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

December 19, 2012

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

Dear Scot Fitzgerald,

REVISED121398 - 699668 [Report ID: 121398]

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 WSCF121398

* 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 # WSCF121398
Data Deliverable Date 12/03/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
W13-011	B2MNB0	121398001	WATER	11/02/12	11/02/12
W13-011	B2MNB6	121398002	WATER	11/02/12	11/02/12
W13-011	B2MN99	121398003	WATER	11/02/12	11/02/12
W13-011	B2MNB5	121398004	WATER	11/02/12	11/02/12
W13-011	B2MNB1	121398005	WATER	11/02/12	11/02/12
W13-011	B2MNB7	121398006	WATER	11/02/12	11/02/12

ATTACHMENT 2

NARRATIVE

Consisting of 7 pages
Including cover page

Attachment 2
Narrative Rev1
WSCF121398

Revision 1: This case narrative replaces the prior in its entirety. 1,4-Dioxane was added per SDR13-064 to samples B2MN99 and B2MNB5.

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 Hexachlorophene analysis is attached to this report.
- Sample Issue Resolution Form SDR13-030 regarding compound list clarification is attached to this report.
- Sample Issue Resolution Form SDR13-064 adding 1,4-Dioxane by 8270 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.

Attachment 2
Narrative Rev1
WSCF121398

- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

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

- The dilution for sample B2MNB6 (121398002) was analyzed out of hold time.
- Nitrite – Matrix Spike recovery was outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- Chloride, Nitrate and Sulfate – 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.

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):

- All applicable QC controls are within the established limits.

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

- All applicable QC controls are within the established limits.

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

- All applicable QC controls are within the established limits.

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Organic Comments

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

- All applicable QC controls are within the established limits.

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.

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 Rev1
WSCF121398

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

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Attachment 2
Narrative Rev1
WSCF121398

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

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Attachment 2
Narrative Rev1
WSCF121398

SAMPLE ISSUE RESOLUTION

SIR NUM	SDR13-064
REV NUM	0
DATE INITIATED	12/12/2012

SAMPLE EVENT INFORMATION

SAF NUM(S)	W13-011, X13-012, W13-012, I13-007, W13-002, W13-010
OPERABLE UNIT(S)	NONE, 100-NR-2
PROJECT(S)	SURV13, CERC13, RCRA13
SAMPLE EVENT TITLE(S)	SURV13, CERC13, RCRA13
LABORATORY	Waste Sampling & Characterization

SAMPLING INFORMATION

NUMBER OF SAMPLES	63
SAMPLE NUMBERS	B2M0Y3, B2M0Y9, B2M105, B2M111, B2M117, B2M123, B2M129, B2M135, B2M141, B2M147, B2M153, B2M159, B2M165, B2M171, B2M177, B2M183, B2M194, B2M1B0, B2M9W6, B2MN27, B2MN32, B2MN37, B2MN42, B2MN47, B2MN52, B2MN57, B2MN64, B2MN71, B2MN75, B2MN81, B2MN82, B2MN89, B2MN94, B2MN99, B2MNB5, B2MNC0, B2MXD6, B2MXL9, B2MXM7, B2MXM8, B2MXN9, B2N3D3, B2N3D5, B2N905, B2N906, B2N910, B2N914, B2N915, B2N919, B2N923, B2N926, B2N931, B2N935, B2N938, B2N941, B2N945, B2N946, B2N950, B2N953, B2N957, B2N958, B2N962, B2N965
SAMPLE MATRIX	WATER
COLLECTION DATE	10/3/2012 - 12/6/2012
SDG NUM	WSCF121241, WSCF121242, WSCF121404, WSCF121448, WSCF121284, WSCF121439, WSCF121226, WSCF121555, WSCF121456, WSCF121275, WSCF121230, WSCF121223, WSCF121303, WSCF121402, WSCF121401, WSCF121398, WSCF121274, WSCF121232, WSCF121450, WSCF121239

ISSUE BACKGROUND

CLASS	Sample Management Issues
TYPE	Addition of Analyses
DESCRIPTION	Missed adding Appendix IX constituent 1,4-Dioxane to the new service list.

DISPOSITION

DESCRIPTION	Proposed disposition: Request that WSCF report the missing data for 1,4-Dioxane for the listed samples. SMR will add necessary information to the affected data packages.
JUSTIFICATION	Accepted disposition: WSCF understands SMR missed having 1,4-dioxane reported for the Appendix IX 8270 service list. The data is available. WSCF has added 1,4-dioxane to the yellow highlighted samples above in addition to B2MXN8 (121450), and B2MN63 (121456). The samples not highlighted have not been received by WSCF as of 12/17/12. When they are received 1,4-dioxane will be added.

Submitted by: Karen Waters-Husted/CHPRC DATE: 12/12/12
Accepted by: Heather Medley/WSCF DATE: 12/17/12

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ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 85 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 #	WSCF121398
Report Date	December 19, 2012

Analytical: Electronically signed by Joseph Hale

Client Services: Electronically signed by Heather Medley

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 # WSCF121398

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
209719	209719	2	BLANK	84375	BLANK		Anions by Ion Chromatography (Water)
209719	209719	3	LCS	84376	LCS		Anions by Ion Chromatography (Water)
209719	209719	4	DUP	84377	B2MNC9(121400003DUP	121400003	Anions by Ion Chromatography (Water)
209719	209719	5	MS	84378	B2MNC9(121400003MS)	121400003	Anions by Ion Chromatography (Water)
209719	209719	6	MSD	84379	B2MNC9(121400003MSD	121400003	Anions by Ion Chromatography (Water)
209719	209719	8	SAMPLE	121398001	B2MNB0		Anions by Ion Chromatography (Water)
209719	209719	9	SAMPLE	121398001	B2MNB0		Anions by Ion Chromatography (Water)
209719	209719	10	SAMPLE	121398002	B2MNB6		Anions by Ion Chromatography (Water)
209843	209843	2	BLANK	84506	BLANK		Anions by Ion Chromatography (Water)
209843	209843	3	LCS	84507	LCS		Anions by Ion Chromatography (Water)
209843	209843	4	DUP	84508	B2M748(121407001DUP)	121407001	Anions by Ion Chromatography (Water)
209843	209843	5	MS	84509	B2M748(121407001MS)	121407001	Anions by Ion Chromatography (Water)
209843	209843	6	MSD	84510	B2M748(121407001MSD)	121407001	Anions by Ion Chromatography (Water)
209843	209843	10	SAMPLE	121398002	B2MNB6		Anions by Ion Chromatography (Water)
209855	210221	5	BLANK	84526	BLANK		ICP-6010 - All possible metals
209855	210221	7	LCS	84528	LCS		ICP-6010 - All possible metals
209855	210221	9	MS	84529	B2MPF1(121411002MS)	121411002	ICP-6010 - All possible metals
209855	210221	10	MSD	84530	B2MPF1(121411002MSD	121411002	ICP-6010 - All possible metals
209855	210221	27	SAMPLE	121398003	B2MN99		ICP-6010 - All possible metals
209855	210221	28	SAMPLE	121398003	B2MN99		ICP-6010 - All possible metals
209855	210221	29	SAMPLE	121398004	B2MNB5		ICP-6010 - All possible metals
209855	210221	30	SAMPLE	121398005	B2MNB1		ICP-6010 - All possible metals
209855	210221	31	SAMPLE	121398005	B2MNB1		ICP-6010 - All possible metals

REVISED121398 -

Batch QC List

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
209855	210221	32	SAMPLE	121398006	B2MNB7		ICP-6010 - All possible metals
210220	210224	4	BLANK	84854	BLANK		ICP-2008 MS All possible metal
210220	210224	5	LCS	84855	LCS		ICP-2008 MS All possible metal
210220	210224	7	MS	84856	B2MCM5(121370001MS)	121370001	ICP-2008 MS All possible metal
210220	210224	8	MSD	84857	B2MCM5(121370001MS	121370001	ICP-2008 MS All possible metal
210220	210224	29	SAMPLE	121398003	B2MN99		ICP-2008 MS All possible metal
210723	210756	4	BLANK	85396	BLANK		ICP-2008 MS All possible metal
210723	210756	5	LCS	85397	LCS		ICP-2008 MS All possible metal
210723	210756	7	MS	85398	B2LTV2(121489001MS)	121489001	ICP-2008 MS All possible metal
210723	210756	8	MSD	85399	B2LTV2(121489001MSD)	121489001	ICP-2008 MS All possible metal
210723	210756	11	SAMPLE	121398004	B2MNB5		ICP-2008 MS All possible metal
210723	210756	12	SAMPLE	121398005	B2MNB1		ICP-2008 MS All possible metal
210723	210756	13	SAMPLE	121398006	B2MNB7		ICP-2008 MS All possible metal

Batch QC List

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
209856	210019	1	BLANK	84531	BLANK		SW-846 8270D Semivolatiles
209856	210019	2	LCS	84532	LCS		SW-846 8270D Semivolatiles
209856	210019	3	MS	84533	B2MN99(121398003MS)	121398003	SW-846 8270D Semivolatiles
209856	210019	4	MSD	84534	B2MN99(121398003MSD	121398003	SW-846 8270D Semivolatiles
209856	210019	5	SAMPLE	121398004	B2MNB5		SW-846 8270D Semivolatiles
209856	210019	6	SAMPLE	121398003	B2MN99		SW-846 8270D Semivolatiles

Batch QC List

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
209922	209924	1	BLANK	84692	BLANK		SW-846 8260B Volatiles
209922	209924	2	LCS	84693	LCS		SW-846 8260B Volatiles
209922	209924	3	MS	84694	B2MRX4(121397007MS)	121397007	SW-846 8260B Volatiles
209922	209924	4	MSD	84695	B2MRX4(121397007MSD	121397007	SW-846 8260B Volatiles
209922	209924	7	SAMPLE	121398004	B2MNB5		SW-846 8260B Volatiles
209922	209924	9	SAMPLE	121398003	B2MN99		SW-846 8260B Volatiles

Batch QC List

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121398

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210119	210119	1	LCS	84814	LCS		Total Alkalinity as mg/L CaCO3 (Water)
210119	210119	3	DUP	84815	B2M586(121387007DUP)	121387007	Total Alkalinity as mg/L CaCO3 (Water)
210119	210119	13	LCS	84816	LCS		Total Alkalinity as mg/L CaCO3 (Water)
210119	210119	17	SAMPLE	121398003	B2MN99		Total Alkalinity as mg/L CaCO3 (Water)
210119	210119	18	SAMPLE	121398004	B2MNB5		Total Alkalinity as mg/L CaCO3 (Water)
210119	210119	19	LCS	84817	LCS		Total Alkalinity as mg/L CaCO3 (Water)
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	10	SAMPLE	121398003	B2MN99		Cyanide (W) by Midi/Spectrophotometer
210348	210349	11	SAMPLE	121398004	B2MNB5		Cyanide (W) by Midi/Spectrophotometer

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

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

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

Method Reference

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

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

LA-523-456	Semivolatile Sample Analysis by SW-846 Method 8270D		
	EPA SW-846	8000B	Determinative Chromagraphic Separations
	EPA SW-846	3510C	Separatory Funnel Liquid-Liquid Extraction
	EPA SW-846	8270D	Semivolatile Organic Compounds by Gas
	EPA SW-846	3545	Pressurized Fluid Extraction (PFE)
			Chromatography/Mass Spectrometry (GC/MS)
	HEIS	8270_SVOA_GCMS	Semivolatile Organic Compounds by Gas
			Chromatography/Mass Spectrometry(GC/MS)

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 # WSCF121398

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

LA-523-455	Volatile Sample Analysis by SW-846 Method 8260B		
	EPA SW-846	8000B	Determinative Chromographic Separations
	EPA SW-846	8260B	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
	HEIS	8260_VOA_GCMS	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

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

Method Reference

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121398

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-531-411	Alkalinity		
	SM	2320	Alkalinity
	HEIS	2320_ALKALINITY	Alkalinity
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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Sample # 121398001
SAF# W13-011
Sample ID B2MNB0

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/02/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	BD	0.102		ug/mL	3	0.069	0.22	11/02/12
Chloride	16887-00-6	LA-533-410	D	52.2		ug/mL	3	0.17	1.2	11/02/12
Nitrite-N	NO2-N	LA-533-410	UDN	<0.057		ug/mL	3	0.057	0.29	11/02/12
Nitrate-N	NO3-N	LA-533-410	D	348		ug/mL	20	0.38	2.0	11/02/12
Sulfate	14808-79-8	LA-533-410	D	269		ug/mL	3	0.33	3.1	11/02/12

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.

