

DECEMBER 18, 2012

REVISION 2

**WSCF Laboratory**

PO Box 650 S3-30  
Richland, WA 99352



December 18, 2012

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

Dear Scot Fitzgerald,

REVISED121230 - 698819 [Report ID: 121230]

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 WSCF121230

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

Very truly yours,

A handwritten signature in black ink, appearing to read "Dan T. Smith".

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

Attachments 4

CC: w/Attachments

File/LB

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**ATTACHMENT 1**

**COVER SHEET**

Consisting of 2 pages  
Including cover page

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**WSCF SAF Number Cross Reference**

Group # WSCF121230  
Data Deliverable Date 11/05/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
W13-010	B2M123	121230001	WATER	10/03/12	10/03/12
W13-010	B2M125	121230002	WATER	10/03/12	10/03/12
W13-010	B2M212	121230003	WATER	10/03/12	10/03/12
W13-010	B2M213	121230004	WATER	10/03/12	10/03/12
W13-010	B2M214	121230005	WATER	10/03/12	10/03/12
W13-010	B2M8H0	121230006	WATER	10/03/12	10/03/12
W13-010	B2M8H1	121230007	WATER	10/03/12	10/03/12

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ATTACHMENT 2

**NARRATIVE**

Consisting of 8 pages  
Including cover page

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Attachment 2  
**Narrative Rev2**  
WSCF121230

**Revision 2: This case narrative replaces the prior in its entirety. 1,4-Dioxane was added per SDR13-064 to sample B2M123.**

**Revision 1: This case narrative replaces the prior in its entirety. P&D correction is adding Kerosene to sample B2M123.**

### **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 by Method 8270 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.

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**Narrative Rev2**  
WSCF121230

- 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**

**Chemical Oxygen Demand** – Hold time requirement for this analysis was met. A Duplicate, Matrix Spike, Matrix Spike Duplicate and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- All 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):

- Vanadium, Strontium, Copper and Aluminum were detected in the Blank and evaluated.
- All other 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.

**Total Organic Carbon** – 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.

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**Total Organic Halides** – 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.

**Organic Comments**

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

- All applicable QC controls are within the established limits.

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

- 4-Nitrophenol and Pentachlorophenol did not meet the MS / MSD RPD acceptance limits. Sample results for this analyte were not flagged. The quality control report was flagged for RPD failure.
- The Blank, MS, MSD and sample B2M123 (121230001) did not meet the acceptance limits for surrogate Phenol-d5. Sample results were not flagged. The quality control report was flagged for surrogate recovery failure.
- All other applicable QC controls are within the established limits.

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

- All applicable QC controls are within the established limits.

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

- All applicable QC controls are within the established limits.

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

- All applicable QC controls are within the established limits.

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**Narrative Rev2**  
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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.

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Attachment 2  
**Narrative Rev2**  
WSCF121230

## SAMPLE ISSUE RESOLUTION

**SIR NUM** SDR13-012  
**REV NUM** 0  
**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** B2M0Y3, B2M0Y9, B2M105, B2M111, B2M117, B2M123, B2M129, B2M135, B2M141, B2M147, B2M153, B2M159, B2M165, B2M171, B2M177, B2M194, B2M1B0, B2M9W6

**SAMPLE MATRIX** WATER

**COLLECTION DATE** 10/3/2012 - 10/10/2012

**SDG NUM** WSCF121241, WSCF121242, WSCF121284, WSCF121226, WSCF121275, WSCF121230, WSCF121223, WSCF121274, WSCF121232, WSCF121239

### 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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**Narrative Rev2**  
WSCF121230

**Problem and Discrepancy Report**

**WSCF**

**SDG WSCF121230**

11/06/2012

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**1. The data package has the following issues:**

- a) TPHKEROSENE for sample number B2M123 was not reported in the electronic or hardcopy data packages.

