QC Sample #85002**							
			Original 121439002							
2-Fluorophenol	367-12-4			ug/L	55.1	34 - 103				11/15/12
Phenol-d5	4165-62-2			ug/L	37.6	10 - 93				11/15/12
Nitrobenzene-d5	4165-60-0			ug/L	77.4	49 - 133				11/15/12
2,4,6-Tribromophenol	118-79-6			ug/L	82.1	33 - 134				11/15/12
2-Fluorobiphenyl	321-60-8			ug/L	80.1	48 - 132				11/15/12
Terphenyl-d14	98904-43-9			ug/L	75.8	56 - 138				11/15/12
2-Methylnaphthalene-d10	7297-45-2			ug/L	79.7	60 - 135				11/15/12
Fluoranthene-d10	93951-69-0			ug/L	90	62 - 139				11/15/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MSD			**QC Sample #85003**							
			Original	**121439002**				**Paired**	**85002**	
2-Fluorophenol	367-12-4			ug/L	59.5	34 - 103	n/a			11/15/12
Phenol-d5	4165-62-2			ug/L	40	10 - 93	n/a			11/15/12
Nitrobenzene-d5	4165-60-0			ug/L	79.6	49 - 133	n/a			11/15/12
2,4,6-Tribromophenol	118-79-6			ug/L	85.4	33 - 134	n/a			11/15/12
2-Fluorobiphenyl	321-60-8			ug/L	83.1	48 - 132	n/a			11/15/12
Terphenyl-d14	98904-43-9			ug/L	78.9	56 - 138	n/a			11/15/12
2-Methylnaphthalene-d10	7297-45-2			ug/L	81.9	60 - 135	n/a			11/15/12
Fluoranthene-d10	93951-69-0			ug/L	92.8	62 - 139	n/a			11/15/12
LCSD			**QC Sample #85004**							
								Paired	**85001**	
2-Fluorophenol	367-12-4			ug/L	61.9	34 - 103	n/a			11/15/12
Phenol-d5	4165-62-2			ug/L	47.3	10 - 93	n/a			11/15/12
Nitrobenzene-d5	4165-60-0			ug/L	76.8	49 - 133	n/a			11/15/12
2,4,6-Tribromophenol	118-79-6			ug/L	76.8	33 - 134	n/a			11/15/12
2-Fluorobiphenyl	321-60-8			ug/L	73.3	48 - 132	n/a			11/15/12
Terphenyl-d14	98904-43-9			ug/L	74.7	56 - 138	n/a			11/15/12
2-Methylnaphthalene-d10	7297-45-2			ug/L	71.6	60 - 135	n/a			11/15/12
Fluoranthene-d10	93951-69-0			ug/L	89.7	62 - 139	n/a			11/15/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121439

Analytical Batch 210419 (QC Batch: 210358)
Associated Samples 121439002

Test SW-846 Method 8015 for GPP

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121439002**							
Methyl Acetate	79-20-9				99.6	70 - 130				11/15/12
BLANK			**QC Sample #85141**							
Methyl Acetate	79-20-9			ug/L	98.9	70 - 130				11/15/12
LCS			**QC Sample #85142**							
Methyl Acetate	79-20-9			ug/L	98.3	70 - 130				11/15/12
MS			**QC Sample #85143**							
			Original 121439002							
Methyl Acetate	79-20-9			ug/L	98.6	70 - 130				11/15/12
MSD			**QC Sample #85144**					**Paired**	**85143**	
			Original 121439002							
Methyl Acetate	79-20-9			ug/L	102.9	70 - 130	n/a			11/15/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121439