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Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Sample # 121398002
SAF# W13-011
Sample ID B2MNB6

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/02/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.165		ug/mL	2	0.046	0.14	11/02/12
Chloride	16887-00-6	LA-533-410	D	21.5		ug/mL	2	0.12	0.81	11/02/12
Nitrite-N	NO2-N	LA-533-410	UDN	<0.038		ug/mL	2	0.038	0.20	11/02/12
Nitrate-N	NO3-N	LA-533-410	D	37.2		ug/mL	10	0.19	0.99	11/05/12
Sulfate	14808-79-8	LA-533-410	D	111		ug/mL	2	0.22	2.1	11/02/12

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.

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Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**11/13/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411		506		ug/L	1	19	95	11/13/12
Magnesium	7439-95-4	LA-505-411		1.02E5		ug/L	1	4.0	20	11/13/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Potassium	7440-09-7	LA-505-411		22600		ug/L	1	76	380	11/13/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Sodium	7440-23-5	LA-505-411		1.51E5		ug/L	1	10	50	11/13/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	11/13/12
Barium	7440-39-3	LA-505-411		317		ug/L	1	4.0	20	11/13/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Chromium	7440-47-3	LA-505-411		66.6		ug/L	1	5.0	25	11/13/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Vanadium	7440-62-2	LA-505-411	B	7.00		ug/L	1	5.0	25	11/13/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	11/13/12
Calcium	7440-70-2	LA-505-411	D	3.88E5		ug/L	10	490	2400	11/13/12
Strontium	7440-24-6	LA-505-411		1980		ug/L	1	9.0	45	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 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)
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o - LCS recovery outside established laboratory acceptance limits.

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Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

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	11/13/12
ICPMS Prep (W)										**11/13/12**
ICP-2008 MS All possible metal										
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	11/13/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/13/12
Mercury	7439-97-6	LA-505-412	D	1.54		ug/L	2	0.10	0.40	11/13/12
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/13/12
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/13/12
Arsenic	7440-38-2	LA-505-412	D	5.61		ug/L	2	0.40	4.0	11/13/12
Selenium	7782-49-2	LA-505-412	BD	15.5		ug/L	2	2.0	20	11/13/12

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X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)
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o - LCS recovery outside established laboratory acceptance limits.

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Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**11/13/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411		285		ug/L	1	19	95	11/13/12
Magnesium	7439-95-4	LA-505-411		25800		ug/L	1	4.0	20	11/13/12
Manganese	7439-96-5	LA-505-411		35.2		ug/L	1	4.0	20	11/13/12
Nickel	7440-02-0	LA-505-411		158		ug/L	1	4.0	20	11/13/12
Potassium	7440-09-7	LA-505-411		10400		ug/L	1	76	380	11/13/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Sodium	7440-23-5	LA-505-411		35400		ug/L	1	10	50	11/13/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	11/13/12
Barium	7440-39-3	LA-505-411		89.7		ug/L	1	4.0	20	11/13/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Chromium	7440-47-3	LA-505-411		67.4		ug/L	1	5.0	25	11/13/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Copper	7440-50-8	LA-505-411	B	7.40		ug/L	1	4.0	20	11/13/12
Vanadium	7440-62-2	LA-505-411	B	14.8		ug/L	1	5.0	25	11/13/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	11/13/12
Calcium	7440-70-2	LA-505-411		89100		ug/L	1	49	240	11/13/12
Strontium	7440-24-6	LA-505-411		428		ug/L	1	9.0	45	11/13/12

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TP Err = Total Propagated Error
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B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
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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.

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Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

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	11/13/12
ICPMS Prep (W)										**11/26/12**
ICP-2008 MS All possible metal										
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	11/27/12
Lead	7439-92-1	LA-505-412	BD	0.600		ug/L	2	0.10	1.0	11/27/12
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	11/27/12
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/27/12
Tin	7440-31-5	LA-505-412	D	1.54		ug/L	2	0.10	1.0	11/27/12
Arsenic	7440-38-2	LA-505-412	D	5.46		ug/L	2	0.40	4.0	11/27/12
Selenium	7782-49-2	LA-505-412	BD	7.71		ug/L	2	2.0	20	11/27/12

MDL = Minimum Detection Limit
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B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
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PQL is equivalent to Estimated Quantitation Limit (EQL)
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o - LCS recovery outside established laboratory acceptance limits.

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Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Sample # 121398005
SAF# W13-011
Sample ID B2MNB1

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**11/13/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411		497		ug/L	1	19	95	11/13/12
Magnesium	7439-95-4	LA-505-411		99000		ug/L	1	4.0	20	11/13/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Potassium	7440-09-7	LA-505-411		21700		ug/L	1	76	380	11/13/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Sodium	7440-23-5	LA-505-411		1.47E5		ug/L	1	10	50	11/13/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	11/13/12
Barium	7440-39-3	LA-505-411		308		ug/L	1	4.0	20	11/13/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Chromium	7440-47-3	LA-505-411		63.7		ug/L	1	5.0	25	11/13/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Vanadium	7440-62-2	LA-505-411	B	5.10		ug/L	1	5.0	25	11/13/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	11/13/12
Calcium	7440-70-2	LA-505-411	D	3.78E5		ug/L	10	490	2400	11/13/12
Strontium	7440-24-6	LA-505-411		1900		ug/L	1	9.0	45	11/13/12

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C - Analyte was found in the Associated Blank. (Inorganic)
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E - Analyte is an estimate, see comment section.
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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)
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o - LCS recovery outside established laboratory acceptance limits.

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Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Sample # 121398005
SAF# W13-011
Sample ID B2MNB1

Matrix WATER
Sampled 11/02/12
Received 11/02/12

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	11/13/12
ICPMS Prep (W)										**11/26/12**
ICP-2008 MS All possible metal										
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	11/27/12
Lead	7439-92-1	LA-505-412	BD	0.274		ug/L	2	0.10	1.0	11/27/12
Mercury	7439-97-6	LA-505-412	D	1.60		ug/L	2	0.10	0.40	11/27/12
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/27/12
Tin	7440-31-5	LA-505-412	BD	0.552		ug/L	2	0.10	1.0	11/27/12
Arsenic	7440-38-2	LA-505-412	D	5.67		ug/L	2	0.40	4.0	11/27/12
Selenium	7782-49-2	LA-505-412	BD	14.7		ug/L	2	2.0	20	11/27/12

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PQL is equivalent to Estimated Quantitation Limit (EQL)
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o - LCS recovery outside established laboratory acceptance limits.

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Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Sample # 121398006
SAF# W13-011
Sample ID B2MNB7

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**11/13/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	29.3		ug/L	1	19	95	11/13/12
Magnesium	7439-95-4	LA-505-411		25600		ug/L	1	4.0	20	11/13/12
Manganese	7439-96-5	LA-505-411	B	19.8		ug/L	1	4.0	20	11/13/12
Nickel	7440-02-0	LA-505-411		86.7		ug/L	1	4.0	20	11/13/12
Potassium	7440-09-7	LA-505-411		10300		ug/L	1	76	380	11/13/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Sodium	7440-23-5	LA-505-411		34600		ug/L	1	10	50	11/13/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	11/13/12
Barium	7440-39-3	LA-505-411		88.2		ug/L	1	4.0	20	11/13/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Chromium	7440-47-3	LA-505-411	B	8.00		ug/L	1	5.0	25	11/13/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	11/13/12
Vanadium	7440-62-2	LA-505-411	B	11.1		ug/L	1	5.0	25	11/13/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	11/13/12
Calcium	7440-70-2	LA-505-411		89100		ug/L	1	49	240	11/13/12
Strontium	7440-24-6	LA-505-411		421		ug/L	1	9.0	45	11/13/12

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TP Err = Total Propagated Error
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X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)
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o - LCS recovery outside established laboratory acceptance limits.

REVISED121398 -

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Sample # 121398006
SAF# W13-011
Sample ID B2MNB7

Matrix WATER
Sampled 11/02/12
Received 11/02/12

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	11/13/12
ICPMS Prep (W)										**11/26/12**
ICP-2008 MS All possible metal										
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	11/27/12
Lead	7439-92-1	LA-505-412	BD	0.360		ug/L	2	0.10	1.0	11/27/12
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	11/27/12
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	11/27/12
Tin	7440-31-5	LA-505-412	BD	0.452		ug/L	2	0.10	1.0	11/27/12
Arsenic	7440-38-2	LA-505-412	D	5.30		ug/L	2	0.40	4.0	11/27/12
Selenium	7782-49-2	LA-505-412	BD	7.88		ug/L	2	2.0	20	11/27/12

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.

REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8270 (W) CLE										**11/06/12**
SW-846 8270D Semivolatiles										
4-Nitrophenol	100-02-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Phenol	108-95-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pyrene	129-00-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitroso-di-n-propylamine	621-64-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Acenaphthene	83-32-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pentachlorophenol	87-86-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Chlorophenol	95-57-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4-Nitroaniline	100-01-6	LA-523-456	U	<0.9		ug/L	1	0.9	2	11/08/12
4-Bromophenyl-phenylether	101-55-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4-Dimethylphenol	105-67-9	LA-523-456	U	<1		ug/L	1	1	2	11/08/12
4-Chloroaniline	106-47-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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)
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REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Bis(1-Chloro-2-propyl)ether	108-60-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Bis-(2-Chloroethyl) ether	111-44-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Bis-(2-Chloroethoxy)methane	111-91-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Di-n-octylphthalate	117-84-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Hexachlorobenzene	118-74-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Anthracene	120-12-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4-Dichlorophenol	120-83-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Dimethylphthalate	131-11-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Dibenzofuran	132-64-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Benzo(g,h,i)perylene	191-24-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Indeno(1,2,3-cd)pyrene	193-39-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Benzo(b)fluoranthene	205-99-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Fluoranthene	206-44-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Benzo(k)fluoranthene	207-08-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Acenaphthylene	208-96-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Chrysene	218-01-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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B - Analyte was detected in both the BLANK and SAMPLE
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REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Benzo(a)pyrene	50-32-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4-Dinitrophenol	51-28-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Dibenzo(a,h)anthracene	53-70-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4,6-Dinitro-2-methylphenol	534-52-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,3-Dichlorobenzene	541-73-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Benzo(a)anthracene	56-55-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,6-Dinitrotoluene	606-20-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4-Chlorophenyl-phenylether	7005-72-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Hexachlorocyclopentadiene	77-47-4	LA-523-456	U	<0.9		ug/L	1	0.9	2	11/08/12
Isophorone	78-59-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Diethyl phthalate	84-66-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Di-n-butylphthalate	84-74-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Phenanthrene	85-01-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Butylbenzylphthalate	85-68-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Fluorene	86-73-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Carbazole	86-74-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Hexachlorobutadiene	87-68-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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Department Organic, Semivolatiles