Analytical Batch 211214 (QC Batch: 211213)
Associated Samples 121439002

Test PCBs by EPA SW-846 Method 8082

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121439002**							
Tetrachloro-m-xylene	877-09-8				68.8	60 - 140				12/04/12
Decachlorobiphenyl	2051-24-3				89.6	60 - 140				12/04/12
BLANK			**QC Sample #85887**							
Tetrachloro-m-xylene	877-09-8				74.7	60 - 140				12/04/12
Decachlorobiphenyl	2051-24-3				88.9	60 - 140				12/04/12
LCS			**QC Sample #85888**							
Tetrachloro-m-xylene	877-09-8				74.7	60 - 140				12/04/12
Decachlorobiphenyl	2051-24-3				87.4	60 - 140				12/04/12
MS			**QC Sample #85889**							
			Original 121439002							
Tetrachloro-m-xylene	877-09-8				74.7	60 - 140				12/04/12
Decachlorobiphenyl	2051-24-3				87.5	60 - 140				12/04/12
MSD			**QC Sample #85890**							
			Original 121439002					**Paired**	**85889**	
Tetrachloro-m-xylene	877-09-8				69.5	60 - 140	n/a			12/04/12
Decachlorobiphenyl	2051-24-3				87.6	60 - 140	n/a			12/04/12

* - QC result out of range n/a - Not Applicable

Quality Control Report

DECEMBER 10, 2012

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121439

Analytical Batch 211239 (QC Batch: 210240)
Associated Samples 121439002

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121439002**							
Strontium Nitrate	10042-76-9			mg	77.7	25 - 105				12/05/12
BLANK			**QC Sample #84911**							
Strontium Nitrate	10042-76-9			mg	76	25 - 105				12/05/12
LCS			**QC Sample #84912**							
Strontium Nitrate	10042-76-9			mg	81.8	25 - 105				12/05/12
DUP			**QC Sample #84913**							
			Original 121430005							
Strontium Nitrate	10042-76-9			mg	73.6	25 - 105	n/a			12/05/12

* - QC result out of range n/a - Not Applicable

Analytical Comment Report

Attention: Scot Fitzgerald

Group # WSCF121439

Quality Control Comments

Department Inorganic

85343 B2MR83(121423005MS)

Analyte Sodium - ICP-6010 - All possible metals

[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

85344 B2MR83(121423005MSD)

Analyte Sodium - ICP-6010 - All possible metals

[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

Attention: Scot Fitzgerald

Group # WSCF121439

Quality Control Comments

Department Organic, Semivolatiles

85004 LCSD for HBN 210318 [ORGP/2032

Analyte 3,3-Dichlorobenzidine - SW-846 8270D Semivolatiles

[1] Matrix Spike RPD outside established laboratory limits No flags assigned.

Attention: Scot Fitzgerald

Group # WSCF121439

Quality Control Comments

Department Radiochemistry

84800 B2MXL9(121439002DUP)

Analyte Plutonium-239_240 - Plutonium (AEA)

[1] The duplicate is outside of default RPD limits. RPD limit does not apply to results less than 5X the Minimum Detectable Concentration.

Analyte Uranium-235 - Uranium (AEA)

[1] The duplicate is outside of default RPD limits. RPD limit does not apply to results less than 5X the Minimum Detectable Concentration.

84847 B2MR83(121423005DUP)

Analyte Gross Beta - GAB Discrete analysis Beta only

[1] The duplicate is outside of default RPD limits. RPD limit does not apply to results less than 5X the Minimum Detectable Concentration.

84913 B2MKK8(121430005DUP)

Analyte Strontium-89_90 - Strontium 89/90 (GPC/GEA)

[1] The duplicate is outside of default RPD limits. RPD limit does not apply to results less than 5X the Minimum Detectable Concentration.

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 5 pages
Including cover page

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

ACKNOWLEDGEMENT OF SAMPLES RECEIVED

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

ATTN: Scot Fitzgerald

Customer Code: CHPRC
PO #: 401647
Work Order #: 121439
Profile #: I13-007-011
Proj. Mgr.:
Phone:

The following samples were received from you on 11/7/2012 3:30:00 PM. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
		Tests scheduled		
121439001	B2MXM3	WATER	11/7/2012 10:21	11/7/2012 15:30
		2008-W; 6010-W		
121439002	B2MXL9	WATER	11/7/2012 10:21	11/7/2012 15:30
		2008-W; 6010-W; 8015-W; 8260V-W; 8270SV-W; AEA-PU-W; AEA-U-W; CN-W; GAB-AO-W; GAB-BO-W; GEA-W; H3-COL-W; PCB-W; SR89/90-W; TC99-W; TPHDWA-W; TPHGWA-W		