Group # WSCF121398

Sample # 121398003
SAF# W13-011
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Matrix WATER
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Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
2-Nitroaniline	88-74-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Nitrophenol	88-75-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Naphthalene	91-20-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Methylnaphthalene	91-57-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Chloronaphthalene	91-58-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
3,3-Dichlorobenzidine	91-94-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Methylphenol	95-48-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,2-Dichlorobenzene	95-50-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4,5-Trichlorophenol	95-95-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Nitrobenzene	98-95-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
3-Nitroaniline	99-09-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
3 & 4 Methylphenol, Total	65794-96-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Hexachloroethane	67-72-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4,6-Trichlorophenol	88-06-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Benzyl alcohol	100-51-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Tributyl phosphate	126-73-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Naphthylamine	91-59-8	LA-523-456	U	<1		ug/L	1	1	2	11/08/12
Pyridine	110-86-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitrosopiperidine	100-75-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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Matrix WATER
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Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
n-Nitrosomethylethylamine	10595-95-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
p-Phenylenediamine	106-50-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Picoline	109-06-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
3,3-Dimethylbenzidine	119-93-7	LA-523-456	U	<4		ug/L	1	4	6	11/08/12
Isosafrole	120-58-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Phentermine	122-09-8	LA-523-456	U	<5		ug/L	1	5	9	11/08/12
1,4-Dioxane	123-91-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,4-Naphthoquinone	130-15-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1-Naphthylamine	134-32-7	LA-523-456	U	<1		ug/L	1	1	2	11/08/12
Aramite	140-57-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Kepone	143-50-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Hexachloropropene	1888-71-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Diallate	2303-16-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pronamide	23950-58-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Isodrin	465-73-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Chlorobenzilate	510-15-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Acetylaminofluorene	53-96-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitrosodiethylamine	55-18-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
3-Methylcholanthrene	56-49-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4-Nitroquinoline-1-oxide	56-57-5	LA-523-456	U	<0.9		ug/L	1	0.9	2	11/08/12
7,12-Dimethylbenz(a)anthracene	57-97-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,3,4,6-Tetrachlorophenol	58-90-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitrosomorpholine	59-89-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pentachlorobenzene	608-93-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Phenacetin	62-44-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Ethyl methanesulfonate	62-50-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Aniline	62-53-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitrosodimethylamine	62-75-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Methyl methanesulfonate	66-27-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pentachloroethane	76-01-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pentachloronitrobenzene	82-68-8	LA-523-456	U	<1		ug/L	1	1	2	11/08/12
2,6-Dichlorophenol	87-65-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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Attention Scot Fitzgerald
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Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Dinoseb(..dinitromethyl phenol)	88-85-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4-Aminobiphenyl	92-67-1	LA-523-456	U	<1		ug/L	1	1	2	11/08/12
n-Nitrosodibutylamine	924-16-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitrosopyrolidine	930-55-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Safrole	94-59-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
o-Toluidine	95-53-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,2,4,5-Tetrachlorobenzene	95-94-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Acetophenone	98-86-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,3,5-Trinitrobenzene	99-35-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Methyl-5-nitroaniline	99-55-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,3-Dinitrobenzene	99-65-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
O,O,O-Triethylthiophosphate	126-68-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Parathion	56-38-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Dimethylaminoazobenzene	60-11-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Dimethoate	60-51-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Thionazin	297-97-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Methyl parathion	298-00-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Phorate	298-02-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Disulfoton	298-04-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Sulfotep	3689-24-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Famfur	52-85-7	LA-523-456	U	<5		ug/L	1	5	9	11/08/12
N-Nitrosodiphenylamin/Diphenyl	DPA+NNDPA	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Methapyrilene	91-80-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8270 (W) CLE										**11/06/12**
SW-846 8270D Semivolatiles										
4-Nitrophenol	100-02-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Phenol	108-95-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pyrene	129-00-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitroso-di-n-propylamine	621-64-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Acenaphthene	83-32-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pentachlorophenol	87-86-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Chlorophenol	95-57-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4-Nitroaniline	100-01-6	LA-523-456	U	<0.9		ug/L	1	0.9	2	11/08/12
4-Bromophenyl-phenylether	101-55-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4-Dimethylphenol	105-67-9	LA-523-456	U	<1		ug/L	1	1	2	11/08/12
4-Chloroaniline	106-47-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Bis(1-Chloro-2-propyl)ether	108-60-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Bis-(2-Chloroethyl) ether	111-44-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Bis-(2-Chloroethoxy)methane	111-91-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Di-n-octylphthalate	117-84-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Hexachlorobenzene	118-74-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Anthracene	120-12-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4-Dichlorophenol	120-83-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Dimethylphthalate	131-11-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Dibenzofuran	132-64-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Benzo(g,h,i)perylene	191-24-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Indeno(1,2,3-cd)pyrene	193-39-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Benzo(b)fluoranthene	205-99-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Fluoranthene	206-44-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Benzo(k)fluoranthene	207-08-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Acenaphthylene	208-96-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Chrysene	218-01-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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REVISED121398 -

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Department Organic, Semivolatiles

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Benzo(a)pyrene	50-32-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4-Dinitrophenol	51-28-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Dibenzo(a,h)anthracene	53-70-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4,6-Dinitro-2-methylphenol	534-52-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,3-Dichlorobenzene	541-73-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Benzo(a)anthracene	56-55-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,6-Dinitrotoluene	606-20-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4-Chlorophenyl-phenylether	7005-72-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Hexachlorocyclopentadiene	77-47-4	LA-523-456	U	<0.9		ug/L	1	0.9	2	11/08/12
Isophorone	78-59-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Diethyl phthalate	84-66-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Di-n-butylphthalate	84-74-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Phenanthrene	85-01-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Butylbenzylphthalate	85-68-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Fluorene	86-73-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Carbazole	86-74-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Hexachlorobutadiene	87-68-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
2-Nitroaniline	88-74-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Nitrophenol	88-75-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Naphthalene	91-20-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Methylnaphthalene	91-57-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Chloronaphthalene	91-58-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
3,3-Dichlorobenzidine	91-94-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Methylphenol	95-48-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,2-Dichlorobenzene	95-50-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4,5-Trichlorophenol	95-95-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Nitrobenzene	98-95-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
3-Nitroaniline	99-09-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
3 & 4 Methylphenol, Total	65794-96-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Hexachloroethane	67-72-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,4,6-Trichlorophenol	88-06-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Benzyl alcohol	100-51-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Tributyl phosphate	126-73-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Naphthylamine	91-59-8	LA-523-456	U	<1		ug/L	1	1	2	11/08/12
Pyridine	110-86-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitrosopiperidine	100-75-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
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Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
n-Nitrosomethylethylamine	10595-95-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
p-Phenylenediamine	106-50-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Picoline	109-06-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
3,3-Dimethylbenzidine	119-93-7	LA-523-456	U	<4		ug/L	1	4	6	11/08/12
Isosafrole	120-58-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Phentermine	122-09-8	LA-523-456	U	<5		ug/L	1	5	9	11/08/12
1,4-Dioxane	123-91-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,4-Naphthoquinone	130-15-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1-Naphthylamine	134-32-7	LA-523-456	U	<1		ug/L	1	1	2	11/08/12
Aramite	140-57-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Kepone	143-50-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Hexachloropropene	1888-71-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Diallate	2303-16-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pronamide	23950-58-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Isodrin	465-73-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Chlorobenzilate	510-15-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Acetylaminofluorene	53-96-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitrosodiethylamine	55-18-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
3-Methylcholanthrene	56-49-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4-Nitroquinoline-1-oxide	56-57-5	LA-523-456	U	<0.9		ug/L	1	0.9	2	11/08/12
7,12-Dimethylbenz(a)anthracene	57-97-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2,3,4,6-Tetrachlorophenol	58-90-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitrosomorpholine	59-89-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pentachlorobenzene	608-93-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Phenacetin	62-44-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Ethyl methanesulfonate	62-50-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Aniline	62-53-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitrosodimethylamine	62-75-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Methyl methanesulfonate	66-27-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pentachloroethane	76-01-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Pentachloronitrobenzene	82-68-8	LA-523-456	U	<1		ug/L	1	1	2	11/08/12
2,6-Dichlorophenol	87-65-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Dinoseb(..dinitromethyl phenol)	88-85-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
4-Aminobiphenyl	92-67-1	LA-523-456	U	<1		ug/L	1	1	2	11/08/12
n-Nitrosodibutylamine	924-16-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
n-Nitrosopyrolidine	930-55-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Safrole	94-59-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
o-Toluidine	95-53-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,2,4,5-Tetrachlorobenzene	95-94-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Acetophenone	98-86-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,3,5-Trinitrobenzene	99-35-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
2-Methyl-5-nitroaniline	99-55-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
1,3-Dinitrobenzene	99-65-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
O,O,O-Triethylthiophosphate	126-68-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Parathion	56-38-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Dimethylaminoazobenzene	60-11-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Dimethoate	60-51-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Thionazin	297-97-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Methyl parathion	298-00-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Phorate	298-02-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Disulfoton	298-04-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Sulfotep	3689-24-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Famfur	52-85-7	LA-523-456	U	<5		ug/L	1	5	9	11/08/12
N-Nitrosodiphenylamin/Diphenyl	DPA+NNDPA	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12
Methapyrilene	91-80-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	11/08/12

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.

REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/08/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	11/09/12

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.
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PQL is equivalent to Estimated Quantitation Limit (EQL)
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REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
2-Hexanone	591-78-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Chloromethane	74-87-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Chloroethane	75-00-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Bromodichloromethane	75-27-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/09/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/09/12

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J - Analyte < PQL (or EQL) >= MDL.
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REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Trichlorofluoromethane	75-69-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Acetonitrile	75-05-8	LA-523-455	U	<2		ug/L	1	2	10	11/09/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/09/12
Isobutyl alcohol	78-83-1	LA-523-455	U	<200		ug/L	1	200	1.E3	11/09/12
Iodomethane	74-88-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,1,1,2-Tetrachloroethane	630-20-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,2,3-Trichloropropane	96-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,2-Dibromo-3-chloropropane	96-12-8	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,2-Dibromoethane	106-93-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Acrolein	107-02-8	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Acrylonitrile	107-13-1	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Allyl chloride	107-05-1	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Methylene bromide	74-95-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Dichlorodifluoromethane	75-71-8	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Ethyl methacrylate	97-63-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12

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TP Err = Total Propagated Error
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J - Analyte < PQL (or EQL) >= MDL.
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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)
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REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Methacrylonitrile	126-98-7	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Methyl methacrylate	80-62-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Trans-1,4-dichloro-2-butene	110-57-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Vinyl acetate	108-05-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Chloroprene	126-99-8	LA-523-455	U	<1		ug/L	1	1	5	11/09/12

MDL = Minimum Detection Limit
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TP Err = Total Propagated Error
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REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/08/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	11/09/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
DF = Dilution Factor
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D - Analyte was reported at a secondary dilution factor.
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REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
2-Hexanone	591-78-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Chloromethane	74-87-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Chloroethane	75-00-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Bromodichloromethane	75-27-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/09/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/09/12

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TP Err = Total Propagated Error
DF = Dilution Factor
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REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Trichlorofluoromethane	75-69-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Acetonitrile	75-05-8	LA-523-455	U	<2		ug/L	1	2	10	11/09/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/09/12
Isobutyl alcohol	78-83-1	LA-523-455	U	<200		ug/L	1	200	1.E3	11/09/12
Iodomethane	74-88-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,1,1,2-Tetrachloroethane	630-20-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,2,3-Trichloropropane	96-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,2-Dibromo-3-chloropropane	96-12-8	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
1,2-Dibromoethane	106-93-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Acrolein	107-02-8	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Acrylonitrile	107-13-1	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Allyl chloride	107-05-1	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Methylene bromide	74-95-3	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Dichlorodifluoromethane	75-71-8	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Ethyl methacrylate	97-63-2	LA-523-455	U	<1		ug/L	1	1	5	11/09/12

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

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D - Analyte was reported at a secondary dilution factor.
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J - Analyte < PQL (or EQL) >= MDL.
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X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)
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REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Methacrylonitrile	126-98-7	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Methyl methacrylate	80-62-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Trans-1,4-dichloro-2-butene	110-57-6	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Vinyl acetate	108-05-4	LA-523-455	U	<1		ug/L	1	1	5	11/09/12
Chloroprene	126-99-8	LA-523-455	U	<1		ug/L	1	1	5	11/09/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
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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.

REVISED121398 -

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121398

Sample # 121398003
SAF# W13-011
Sample ID B2MN99

Matrix WATER
Sampled 11/02/12
Received 11/02/12

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	D	879		ug/L	5	20	100	11/13/12
										11/05/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		93		mg/L	1	1	10	11/05/12

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.

REVISED121398 -

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121398

Sample # 121398004
SAF# W13-011
Sample ID B2MNB5

Matrix WATER
Sampled 11/02/12
Received 11/02/12

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		22.4		ug/L	1	4.0	20	11/13/12
										11/05/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		110		mg/L	1	1	10	11/05/12

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.