Test Acronym Description

Test Acronym	Description
2008-W	ICP-MS (W)
6010-W	ICP-AES (W)
8015-W	8015 (W)
8260V-W	Volatiles by 8260B (W)
8270SV-W	Semivolatiles by 8270D (W)
AEA-PU-W	Plutonium (AEA) (W)
AEA-U-W	Uranium Isotopic (AEA) (W)
CN-W	Cyanide (Spectroscopy) (W)
GAB-AO-W	Gross Alpha/Beta (A only)(W)
GAB-BO-W	Gross Alpha/Beta (B only)(W)
GEA-W	Gamma Energy Analysis (W)
H3-COL-W	Tritium by EICHROM Column (W)
PCB-W	PCB (8082) (W)
SR89/90-W	Strontium 89/90 (GPC) (W)

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

TC99-W	Technetium-99 (W)
TPHDWA-W	TPHD-WA (W)
TPHGWA-W	TPHG-WA (Water)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # I13-007-011

Page 1 of 2

Collector	Robert Crow	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	I13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	100NR2, DECEMBER 2012	Logbook No.	HNF-N-506 36/34	Ice Chest No.	N/A
Shipped To (Lab)	Waste Sampling & Characterization	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority: 31 Days	**PRIORITY**	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOH Order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time** Total Activity Exemption: Yes ☑ No ☐

100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.
FY12 and FY13 samples cannot be in the same SD

121439

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MXM3 1	Y	W	11-7-12	1021	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B2MXM3	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: LIST-3 (17)	6 Months	HNO3 to pH <2
B2MXM3	Y	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2MXL9 2	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B2MXL9	N	W			1x500-mL G/P	200.8_METALS_ICPMS: LIST-3 (17)	6 Months	HNO3 to pH <2
B2MXL9	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B2MXL9	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2MXL9	N	W			4x1-L aG	8082_PCB_GC: List-1 (7)	None	Cool~4C
B2MXL9	N	W			3x40-mL aGs*	8260_VOA_GCMS_IX: COMMON	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2MXL9	N	W			4x1-L aG	8270_SVOA_GCMS_IX: COMMON	7/40 Days	Cool~4C
B2MXL9	N	W			3x40-mL Gs*	Alcohols, Glycols, & Ketones - 8015M	14/40 Days	Cool~4C
B2MXL9	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2MXL9	N	W			1x500-mL G/P	GAMMA_GS: List-1 (10)	6 Months	HNO3 to pH <2
B2MXL9	N	W	11-7-12	1021	1x1-L P	PUISO_IE_PRECIP_AEA: Pu-238 + 239/240 (2)	180 Days	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Robert Crow	R Crow		NOV 07 2012 1530	TA Finazzo			NOV 07 2012 1530
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PRINTED O 10/24/2012

A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **I13-007-011**

Page 2 of 2

Collector	Robert Crow	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	I13-007	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	100NR2, DECEMBER 2012	Logbook No.	HNF-N-506 36/36	Ice Chest No.	N/A
Shipped To (Lab)	Waste Sampling & Characterization	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	CERCLA	Priority: 31 Days	**PRIORITY**	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS **Hold Time**

100 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.
FY12 and FY13 samples cannot be in the same SD

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MXL9	N	W	11-7-12	1021	1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B2MXL9	N	W			1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B2MXL9	N	W			3x1-L aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2/Cool~4C
B2MXL9	N	W			4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2/Cool~4C
B2MXL9	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2MXL9	N	W	11-7-12	1021	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Robert Crow	R Crow		NOV 07 2012 1530	TA Frazier	[illegible]		NOV 07 2012 1530
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

S	= Soil	DS	= Drum Solids
SE	= Sediment	DL	= Drum Liquids
SO	= Solid	T	= Tissue
SL	= Sludge	WI	= Wipe
W	= Water	L	= Liquid
O	= Oil	V	= Vegetation
A	= Air	X	= Other

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process) Disposed By Date/Time

PRINTED O 10/24/2012

A-6004-842 (REV 2)