REVISED121398 -

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Analytical Batch 209719 (QC Batch: 209719)
Associated Samples 121398001, 121398002

Test Anions by Ion Chromatography (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #84375**							
Fluoride	16984-48-8		<0.023	ug/mL					U	11/02/12
Chloride	16887-00-6		<0.058	ug/mL					U	11/02/12
Nitrite-N	NO2-N		<0.019	ug/mL					U	11/02/12
Nitrate-N	NO3-N		<0.019	ug/mL					U	11/02/12
Sulfate	14808-79-8		<0.11	ug/mL					U	11/02/12
LCS			**QC Sample #84376**							
Fluoride	16984-48-8		0.930	ug/mL	93.9	90 - 110				11/02/12
Chloride	16887-00-6		1.89	ug/mL	95.6	90 - 110				11/02/12
Nitrite-N	NO2-N		0.953	ug/mL	97.4	90 - 110				11/02/12
Nitrate-N	NO3-N		0.798	ug/mL	90.1	90 - 110				11/02/12
Sulfate	14808-79-8		3.59	ug/mL	91.6	90 - 110				11/02/12
DUP			**QC Sample #84377**							
			Original 121400003							
Fluoride	16984-48-8		5.15	ug/mL			2.00	20	D	11/02/12
Chloride	16887-00-6		12.2	ug/mL			1.60	20	D	11/02/12
Nitrite-N	NO2-N		<0.038	ug/mL			0.00	20	UD	11/02/12
Nitrate-N	NO3-N		29.3	ug/mL			0.40	20	D	11/02/12

* - QC result out of range

n/a - Not Applicable

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Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Sulfate	14808-79-8		42.1	ug/mL			0.00	20	D	11/02/12
MS			**QC Sample #84378**							
			Original 121400003							
Fluoride	16984-48-8		1.12	ug/mL	112.1	80 - 120			D	11/02/12
Chloride	16887-00-6		1.60	ug/mL	79.8	80 - 120			DX	11/02/12
Nitrite-N	NO2-N		0.777	ug/mL	78.6	80 - 120			DN	11/02/12
Nitrate-N	NO3-N		0.337	ug/mL	37.7	80 - 120			DX	11/02/12
Sulfate	14808-79-8		1.13	ug/mL	28.6	80 - 120			DX	11/02/12
MSD			**QC Sample #84379**							
			Original 121400003					**Paired**	**84378**	
Fluoride	16984-48-8		1.18	ug/mL	117.5	80 - 120	0.90	20	D	11/02/12
Chloride	16887-00-6		2.27	ug/mL	113.4	80 - 120	4.80	20	DX	11/02/12
Nitrite-N	NO2-N		0.879	ug/mL	88.9	80 - 120	12.30	20	D	11/02/12
Nitrate-N	NO3-N		0.548	ug/mL	61.2	80 - 120	0.70	20	DX	11/02/12
Sulfate	14808-79-8		3.46	ug/mL	87.3	80 - 120	5.20	20	DX	11/02/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Analytical Batch 209843 (QC Batch: 209843)
Associated Samples 121398002

Test Anions by Ion Chromatography (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #84506**							
Nitrate-N	NO3-N		<0.019	ug/mL					U	11/05/12
LCS			**QC Sample #84507**							
Nitrate-N	NO3-N		0.918	ug/mL	103.6	90 - 110				11/05/12
DUP			**QC Sample #84508**							
			Original 121407001							
Nitrate-N	NO3-N		6.01	ug/mL			2.30	20	D	11/05/12
MS			**QC Sample #84509**							
			Original 121407001							
Nitrate-N	NO3-N		0.720	ug/mL	80.6	80 - 120			D	11/05/12
MSD			**QC Sample #84510**							
			Original 121407001					**Paired**	**84509**	
Nitrate-N	NO3-N		0.738	ug/mL	82.5	80 - 120	0.30	20	D	11/05/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Analytical Batch 209924 (QC Batch: 209922)
Associated Samples 121398003, 121398004

Test SW-846 8260B Volatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #84692**							
1,1-Dichloroethene	75-35-4		<1	ug/L					U	11/08/12
Trichloroethene	79-01-6		<1	ug/L					U	11/08/12
Benzene	71-43-2		<1	ug/L					U	11/08/12
Toluene	108-88-3		<1	ug/L					U	11/08/12
Chlorobenzene	108-90-7		<1	ug/L					U	11/08/12
1,1-Dichloroethane	75-34-3		<1	ug/L					U	11/08/12
Ethylbenzene	100-41-4		<1	ug/L					U	11/08/12
Styrene	100-42-5		<1	ug/L					U	11/08/12
cis-1,3-Dichloropropene	10061-01-5		<1	ug/L					U	11/08/12
trans-1,3-Dichloropropene	10061-02-6		<1	ug/L					U	11/08/12
1,2-Dichloroethane	107-06-2		<1	ug/L					U	11/08/12
Methyl isobutyl ketone	108-10-1		<1	ug/L					U	11/08/12
Dibromochloromethane	124-48-1		<1	ug/L					U	11/08/12
Tetrachloroethene	127-18-4		<1	ug/L					U	11/08/12
Total Xylenes	1330-20-7		<1	ug/L					U	11/08/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

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	11/08/12
Carbon tetrachloride	56-23-5		<1	ug/L				U	11/08/12
2-Hexanone	591-78-6		<1	ug/L				U	11/08/12
Acetone	67-64-1		<1	ug/L				U	11/08/12
Chloroform	67-66-3		<1	ug/L				U	11/08/12
1,1,1-Trichloroethane	71-55-6		<1	ug/L				U	11/08/12
Bromomethane	74-83-9		<1	ug/L				U	11/08/12
Chloromethane	74-87-3		<1	ug/L				U	11/08/12
Chloroethane	75-00-3		<1	ug/L				U	11/08/12
Vinyl chloride	75-01-4		<1	ug/L				U	11/08/12
Methylene chloride	75-09-2		<1	ug/L				U	11/08/12
Carbon disulfide	75-15-0		<1	ug/L				U	11/08/12
Bromoform	75-25-2		<1	ug/L				U	11/08/12
Bromodichloromethane	75-27-4		<1	ug/L				U	11/08/12
1,2-Dichloropropane	78-87-5		<1	ug/L				U	11/08/12
Methyl ethyl ketone	78-93-3		<1	ug/L				U	11/08/12
1,1,2-Trichloroethane	79-00-5		<1	ug/L				U	11/08/12
1,1,2,2-Tetrachloroethane	79-34-5		<1	ug/L				U	11/08/12
1-Butanol	71-36-3		<100	ug/L				U	11/08/12
Tetrahydrofuran	109-99-9		<2	ug/L				U	11/08/12
Trichlorofluoromethane	75-69-4		<1	ug/L				U	11/08/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

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	11/08/12
Acetonitrile	75-05-8		<2	ug/L					U	11/08/12
cis-1,2-Dichloroethene	156-59-2		<1	ug/L					U	11/08/12
Propionitrile	107-12-0		<2	ug/L					U	11/08/12
Isobutyl alcohol	78-83-1		<200	ug/L					U	11/08/12
Iodomethane	74-88-4		<1	ug/L					U	11/08/12
1,1,1,2-Tetrachloroethane	630-20-6		<1	ug/L					U	11/08/12
1,2,3-Trichloropropane	96-18-4		<1	ug/L					U	11/08/12
1,2-Dibromo-3-chloropropane	96-12-8		<1	ug/L					U	11/08/12
1,2-Dibromoethane	106-93-4		<1	ug/L					U	11/08/12
Acrolein	107-02-8		<1	ug/L					U	11/08/12
Acrylonitrile	107-13-1		<1	ug/L					U	11/08/12
Allyl chloride	107-05-1		<1	ug/L					U	11/08/12
Methylene bromide	74-95-3		<1	ug/L					U	11/08/12
Dichlorodifluoromethane	75-71-8		<1	ug/L					U	11/08/12
Ethyl methacrylate	97-63-2		<1	ug/L					U	11/08/12
Methacrylonitrile	126-98-7		<1	ug/L					U	11/08/12
Methyl methacrylate	80-62-6		<1	ug/L					U	11/08/12
Trans-1,4-dichloro-2-butene	110-57-6		<1	ug/L					U	11/08/12
Vinyl acetate	108-05-4		<1	ug/L					U	11/08/12

* - QC result out of range

n/a - Not Applicable

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chloroprene	126-99-8		<1	ug/L					U	11/08/12
LCS			**QC Sample #84693**							
1,1-Dichloroethene	75-35-4		22	ug/L	89.5	75 - 125				11/08/12
Trichloroethene	79-01-6		26	ug/L	103.4	75 - 125				11/08/12
Benzene	71-43-2		26	ug/L	105.2	75 - 125				11/08/12
Toluene	108-88-3		26	ug/L	105.4	75 - 125				11/08/12
Chlorobenzene	108-90-7		26	ug/L	103.3	75 - 125				11/08/12
1,1-Dichloroethane	75-34-3		25	ug/L	99.8	75 - 125				11/08/12
Ethylbenzene	100-41-4		27	ug/L	109.3	75 - 125				11/08/12
Styrene	100-42-5		28	ug/L	110	75 - 125				11/08/12
trans-1,3-Dichloropropene	10061-02-6		27	ug/L	109	75 - 125				11/08/12
1,2-Dichloroethane	107-06-2		26	ug/L	105.4	75 - 125				11/08/12
1,1,1-Trichloroethane	71-55-6		26	ug/L	102.4	75 - 125				11/08/12
Dibromochloromethane	124-48-1		26	ug/L	105.3	75 - 125				11/08/12
Carbon disulfide	75-15-0		21	ug/L	84.6	75 - 125				11/08/12
Bromoform	75-25-2		28	ug/L	110.2	75 - 125				11/08/12
Bromodichloromethane	75-27-4		27	ug/L	108	75 - 125				11/08/12
1,2-Dichloropropane	78-87-5		27	ug/L	107	75 - 125				11/08/12
1,1,2-Trichloroethane	79-00-5		26	ug/L	105.6	75 - 125				11/08/12
1,1,2,2-Tetrachloroethane	79-34-5		27	ug/L	107.3	75 - 125				11/08/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
trans-1,2-Dichloroethene	156-60-5		25	ug/L	100.6	75 - 125				11/08/12
cis-1,2-Dichloroethene	156-59-2		26	ug/L	103.6	75 - 125				11/08/12
MS			**QC Sample #84694**							
			Original 121397007							
1,1-Dichloroethene	75-35-4		22	ug/L	88	75 - 125				11/08/12
Trichloroethene	79-01-6		26	ug/L	104.5	75 - 125				11/08/12
Benzene	71-43-2		26	ug/L	103.9	75 - 125				11/08/12
Toluene	108-88-3		27	ug/L	106.8	75 - 125				11/08/12
Chlorobenzene	108-90-7		26	ug/L	103.7	75 - 125				11/08/12
1,1-Dichloroethane	75-34-3		25	ug/L	98.2	75 - 125				11/08/12
Ethylbenzene	100-41-4		27	ug/L	109.4	75 - 125				11/08/12
Styrene	100-42-5		28	ug/L	110.6	75 - 125				11/08/12
trans-1,3-Dichloropropene	10061-02-6		27	ug/L	108.6	75 - 125				11/08/12
1,2-Dichloroethane	107-06-2		26	ug/L	103.2	75 - 125				11/08/12
1,1,1-Trichloroethane	71-55-6		26	ug/L	102.3	75 - 125				11/08/12
Dibromochloromethane	124-48-1		26	ug/L	104.2	75 - 125				11/08/12
Carbon disulfide	75-15-0		20	ug/L	81.6	75 - 125				11/08/12
Bromoform	75-25-2		27	ug/L	107.5	75 - 125				11/08/12
Bromodichloromethane	75-27-4		27	ug/L	108.6	75 - 125				11/08/12
1,2-Dichloropropane	78-87-5		27	ug/L	107	75 - 125				11/08/12
1,1,2-Trichloroethane	79-00-5		26	ug/L	104.6	75 - 125				11/08/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

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	104.8	75 - 125				11/08/12
trans-1,2-Dichloroethene	156-60-5		25	ug/L	99	75 - 125				11/08/12
cis-1,2-Dichloroethene	156-59-2		25	ug/L	101.2	75 - 125				11/08/12
MSD			**QC Sample #84695**							
			Original	**121397007**					**Paired** **84694**	
1,1-Dichloroethene	75-35-4		22	ug/L	89.9	75 - 125	2.20	20		11/08/12
Trichloroethene	79-01-6		26	ug/L	104.3	75 - 125	0.20	20		11/08/12
Benzene	71-43-2		26	ug/L	105.3	75 - 125	1.30	20		11/08/12
Toluene	108-88-3		27	ug/L	107.7	75 - 125	0.80	20		11/08/12
Chlorobenzene	108-90-7		26	ug/L	104	75 - 125	0.30	20		11/08/12
1,1-Dichloroethane	75-34-3		25	ug/L	100.7	75 - 125	2.50	20		11/08/12
Ethylbenzene	100-41-4		28	ug/L	110.8	75 - 125	1.20	20		11/08/12
Styrene	100-42-5		27	ug/L	109.6	75 - 125	0.90	20		11/08/12
trans-1,3-Dichloropropene	10061-02-6		27	ug/L	107	75 - 125	1.50	20		11/08/12
1,2-Dichloroethane	107-06-2		26	ug/L	102.3	75 - 125	0.80	20		11/08/12
1,1,1-Trichloroethane	71-55-6		26	ug/L	103	75 - 125	0.70	20		11/08/12
Dibromochloromethane	124-48-1		26	ug/L	104.2	75 - 125	0.00	20		11/08/12
Carbon disulfide	75-15-0		21	ug/L	82.7	75 - 125	1.40	20		11/08/12
Bromoform	75-25-2		26	ug/L	104.2	75 - 125	3.20	20		11/08/12
Bromodichloromethane	75-27-4		27	ug/L	107.8	75 - 125	0.70	20		11/08/12
1,2-Dichloropropane	78-87-5		26	ug/L	105.9	75 - 125	1.00	20		11/08/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,1,2-Trichloroethane	79-00-5		26	ug/L	104.1	75 - 125	0.50	20		11/08/12
1,1,2,2-Tetrachloroethane	79-34-5		26	ug/L	103.3	75 - 125	1.50	20		11/08/12
trans-1,2-Dichloroethene	156-60-5		25	ug/L	99.8	75 - 125	0.80	20		11/08/12
cis-1,2-Dichloroethene	156-59-2		26	ug/L	103.7	75 - 125	2.40	20		11/08/12

* - QC result out of range

n/a - Not Applicable

REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analytical Batch 210019 (QC Batch: 209856)
Associated Samples 121398003, 121398004

Test SW-846 8270D Semivolatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #84531**							
4-Nitrophenol	100-02-7		<1	ug/L					U	11/08/12
1,2,4-Trichlorobenzene	120-82-1		<1	ug/L					U	11/08/12
2,4-Dinitrotoluene	121-14-2		<1	ug/L					U	11/08/12
1,4-Dichlorobenzene	106-46-7		<1	ug/L					U	11/08/12
Phenol	108-95-2		<1	ug/L					U	11/08/12
Pyrene	129-00-0		<1	ug/L					U	11/08/12
4-Chloro-3-methylphenol	59-50-7		<1	ug/L					U	11/08/12
n-Nitroso-di-n-propylamine	621-64-7		<1	ug/L					U	11/08/12
Acenaphthene	83-32-9		<1	ug/L					U	11/08/12
Pentachlorophenol	87-86-5		<1	ug/L					U	11/08/12
2-Chlorophenol	95-57-8		<1	ug/L					U	11/08/12
4-Nitroaniline	100-01-6		<1	ug/L					U	11/08/12
4-Bromophenyl-phenylether	101-55-3		<1	ug/L					U	11/08/12
2,4-Dimethylphenol	105-67-9		<2	ug/L					U	11/08/12
4-Chloroaniline	106-47-8		<1	ug/L					U	11/08/12

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

REVISED121398 -

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

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

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

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	11/08/12
4,6-Dinitro-2-methylphenol	534-52-1		<1	ug/L					U	11/08/12
1,3-Dichlorobenzene	541-73-1		<1	ug/L					U	11/08/12
Benzo(a)anthracene	56-55-3		<1	ug/L					U	11/08/12
2,6-Dinitrotoluene	606-20-2		<1	ug/L					U	11/08/12
4-Chlorophenyl-phenylether	7005-72-3		<1	ug/L					U	11/08/12
Hexachlorocyclopentadiene	77-47-4		<1	ug/L					U	11/08/12
Isophorone	78-59-1		<1	ug/L					U	11/08/12
Diethyl phthalate	84-66-2		<1	ug/L					U	11/08/12
Di-n-butylphthalate	84-74-2		<1	ug/L					U	11/08/12
Phenanthrene	85-01-8		<1	ug/L					U	11/08/12
Butylbenzylphthalate	85-68-7		<1	ug/L					U	11/08/12
Fluorene	86-73-7		<1	ug/L					U	11/08/12
Carbazole	86-74-8		<1	ug/L					U	11/08/12
Hexachlorobutadiene	87-68-3		<1	ug/L					U	11/08/12
2-Nitroaniline	88-74-4		<1	ug/L					U	11/08/12
2-Nitrophenol	88-75-5		<1	ug/L					U	11/08/12
Naphthalene	91-20-3		<1	ug/L					U	11/08/12
2-Methylnaphthalene	91-57-6		<1	ug/L					U	11/08/12
2-Chloronaphthalene	91-58-7		<1	ug/L					U	11/08/12
3,3-Dichlorobenzidine	91-94-1		<1	ug/L					U	11/08/12

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

REVISED121398 -

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
2-Methylphenol	95-48-7		<1	ug/L					U	11/08/12
1,2-Dichlorobenzene	95-50-1		<1	ug/L					U	11/08/12
2,4,5-Trichlorophenol	95-95-4		<1	ug/L					U	11/08/12
Nitrobenzene	98-95-3		<1	ug/L					U	11/08/12
3-Nitroaniline	99-09-2		<1	ug/L					U	11/08/12
3 & 4 Methylphenol, Total	65794-96-9		<1	ug/L					U	11/08/12
Hexachloroethane	67-72-1		<1	ug/L					U	11/08/12
2,4,6-Trichlorophenol	88-06-2		<1	ug/L					U	11/08/12
Benzyl alcohol	100-51-6		<1	ug/L					U	11/08/12
Tributyl phosphate	126-73-8		<1	ug/L					U	11/08/12
2-Naphthylamine	91-59-8		<2	ug/L					U	11/08/12
Pyridine	110-86-1		<1	ug/L					U	11/08/12
n-Nitrosopiperidine	100-75-4		<1	ug/L					U	11/08/12
n-Nitrosomethylethylamine	10595-95-6		<1	ug/L					U	11/08/12
p-Phenylenediamine	106-50-3		<1	ug/L					U	11/08/12
2-Picoline	109-06-8		<1	ug/L					U	11/08/12
3,3-Dimethylbenzidine	119-93-7		<4	ug/L					U	11/08/12
Isosafrole	120-58-1		<1	ug/L					U	11/08/12
Phentermine	122-09-8		<5	ug/L					U	11/08/12
1,4-Dioxane	123-91-1		<1	ug/L					U	11/08/12
1,4-Naphthoquinone	130-15-4		<1	ug/L					U	11/08/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
1-Naphthylamine	134-32-7		<2	ug/L				U	11/08/12
Aramite	140-57-8		<1	ug/L				U	11/08/12
Kepone	143-50-0		<1	ug/L				U	11/08/12
Hexachloropropene	1888-71-7		<1	ug/L				U	11/08/12
Diallate	2303-16-4		<1	ug/L				U	11/08/12
Pronamide	23950-58-5		<1	ug/L				U	11/08/12
Isodrin	465-73-6		<1	ug/L				U	11/08/12
Chlorobenzilate	510-15-6		<1	ug/L				U	11/08/12
2-Acetylaminofluorene	53-96-3		<1	ug/L				U	11/08/12
n-Nitrosodiethylamine	55-18-5		<1	ug/L				U	11/08/12
3-Methylcholanthrene	56-49-5		<1	ug/L				U	11/08/12
4-Nitroquinoline-1-oxide	56-57-5		<1	ug/L				U	11/08/12
7,12-Dimethylbenz(a)anthracene	57-97-6		<1	ug/L				U	11/08/12
2,3,4,6-Tetrachlorophenol	58-90-2		<1	ug/L				U	11/08/12
n-Nitrosomorpholine	59-89-2		<1	ug/L				U	11/08/12
Pentachlorobenzene	608-93-5		<1	ug/L				U	11/08/12
Phenacetin	62-44-2		<1	ug/L				U	11/08/12
Ethyl methanesulfonate	62-50-0		<1	ug/L				U	11/08/12
Aniline	62-53-3		<1	ug/L				U	11/08/12
n-Nitrosodimethylamine	62-75-9		<1	ug/L				U	11/08/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Methyl methanesulfonate	66-27-3		<1	ug/L					U	11/08/12
Pentachloroethane	76-01-7		<1	ug/L					U	11/08/12
Pentachloronitrobenzene	82-68-8		<2	ug/L					U	11/08/12
2,6-Dichlorophenol	87-65-0		<1	ug/L					U	11/08/12
Dinoseb(..dinitromethylphenol)	88-85-7		<1	ug/L					U	11/08/12
4-Aminobiphenyl	92-67-1		<2	ug/L					U	11/08/12
n-Nitrosodibutylamine	924-16-3		<1	ug/L					U	11/08/12
n-Nitrosopyrolidine	930-55-2		<1	ug/L					U	11/08/12
Safrole	94-59-7		<1	ug/L					U	11/08/12
o-Toluidine	95-53-4		<1	ug/L					U	11/08/12
1,2,4,5-Tetrachlorobenzene	95-94-3		<1	ug/L					U	11/08/12
Acetophenone	98-86-2		<1	ug/L					U	11/08/12
1,3,5-Trinitrobenzene	99-35-4		<1	ug/L					U	11/08/12
2-Methyl-5-nitroaniline	99-55-8		<1	ug/L					U	11/08/12
1,3-Dinitrobenzene	99-65-0		<1	ug/L					U	11/08/12
O,O,O-Triethylthiophosphate	126-68-1		<1	ug/L					U	11/08/12
Parathion	56-38-2		<1	ug/L					U	11/08/12
Dimethylaminoazobenzene	60-11-7		<1	ug/L					U	11/08/12
Dimethoate	60-51-5		<1	ug/L					U	11/08/12
Thionazin	297-97-2		<1	ug/L					U	11/08/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Methyl parathion	298-00-0		<1	ug/L					U	11/08/12
Phorate	298-02-2		<1	ug/L					U	11/08/12
Disulfoton	298-04-4		<1	ug/L					U	11/08/12
Sulfotep	3689-24-5		<1	ug/L					U	11/08/12
Famfur	52-85-7		<5	ug/L					U	11/08/12
N-Nitrosodiphenylamin/ Diphenyl	DPA+NNDPA		<1	ug/L					U	11/08/12
Methapyrilene	91-80-5		<1	ug/L					U	11/08/12
LCS			**QC Sample #84532**							
4-Nitrophenol	100-02-7		12	ug/L	39.3	5 - 88				11/08/12
1,2,4-Trichlorobenzene	120-82-1		18	ug/L	60.5	50 - 105				11/08/12
Phenol	108-95-2		12	ug/L	40.2	18 - 89				11/08/12
1,4-Dichlorobenzene	106-46-7		12	ug/L	60.3	47 - 115				11/08/12
2,4-Dinitrotoluene	121-14-2		20	ug/L	68	59 - 110				11/08/12
Pyrene	129-00-0		23	ug/L	75.5	64 - 116				11/08/12
4-Chloro-3-methylphenol	59-50-7		22	ug/L	72	62 - 109				11/08/12
n-Nitroso-di-n-propylamine	621-64-7		19	ug/L	63.5	61 - 110				11/08/12
Acenaphthene	83-32-9		19	ug/L	64.2	59 - 113				11/08/12
Pentachlorophenol	87-86-5		20	ug/L	67.2	17 - 125				11/08/12
2-Chlorophenol	95-57-8		19	ug/L	63.7	55 - 109				11/08/12
1,4-Dioxane	123-91-1		19	ug/L	63.3	42 - 99				11/08/12

* - QC result out of range

n/a - Not Applicable

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
n-Nitrosodimethylamine	62-75-9		22	ug/L	71.8	40 - 103				11/08/12
Benzyl alcohol	100-51-6		22	ug/L	72.6	58 - 108				11/08/12
2-Methylphenol	95-48-7		19	ug/L	63.7	59 - 107				11/08/12
Hexachloroethane	67-72-1		16	ug/L	53.3	43 - 105				11/08/12
2-Nitrophenol	88-75-5		19	ug/L	63	48 - 113				11/08/12
2,4-Dimethylphenol	105-67-9		19	ug/L	63.2	58 - 113				11/08/12
2,4-Dichlorophenol	120-83-2		19	ug/L	63.6	52 - 110				11/08/12
Anthracene	120-12-7		20	ug/L	68	67 - 113				11/08/12
Naphthalene	91-20-3		18	ug/L	60.8	55 - 110				11/08/12
2-Nitroaniline	88-74-4		22	ug/L	74.8	57 - 114				11/08/12
Dibenzofuran	132-64-9		20	ug/L	66.7	61 - 113				11/08/12
Fluorene	86-73-7		20	ug/L	66.4	64 - 115				11/08/12
Tributyl phosphate	126-73-8		22	ug/L	72.4	65 - 108				11/08/12
Hexachlorobenzene	118-74-1		20	ug/L	67.2	60 - 117				11/08/12
Dimethoate	60-51-5		12	ug/L	77.6	64 - 108				11/08/12
Carbazole	86-74-8		22	ug/L	73.7	35 - 129				11/08/12
Di-n-butylphthalate	84-74-2		23	ug/L	75.6	70 - 116				11/08/12
3,3-Dichlorobenzidine	91-94-1		14	ug/L	46.2	16 - 117				11/08/12
Bis-(2-Ethylhexyl)phthalate	117-81-7		24	ug/L	79.4	64 - 133				11/08/12
Di-n-octylphthalate	117-84-0		25	ug/L	81.7	57 - 134				11/08/12
Benzo(a)pyrene	50-32-8		21	ug/L	71.2	63 - 115				11/08/12
2-Picoline	109-06-8		22	ug/L	73.6	59 - 102				11/08/12

* - QC result out of range

n/a - Not Applicable

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Bis(1-Chloro-2-propyl)ether	108-60-1		18	ug/L	58.4	58 - 111				11/08/12
4-Chloroaniline	106-47-8		25	ug/L	82.6	43 - 125				11/08/12
MS			**QC Sample #84533**							
			Original 121398003							
4-Nitrophenol	100-02-7	<0.9	10	ug/L	36	15 - 57				11/08/12
1,2,4-Trichlorobenzene	120-82-1	<0.9	22	ug/L	77.3	51 - 104				11/08/12
Phenol	108-95-2	<0.9	11	ug/L	39.6	24 - 65				11/08/12
1,4-Dichlorobenzene	106-46-7	<0.9	15	ug/L	78.3	52 - 114				11/08/12
2,4-Dinitrotoluene	121-14-2	<0.9	22	ug/L	78.4	57 - 112				11/08/12
Pyrene	129-00-0	<0.9	21	ug/L	75.3	58 - 119				11/08/12
4-Chloro-3-methylphenol	59-50-7	<0.9	22	ug/L	77.2	56 - 115				11/08/12
n-Nitroso-di-n-propylamine	621-64-7	<0.9	21	ug/L	72.6	60 - 112				11/08/12
Acenaphthene	83-32-9	<0.9	22	ug/L	78	60 - 113				11/08/12
Pentachlorophenol	87-86-5	<0.9	23	ug/L	79.6	32 - 127				11/08/12
2-Chlorophenol	95-57-8	<0.9	21	ug/L	75.1	52 - 113				11/08/12
1,4-Dioxane	123-91-1	<0.9	20	ug/L	70.6	39 - 93				11/08/12
n-Nitrosodimethylamine	62-75-9	<0.9	21	ug/L	74.7	41 - 92				11/08/12
Benzyl alcohol	100-51-6	<0.9	21	ug/L	73.8	56 - 107				11/08/12
2-Methylphenol	95-48-7	<0.9	20	ug/L	72.2	46 - 114				11/08/12
Hexachloroethane	67-72-1	<0.9	20	ug/L	70.5	48 - 102				11/08/12
2-Nitrophenol	88-75-5	<0.9	22	ug/L	77.2	51 - 114				11/08/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
2,4-Dimethylphenol	105-67-9	<1	23	ug/L	80.2	46 - 124				11/08/12
2,4-Dichlorophenol	120-83-2	<0.9	22	ug/L	77	50 - 114				11/08/12
Anthracene	120-12-7	<0.9	22	ug/L	79.2	64 - 116				11/08/12
Naphthalene	91-20-3	<0.9	22	ug/L	77.3	57 - 110				11/08/12
2-Nitroaniline	88-74-4	<0.9	24	ug/L	83.3	60 - 114				11/08/12
Dibenzofuran	132-64-9	<0.9	23	ug/L	80.8	61 - 114				11/08/12
Fluorene	86-73-7	<0.9	23	ug/L	81.1	63 - 116				11/08/12
Tributyl phosphate	126-73-8	<0.9	22	ug/L	77.7	59 - 113				11/08/12
Hexachlorobenzene	118-74-1	<0.9	22	ug/L	77.2	58 - 119				11/08/12
Dimethoate	60-51-5	<0.9	12	ug/L	85.8	53 - 119				11/08/12
Carbazole	86-74-8	<0.9	25	ug/L	88.9	41 - 122				11/08/12
Di-n-butylphthalate	84-74-2	<0.9	25	ug/L	87.4	67 - 118				11/08/12
3,3-Dichlorobenzidine	91-94-1	<0.9	19	ug/L	68.2	16 - 121				11/08/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	<0.9	24	ug/L	86.1	64 - 134				11/08/12
Di-n-octylphthalate	117-84-0	<0.9	24	ug/L	84.7	40 - 143				11/08/12
Benzo(a)pyrene	50-32-8	<0.9	24	ug/L	83.7	61 - 117				11/08/12
2-Picoline	109-06-8	<0.9	24	ug/L	86.1	50 - 104				11/08/12
Bis(1-Chloro-2-propyl)ether	108-60-1	<0.9	20	ug/L	69.5	58 - 112				11/08/12
4-Chloroaniline	106-47-8	<0.9	25	ug/L	87.4	43 - 118				11/08/12
MSD			**QC Sample #84534**							
			Original 121398003					**Paired**	**84533**	
4-Nitrophenol	100-02-7	<0.9	11	ug/L	39.9	15 - 57	10.40	20		11/08/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,2,4-Trichlorobenzene	120-82-1	<0.9	21	ug/L	75	51 - 104	3.00	20		11/08/12
Phenol	108-95-2	<0.9	11	ug/L	39.5	24 - 65	0.30	20		11/08/12
1,4-Dichlorobenzene	106-46-7	<0.9	14	ug/L	72.3	52 - 114	8.10	20		11/08/12
2,4-Dinitrotoluene	121-14-2	<0.9	23	ug/L	80	57 - 112	2.10	20		11/08/12
Pyrene	129-00-0	<0.9	22	ug/L	76.8	58 - 119	2.00	20		11/08/12
4-Chloro-3-methylphenol	59-50-7	<0.9	23	ug/L	79.6	56 - 115	3.10	20		11/08/12
n-Nitroso-di-n-propylamine	621-64-7	<0.9	21	ug/L	74.8	60 - 112	3.00	20		11/08/12
Acenaphthene	83-32-9	<0.9	22	ug/L	79.2	60 - 113	1.50	20		11/08/12
Pentachlorophenol	87-86-5	<0.9	22	ug/L	77.1	32 - 127	3.20	20		11/08/12
2-Chlorophenol	95-57-8	<0.9	21	ug/L	74	52 - 113	1.50	20		11/08/12
1,4-Dioxane	123-91-1	<0.9	19	ug/L	66.7	39 - 93	5.60	20		11/08/12
n-Nitrosodimethylamine	62-75-9	<0.9	21	ug/L	72.9	41 - 92	2.50	20		11/08/12
Benzyl alcohol	100-51-6	<0.9	21	ug/L	75.7	56 - 107	2.50	20		11/08/12
2-Methylphenol	95-48-7	<0.9	20	ug/L	72.3	46 - 114	0.10	20		11/08/12
Hexachloroethane	67-72-1	<0.9	19	ug/L	66.2	48 - 102	6.30	20		11/08/12
2-Nitrophenol	88-75-5	<0.9	22	ug/L	76.8	51 - 114	0.50	20		11/08/12
2,4-Dimethylphenol	105-67-9	<1	23	ug/L	82.2	46 - 124	2.50	20		11/08/12
2,4-Dichlorophenol	120-83-2	<0.9	21	ug/L	74.4	50 - 114	3.40	20		11/08/12
Anthracene	120-12-7	<0.9	23	ug/L	80.9	64 - 116	2.10	20		11/08/12
Naphthalene	91-20-3	<0.9	21	ug/L	75.4	57 - 110	2.50	20		11/08/12
2-Nitroaniline	88-74-4	<0.9	25	ug/L	88.5	60 - 114	6.10	20		11/08/12

* - QC result out of range

n/a - Not Applicable

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Dibenzofuran	132-64-9	<0.9	23	ug/L	80.8	61 - 114	0.00	20		11/08/12
Fluorene	86-73-7	<0.9	23	ug/L	80.8	63 - 116	0.30	20		11/08/12
Tributyl phosphate	126-73-8	<0.9	23	ug/L	80.2	59 - 113	3.20	20		11/08/12
Hexachlorobenzene	118-74-1	<0.9	23	ug/L	79.6	58 - 119	3.00	20		11/08/12
Dimethoate	60-51-5	<0.9	13	ug/L	88.7	53 - 119	3.30	20		11/08/12
Carbazole	86-74-8	<0.9	26	ug/L	92.3	41 - 122	3.60	20		11/08/12
Di-n-butylphthalate	84-74-2	<0.9	25	ug/L	87.8	67 - 118	0.50	20		11/08/12
3,3-Dichlorobenzidine	91-94-1	<0.9	21	ug/L	72.5	16 - 121	6.10	20		11/08/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	<0.9	25	ug/L	89.6	64 - 134	4.00	20		11/08/12
Di-n-octylphthalate	117-84-0	<0.9	24	ug/L	85.7	40 - 143	1.20	20		11/08/12
Benzo(a)pyrene	50-32-8	<0.9	24	ug/L	84.9	61 - 117	1.40	20		11/08/12
2-Picoline	109-06-8	<0.9	23	ug/L	81.2	50 - 104	5.90	20		11/08/12
Bis(1-Chloro-2-propyl)ether	108-60-1	<0.9	20	ug/L	70	58 - 112	0.60	20		11/08/12
4-Chloroaniline	106-47-8	<0.9	26	ug/L	90.2	43 - 118	3.20	20		11/08/12

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

REVISED121398 -

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121398

Analytical Batch 210119 (QC Batch: 210119)
Associated Samples 121398003, 121398004

Test Total Alkalinity as mg/L CaCO3 (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #84814**							
Total Alkalinity as CaCO3	ALKALINITY		97	mg/L	97.3	80 - 120				11/05/12
DUP			**QC Sample #84815**							
			Original 121387007							
Total Alkalinity as CaCO3	ALKALINITY		180	mg/L			1.10	20		11/05/12
LCS			**QC Sample #84816**							
Total Alkalinity as CaCO3	ALKALINITY		98	mg/L	97.8	80 - 120				11/05/12
LCS			**QC Sample #84817**							
Total Alkalinity as CaCO3	ALKALINITY		97	mg/L	97.4	80 - 120				11/05/12

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

REVISED121398 -

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Analytical Batch 210221 (QC Batch: 209855)
Associated Samples 121398003, 121398004, 121398005, 121398006

Test ICP-6010 - All possible metals

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #84526**							
Iron	7439-89-6		<19	ug/L					U	11/13/12
Magnesium	7439-95-4		<4.0	ug/L					U	11/13/12
Manganese	7439-96-5		<4.0	ug/L					U	11/13/12
Nickel	7440-02-0		<4.0	ug/L					U	11/13/12
Potassium	7440-09-7		<76	ug/L					U	11/13/12
Silver	7440-22-4		<4.0	ug/L					U	11/13/12
Sodium	7440-23-5		<10	ug/L					U	11/13/12
Antimony	7440-36-0		<36	ug/L					U	11/13/12
Barium	7440-39-3		<4.0	ug/L					U	11/13/12
Cadmium	7440-43-9		<4.0	ug/L					U	11/13/12
Chromium	7440-47-3		<5.0	ug/L					U	11/13/12
Cobalt	7440-48-4		<4.0	ug/L					U	11/13/12
Copper	7440-50-8		<4.0	ug/L					U	11/13/12
Vanadium	7440-62-2		<5.0	ug/L					U	11/13/12
Zinc	7440-66-6		<5.0	ug/L					U	11/13/12
Calcium	7440-70-2		<49	ug/L					U	11/13/12
Strontium	7440-24-6		<9.0	ug/L					U	11/13/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Beryllium	7440-41-7		<4.0	ug/L					U	11/13/12
LCS			**QC Sample #84528**							
Iron	7439-89-6		992	ug/L	99.2	80 - 120				11/13/12
Magnesium	7439-95-4		10400	ug/L	103.5	80 - 120				11/13/12
Manganese	7439-96-5		1010	ug/L	101.2	80 - 120				11/13/12
Nickel	7440-02-0		975	ug/L	97.5	80 - 120				11/13/12
Potassium	7440-09-7		11200	ug/L	111.7	80 - 120				11/13/12
Silver	7440-22-4		1020	ug/L	101.8	80 - 120				11/13/12
Sodium	7440-23-5		10900	ug/L	108.7	80 - 120				11/13/12
Antimony	7440-36-0		1020	ug/L	102.1	80 - 120				11/13/12
Barium	7440-39-3		1040	ug/L	104.1	80 - 120				11/13/12
Cadmium	7440-43-9		1000	ug/L	100.3	80 - 120				11/13/12
Chromium	7440-47-3		997	ug/L	99.7	80 - 120				11/13/12
Cobalt	7440-48-4		980	ug/L	98	80 - 120				11/13/12
Copper	7440-50-8		1030	ug/L	103	80 - 120				11/13/12
Vanadium	7440-62-2		998	ug/L	99.8	80 - 120				11/13/12
Zinc	7440-66-6		1030	ug/L	102.9	80 - 120				11/13/12
Calcium	7440-70-2		20000	ug/L	100.2	80 - 120				11/13/12
Strontium	7440-24-6		960	ug/L	96	80 - 120				11/13/12
Beryllium	7440-41-7		1010	ug/L	101.1	80 - 120				11/13/12
MS			**QC Sample #84529**							
			Original 121411002							
Iron	7439-89-6		976	ug/L	97.6	75 - 125				11/13/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Magnesium	7439-95-4		10200	ug/L	101.5	75 - 125				11/13/12
Manganese	7439-96-5		998	ug/L	99.8	75 - 125				11/13/12
Nickel	7440-02-0		960	ug/L	96	75 - 125				11/13/12
Potassium	7440-09-7		11000	ug/L	109.7	75 - 125				11/13/12
Silver	7440-22-4		1010	ug/L	100.8	75 - 125				11/13/12
Sodium	7440-23-5		10700	ug/L	106.9	75 - 125				11/13/12
Antimony	7440-36-0		1000	ug/L	100.4	75 - 125				11/13/12
Barium	7440-39-3		1020	ug/L	101.9	75 - 125				11/13/12
Cadmium	7440-43-9		986	ug/L	98.6	75 - 125				11/13/12
Chromium	7440-47-3		982	ug/L	98.2	75 - 125				11/13/12
Cobalt	7440-48-4		966	ug/L	96.6	75 - 125				11/13/12
Copper	7440-50-8		1000	ug/L	100.5	75 - 125				11/13/12
Vanadium	7440-62-2		980	ug/L	98	75 - 125				11/13/12
Zinc	7440-66-6		1010	ug/L	101.3	75 - 125				11/13/12
Calcium	7440-70-2		19800	ug/L	98.9	75 - 125				11/13/12
Strontium	7440-24-6		940	ug/L	94	75 - 125				11/13/12
Beryllium	7440-41-7		993	ug/L	99.3	75 - 125				11/13/12
MSD			**QC Sample #84530**							
			Original 121411002						**Paired 84529**	
Iron	7439-89-6		1020	ug/L	101.7	75 - 125	4.10	20		11/13/12
Magnesium	7439-95-4		10600	ug/L	105.7	75 - 125	4.10	20		11/13/12
Manganese	7439-96-5		1030	ug/L	103.4	75 - 125	3.60	20		11/13/12
Nickel	7440-02-0		1000	ug/L	100.2	75 - 125	4.30	20		11/13/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7		11400	ug/L	113.8	75 - 125	3.70	20		11/13/12
Silver	7440-22-4		1040	ug/L	104.2	75 - 125	3.30	20		11/13/12
Sodium	7440-23-5		11000	ug/L	110.5	75 - 125	3.30	20		11/13/12
Antimony	7440-36-0		1030	ug/L	103.2	75 - 125	2.80	20		11/13/12
Barium	7440-39-3		1060	ug/L	106.2	75 - 125	4.10	20		11/13/12
Cadmium	7440-43-9		1020	ug/L	102.2	75 - 125	3.60	20		11/13/12
Chromium	7440-47-3		1020	ug/L	102.1	75 - 125	3.80	20		11/13/12
Cobalt	7440-48-4		1000	ug/L	100.2	75 - 125	3.60	20		11/13/12
Copper	7440-50-8		1050	ug/L	105	75 - 125	4.40	20		11/13/12
Vanadium	7440-62-2		1020	ug/L	101.7	75 - 125	3.70	20		11/13/12
Zinc	7440-66-6		1050	ug/L	104.9	75 - 125	3.50	20		11/13/12
Calcium	7440-70-2		20500	ug/L	102.5	75 - 125	3.60	20		11/13/12
Strontium	7440-24-6		985	ug/L	98.5	75 - 125	4.60	20		11/13/12
Beryllium	7440-41-7		1030	ug/L	103.1	75 - 125	3.80	20		11/13/12

* - QC result out of range

n/a - Not Applicable

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Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Analytical Batch 210224 (QC Batch: 210220)
Associated Samples 121398003

Test ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #84854**							
Antimony	7440-36-0		<0.30	ug/L					U	11/13/12
Lead	7439-92-1		<0.050	ug/L					U	11/13/12
Mercury	7439-97-6		<0.050	ug/L					U	11/13/12
Thallium	7440-28-0		<0.050	ug/L					U	11/13/12
Tin	7440-31-5		<0.050	ug/L					U	11/13/12
Arsenic	7440-38-2		<0.20	ug/L					U	11/13/12
Selenium	7782-49-2		<1.0	ug/L					U	11/13/12
LCS			**QC Sample #84855**							
Antimony	7440-36-0		41.1	ug/L	102.8	85 - 115				11/13/12
Lead	7439-92-1		42.6	ug/L	106.6	85 - 115				11/13/12
Mercury	7439-97-6		1.98	ug/L	99.2	85 - 115				11/13/12
Thallium	7440-28-0		42.5	ug/L	106.2	85 - 115				11/13/12
Tin	7440-31-5		40.8	ug/L	102.1	85 - 115				11/13/12
Arsenic	7440-38-2		38.8	ug/L	96.9	85 - 115				11/13/12
Selenium	7782-49-2		36.9	ug/L	92.2	85 - 115				11/13/12
MS			**QC Sample #84856**							
			Original 121370001							

* - QC result out of range

n/a - Not Applicable

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Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Antimony	7440-36-0		41.6	ug/L	104	70 - 130				11/13/12
Lead	7439-92-1		43.2	ug/L	108.1	70 - 130				11/13/12
Mercury	7439-97-6		2.09	ug/L	104.6	70 - 130				11/13/12
Thallium	7440-28-0		43.8	ug/L	109.6	70 - 130				11/13/12
Tin	7440-31-5		41.2	ug/L	103	70 - 130				11/13/12
Arsenic	7440-38-2		39.7	ug/L	99.2	70 - 130				11/13/12
Selenium	7782-49-2		38.1	ug/L	95.3	70 - 130				11/13/12
MSD			**QC Sample #84857**							
			Original	**121370001**					**Paired**	**84856**
Antimony	7440-36-0		42.1	ug/L	105.2	70 - 130	1.20	20		11/13/12
Lead	7439-92-1		44.5	ug/L	111.2	70 - 130	2.80	20		11/13/12
Mercury	7439-97-6		2.15	ug/L	107.4	70 - 130	2.60	20		11/13/12
Thallium	7440-28-0		45.3	ug/L	113.3	70 - 130	3.30	20		11/13/12
Tin	7440-31-5		41.6	ug/L	104	70 - 130	1.00	20		11/13/12
Arsenic	7440-38-2		40.2	ug/L	100.6	70 - 130	1.20	20		11/13/12
Selenium	7782-49-2		38.5	ug/L	96.2	70 - 130	1.00	20		11/13/12

* - QC result out of range

n/a - Not Applicable

REVISED121398 -

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121398

Analytical Batch 210349 (QC Batch: 210348)
Associated Samples 121398003, 121398004

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

REVISED121398 -

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Analytical Batch 210756 (QC Batch: 210723)
Associated Samples 121398004, 121398005, 121398006

Test ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85396**							
Antimony	7440-36-0		<0.30	ug/L					U	11/27/12
Lead	7439-92-1		<0.050	ug/L					U	11/27/12
Mercury	7439-97-6		<0.050	ug/L					U	11/27/12
Thallium	7440-28-0		<0.050	ug/L					U	11/27/12
Tin	7440-31-5		<0.050	ug/L					U	11/27/12
Arsenic	7440-38-2		<0.20	ug/L					U	11/27/12
Selenium	7782-49-2		<1.0	ug/L					U	11/27/12
LCS			**QC Sample #85397**							
Antimony	7440-36-0		40.2	ug/L	100.6	85 - 115				11/27/12
Lead	7439-92-1		41.9	ug/L	104.7	85 - 115				11/27/12
Mercury	7439-97-6		1.97	ug/L	98.3	85 - 115				11/27/12
Thallium	7440-28-0		41.6	ug/L	103.9	85 - 115				11/27/12
Tin	7440-31-5		40.7	ug/L	101.8	85 - 115				11/27/12
Arsenic	7440-38-2		39.2	ug/L	98	85 - 115				11/27/12
Selenium	7782-49-2		36.5	ug/L	91.3	85 - 115				11/27/12
MS			**QC Sample #85398**							
			Original 121489001							

* - QC result out of range

n/a - Not Applicable

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Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Antimony	7440-36-0		40.6	ug/L	101.6	70 - 130				11/27/12
Lead	7439-92-1		42.3	ug/L	105.7	70 - 130				11/27/12
Mercury	7439-97-6		2.14	ug/L	106.8	70 - 130				11/27/12
Thallium	7440-28-0		42.2	ug/L	105.5	70 - 130				11/27/12
Tin	7440-31-5		41.1	ug/L	102.8	70 - 130				11/27/12
Arsenic	7440-38-2		39.4	ug/L	98.4	70 - 130				11/27/12
Selenium	7782-49-2		37.0	ug/L	92.4	70 - 130				11/27/12
MSD			**QC Sample #85399**							
			Original	**121489001**				**Paired**	**85398**	
Antimony	7440-36-0		38.7	ug/L	96.8	70 - 130	4.80	20		11/27/12
Lead	7439-92-1		39.7	ug/L	99.2	70 - 130	6.40	20		11/27/12
Mercury	7439-97-6		2.00	ug/L	100	70 - 130	6.60	20		11/27/12
Thallium	7440-28-0		39.6	ug/L	99.1	70 - 130	6.30	20		11/27/12
Tin	7440-31-5		38.9	ug/L	97.2	70 - 130	5.60	20		11/27/12
Arsenic	7440-38-2		37.4	ug/L	93.6	70 - 130	4.90	20		11/27/12
Selenium	7782-49-2		34.6	ug/L	86.6	70 - 130	6.40	20		11/27/12

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

REVISED121398 -

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Analytical Batch 209924 (QC Batch: 209922)
Associated Samples 121398003, 121398004

Test SW-846 8260B Volatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121398003**							
1,2-Dichloroethane-d4	17060-07-0				98.4	75 - 125				11/09/12
Toluene-d8	2037-26-5				94.2	75 - 125				11/09/12
4-Bromofluorobenzene	460-00-4				100.4	75 - 125				11/09/12
SAMPLE			**Sample #121398004**							
1,2-Dichloroethane-d4	17060-07-0				97.8	75 - 125				11/09/12
Toluene-d8	2037-26-5				94.4	75 - 125				11/09/12
4-Bromofluorobenzene	460-00-4				99.8	75 - 125				11/09/12
BLANK			**QC Sample #84692**							
1,2-Dichloroethane-d4	17060-07-0				95.6	75 - 125				11/08/12
Toluene-d8	2037-26-5				93.6	75 - 125				11/08/12
4-Bromofluorobenzene	460-00-4				97.7	75 - 125				11/08/12
LCS			**QC Sample #84693**							
1,2-Dichloroethane-d4	17060-07-0				97.3	75 - 125				11/08/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Toluene-d8	2037-26-5				93.4	75 - 125				11/08/12
4-Bromofluorobenzene	460-00-4				96.2	75 - 125				11/08/12
MS			**QC Sample #84694**							
			Original	**121397007**						
4-Bromofluorobenzene	460-00-4				96.8	75 - 125				11/08/12
1,2-Dichloroethane-d4	17060-07-0				95.5	75 - 125				11/08/12
Toluene-d8	2037-26-5				94.3	75 - 125				11/08/12
MSD			**QC Sample #84695**							
			Original	**121397007**				**Paired**	**84694**	
1,2-Dichloroethane-d4	17060-07-0				94.5	75 - 125	n/a			11/08/12
Toluene-d8	2037-26-5				94	75 - 125	n/a			11/08/12
4-Bromofluorobenzene	460-00-4				98.2	75 - 125	n/a			11/08/12

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

REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analytical Batch 210019 (QC Batch: 209856)
Associated Samples 121398003, 121398004

Test SW-846 8270D Semivolatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121398003**							
2-Fluorophenol	367-12-4				57.8	34 - 103				11/08/12
Phenol-d5	4165-62-2				39.6	10 - 93				11/08/12
Nitrobenzene-d5	4165-60-0				81.9	49 - 133				11/08/12
2-Methylnaphthalene-d10	7297-45-2				78.3	60 - 135				11/08/12
2-Fluorobiphenyl	321-60-8				79.1	48 - 132				11/08/12
2,4,6-Tribromophenol	118-79-6				74.6	33 - 134				11/08/12
Fluoranthene-d10	93951-69-0				86.7	62 - 139				11/08/12
Terphenyl-d14	98904-43-9				85.7	56 - 138				11/08/12
SAMPLE			**Sample #121398004**							
2-Fluorophenol	367-12-4				55.3	34 - 103				11/08/12
Phenol-d5	4165-62-2				37.5	10 - 93				11/08/12
Nitrobenzene-d5	4165-60-0				77.6	49 - 133				11/08/12
2-Methylnaphthalene-d10	7297-45-2				72.9	60 - 135				11/08/12
2-Fluorobiphenyl	321-60-8				76.6	48 - 132				11/08/12
2,4,6-Tribromophenol	118-79-6				65.1	33 - 134				11/08/12

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

REVISED121398 -

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Fluoranthene-d10	93951-69-0				84.9	62 - 139				11/08/12
Terphenyl-d14	98904-43-9				72	56 - 138				11/08/12
BLANK			**QC Sample #84531**							
2-Fluorophenol	367-12-4				65	34 - 103				11/08/12
Phenol-d5	4165-62-2				49.5	10 - 93				11/08/12
Nitrobenzene-d5	4165-60-0				84.4	49 - 133				11/08/12
2-Methylnaphthalene-d10	7297-45-2				81.9	60 - 135				11/08/12
2-Fluorobiphenyl	321-60-8				83.5	48 - 132				11/08/12
2,4,6-Tribromophenol	118-79-6				74.9	33 - 134				11/08/12
Fluoranthene-d10	93951-69-0				86	62 - 139				11/08/12
Terphenyl-d14	98904-43-9				95.6	56 - 138				11/08/12
LCS			**QC Sample #84532**							
2-Fluorophenol	367-12-4				56.6	34 - 103				11/08/12
Phenol-d5	4165-62-2				40.8	10 - 93				11/08/12
Nitrobenzene-d5	4165-60-0				68.2	49 - 133				11/08/12
2-Methylnaphthalene-d10	7297-45-2				67.4	60 - 135				11/08/12
2-Fluorobiphenyl	321-60-8				68.4	48 - 132				11/08/12
2,4,6-Tribromophenol	118-79-6				67.7	33 - 134				11/08/12
Fluoranthene-d10	93951-69-0				74.4	62 - 139				11/08/12
Terphenyl-d14	98904-43-9				80	56 - 138				11/08/12

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

REVISED121398 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121398

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MS			**QC Sample #84533**							
			Original	**121398003**						
2-Fluorophenol	367-12-4				61.2	34 - 103				11/08/12
Phenol-d5	4165-62-2				39.6	10 - 93				11/08/12
Nitrobenzene-d5	4165-60-0				84.2	49 - 133				11/08/12
2-Methylnaphthalene-d10	7297-45-2				77.9	60 - 135				11/08/12
2-Fluorobiphenyl	321-60-8				79.1	48 - 132				11/08/12
2,4,6-Tribromophenol	118-79-6				82.5	33 - 134				11/08/12
Fluoranthene-d10	93951-69-0				94.5	62 - 139				11/08/12
Terphenyl-d14	98904-43-9				78.7	56 - 138				11/08/12
MSD			**QC Sample #84534**							
			Original	**121398003**				**Paired**	**84533**	
2-Fluorophenol	367-12-4				57.5	34 - 103	n/a			11/08/12
Phenol-d5	4165-62-2				39.1	10 - 93	n/a			11/08/12
Nitrobenzene-d5	4165-60-0				83.6	49 - 133	n/a			11/08/12
2-Methylnaphthalene-d10	7297-45-2				79.5	60 - 135	n/a			11/08/12
2-Fluorobiphenyl	321-60-8				83	48 - 132	n/a			11/08/12
2,4,6-Tribromophenol	118-79-6				81.1	33 - 134	n/a			11/08/12
Fluoranthene-d10	93951-69-0				96.7	62 - 139	n/a			11/08/12
Terphenyl-d14	98904-43-9				82.8	56 - 138	n/a			11/08/12

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

REVISED121398 -

Attention: Scot Fitzgerald **Group #** WSCF121398

121398002	B2MNB6

IC: Sample was analyzed within hold time, but required further dilution to be run outside of hold time. Original data supports dilution result, data is good.

Quality Control Comments

Department Inorganic

84378 B2MNC9(121400003MS)

Analyte Chloride - Anions by Ion Chromatography (Water)
[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

Analyte Nitrate-N - Anions by Ion Chromatography (Water)
[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

Analyte Sulfate - Anions by Ion Chromatography (Water)
[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

84379 B2MNC9(121400003MSD)

Analyte Chloride - Anions by Ion Chromatography (Water)
[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

Analyte Nitrate-N - Anions by Ion Chromatography (Water)
[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

Analyte Sulfate - Anions by Ion Chromatography (Water)
[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 8 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 #: 121398
Profile #: W13-011-106
Proj. Mgr.:
Phone:

The following samples were received from you on 11/2/2012 9:30:00 AM. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
		Tests scheduled		
121398001	B2MNB0	WATER	11/2/2012 08:52	11/2/2012 09:30
		IC-W		
121398002	B2MNB6	WATER	11/2/2012 08:04	11/2/2012 09:30
		IC-W		
121398003	B2MN99	WATER	11/2/2012 08:52	11/2/2012 09:30
		2008-W; 6010-W; 8260V-W; 8270SV-W; ALK-W; CN-W		
121398004	B2MNB5	WATER	11/2/2012 08:04	11/2/2012 09:30
		2008-W; 6010-W; 8260V-W; 8270SV-W; ALK-W; CN-W		
121398005	B2MNB1	WATER	11/2/2012 08:52	11/2/2012 09:30
		2008-W; 6010-W		
121398006	B2MNB7	WATER	11/2/2012 08:04	11/2/2012 09:30
		2008-W; 6010-W		

Test Acronym Description

Test Acronym	Description
2008-W	ICP-MS (W)
6010-W	ICP-AES (W)
8260V-W	Volatiles by 8260B (W)
8270SV-W	Semivolatiles by 8270D (W)
ALK-W	Total Alkalinity (W)
CN-W	Cyanide (Spectroscopy) (W)
IC-W	Anions by IC (W)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **W13-011-106**

Page 1 of 1

Collector	L.D. Wall CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W13-011	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, NOVEMBER 2012	Logbook No.	HNF-N-506 48/87	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	RCRA	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)

121398

SPECIAL INSTRUCTIONS **Hold Time**

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

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*		Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MNB0	1	N	W	11.2.12	0852	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	L.D. Wall		NOV 0 2 2012 0930	TA FRAZIER			NOV 0 2 2012 0930
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

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A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W13-011-108

Page 1 of 1

Collector	L.D. Wall CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W13-011	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, NOVEMBER 2012	Logbook No.	HNF-N-506 48/87	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	RCRA	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** Total Activity Exemption: Yes ☑ No ☐

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

Sample No.	Filter *		Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MNB6	2	N	W 11.2.12	0804	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	R.D. Wall		NOV 0 2 2012 0930	TA Frazier			NOV 0 7 2012 0930
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

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A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **W13-011-105**

Page 1 of 2

Collector	L.D. Wall CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W13-011	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, NOVEMBER 2012	Logbook No.	HNF-N-506 48/87	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	RCRA	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** Total Activity Exemption: Yes ☑ No ☐

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MN99 3	N	W	11.2.12	0852	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B2MN99	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Antimony (1)	6 Months	HNO3 to pH <2
B2MN99	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	6 Months	HNO3 to pH <2
B2MN99	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Lead (1)	6 Months	HNO3 to pH <2
B2MN99	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Selenium (1)	6 Months	HNO3 to pH <2
B2MN99	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Thallium (1)	6 Months	HNO3 to pH <2
B2MN99	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Tin (1)	6 Months	HNO3 to pH <2
B2MN99	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2MN99	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B2MN99	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2MN99	N	W			3x40-mL aGs*	8260_VOA_GCMS_IX: COMMON	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2MN99	N	W			4x1-L aG	8270_SVOA_GCMS_IX: COMMON	7/40 Days	Cool~4C
B2MNB1 5	Y	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B2MNB1	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: Antimony (1)	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	L.D. Wall		NOV 0 2 2012 0930	TA Frazier			NOV 0 2 2012 0930
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

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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W13-011-105

Page 2 of 2

Collector	L.D. Wall CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W13-011	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, NOVEMBER 2012	Logbook No.	HNF-N-506 48/87	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	RCRA	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**

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

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MNB1	Y	W	11-2-12	0352	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	6 Months	HNO3 to pH <2
B2MNB1	Y	W	↓	↓	1x500-mL G/P	200.8_METALS_ICPMS: Lead (1)	6 Months	HNO3 to pH <2
B2MNB1	Y	W	↓	↓	1x500-mL G/P	200.8_METALS_ICPMS: Selenium (1)	6 Months	HNO3 to pH <2
B2MNB1	Y	W	↓	↓	1x500-mL G/P	200.8_METALS_ICPMS: Thallium (1)	6 Months	HNO3 to pH <2
B2MNB1	Y	W	↓	↓	1x500-mL G/P	200.8_METALS_ICPMS: Tin (1)	6 Months	HNO3 to pH <2
B2MNB1	Y	W	↓	↓	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	R.O. Wall		NOV 0 2 2012 0930	TA Finazzi			NOV 0 2 2012 0930
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

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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **W13-011-107**

Page 1 of 2

Collector	L.D. Wall CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W13-011	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, NOVEMBER 2012	Logbook No.	HNF-N-506 48/87	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	RCRA	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 Orde: 5400.5 (1990/1993)

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

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MNB5 4	N	W	11.2.12	0804	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B2MNB5	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Antimony (1)	6 Months	HNO3 to pH <2
B2MNB5	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	6 Months	HNO3 to pH <2
B2MNB5	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Lead (1)	6 Months	HNO3 to pH <2
B2MNB5	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Selenium (1)	6 Months	HNO3 to pH <2
B2MNB5	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Thallium (1)	6 Months	HNO3 to pH <2
B2MNB5	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Tin (1)	6 Months	HNO3 to pH <2
B2MNB5	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2MNB5	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B2MNB5	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2MNB5	N	W			3x40-mL aGs*	8260_VOA_GCMS_IX: COMMON	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2MNB5	N	W			4x1-L aG	8270_SVOA_GCMS_IX: COMMON	7/40 Days	Cool~4C
B2MNB7 6	Y	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B2MNB7	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: Antimony (1)	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	L.D. Wall		NOV 0 2 2012 0930	TA Pharzin			NOV 0 2 2012 0930
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 10/10/2012

A-6004-842 (REV 2)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W13-011-107

Page 2 of 2

Collector	L.D. Wall CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W13-011	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, NOVEMBER 2012	Logbook No.	HNF-N-506 48 / 87	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	RCRA	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**

FY12 and FY13 samples cannot be in the same SDG
Site Wide Generator Knowledge Information Form applies
The CACN for all analytical work at WSCF is 401647

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MNB7	Y	W	11.2.12	0804	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	6 Months	HNO3 to pH <2
B2MNB7	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: Lead (1)	6 Months	HNO3 to pH <2
B2MNB7	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: Selenium (1)	6 Months	HNO3 to pH <2
B2MNB7	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: Thallium (1)	6 Months	HNO3 to pH <2
B2MNB7	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: Tin (1)	6 Months	HNO3 to pH <2
B2MNB7	Y	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
L.D. Wall CHPRC	L.D. Wall		NOV 0 2 2012 0930	TA FRAZIER			NOV 0 2 2012 0930
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

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