**Resolution:** *Provide appropriate correction*

**Lab Response:** **The result has been added.**

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Attachment 2  
**Narrative Rev2**  
 WSCF121230

## 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, B2M180, 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

ATTACHMENT 3

**ANALYTICAL RESULTS**

Consisting of 87 pages  
Including cover page

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**WSCF ANALYTICAL RESULTS REPORT**

For

CH2M Hill Plateau Remediation

PO Box 1600  
Richland, WA 99352

Attention: Scot Fitzgerald

**Contract #** MOA-FH-CHPRC-2008  
**Group #** WSCF121230  
**Report Date** December 18, 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.*

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## Batch QC List

Attention Scot Fitzgerald  
Department Inorganic

Group # WSCF121230

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
208198	208205	5	BLANK	82193	BLANK		ICP-6010 - All possible metals
208198	208205	7	LCS	82195	LCS		ICP-6010 - All possible metals
208198	208205	9	MS	82196	B2M131(121223007MS) 121223007		ICP-6010 - All possible metals
208198	208205	10	MSD	82197	B2M131(121223007MSD) 121223007		ICP-6010 - All possible metals
208198	208205	18	SAMPLE	121230001	B2M123		ICP-6010 - All possible metals
208198	208205	19	SAMPLE	121230002	B2M125		ICP-6010 - All possible metals
208257	208292	4	BLANK	82385	BLANK		ICP-2008 MS All possible metal
208257	208292	5	LCS	82386	LCS		ICP-2008 MS All possible metal
208257	208292	7	MS	82387	B2M8H4(121223010MS) 121223010		ICP-2008 MS All possible metal
208257	208292	8	MSD	82388	B2M8H4(121223010MSD) 121223010		ICP-2008 MS All possible metal
208257	208292	24	SAMPLE	121230001	B2M123		ICP-2008 MS All possible metal
208257	208292	25	SAMPLE	121230002	B2M125		ICP-2008 MS All possible metal
208257	208292	26	SAMPLE	121230006	B2M8H0		ICP-2008 MS All possible metal
208257	208292	27	SAMPLE	121230007	B2M8H1		ICP-2008 MS All possible metal
208507	208508	3	BLANK	82881	BLANK		Chemical Oxygen Demand
208507	208508	4	LCS	82882	LCS		Chemical Oxygen Demand
208507	208508	9	MS	82885	B2M129(121223013MS) 121223013		Chemical Oxygen Demand
208507	208508	10	MSD	82886	B2M129(121223013MSD) 121223013		Chemical Oxygen Demand
208507	208508	15	SAMPLE	121230001	B2M123		Chemical Oxygen Demand
209143	209144	1	BLANK	83634	BLANK		Total Organic Halides
209143	209144	2	LCS	83635	LCS		Total Organic Halides
209143	209144	10	MS	83639	B2M234(121226011MS) 121226011		Total Organic Halides
209143	209144	11	MSD	83640	B2M234(121226011MSD) 121226011		Total Organic Halides

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## Batch QC List

Attention Scot Fitzgerald  
 Department Inorganic

Group # WSCF121230

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
209143	209144	16	SAMPLE	121230001	B2M123		Total Organic Halides
209143	209144	17	SAMPLE	121230003	B2M212		Total Organic Halides
209143	209144	18	SAMPLE	121230004	B2M213		Total Organic Halides
209143	209144	19	SAMPLE	121230005	B2M214		Total Organic Halides

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## Batch QC List

Attention Scot Fitzgerald  
 Department Organic, Semivolatiles

Group # WSCF121230

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
208245	208258	1	BLANK	82350	BLANK		Extractable Diesel and Petroleum
208245	208258	2	LCS	82351	LCS		Extractable Diesel and Petroleum
208245	208258	3	MS	82352	B2M129(121223013MS)	121223013	Extractable Diesel and Petroleum
208245	208258	4	MSD	82353	B2M129(121223013MSD)	121223013	Extractable Diesel and Petroleum
208245	208258	10	SAMPLE	121230001	B2M123		Extractable Diesel and Petroleum
208488	208850	1	BLANK	82826	BLANK		SW-846 8270D Semivolatiles
208488	208850	2	LCS	82827	LCS		SW-846 8270D Semivolatiles
208488	208850	3	MS	82828	B2M0Y3(121239001MS)	121239001	SW-846 8270D Semivolatiles
208488	208850	4	MSD	82829	B2M0Y3(121239001MSD)	121239001	SW-846 8270D Semivolatiles
208488	208850	10	SAMPLE	121230001	B2M123		SW-846 8270D Semivolatiles
208650	208887	1	BLANK	82953	BLANK		PCBs by EPA SW-846 Method 8082
208650	208887	2	LCS	82954	LCS		PCBs by EPA SW-846 Method 8082
208650	208887	3	MS	82955	B2M129(121223013MS)	121223013	PCBs by EPA SW-846 Method 8082
208650	208887	4	MSD	82956	B2M129(121223013MSD)	121223013	PCBs by EPA SW-846 Method 8082
208650	208887	8	SAMPLE	121230001	B2M123		PCBs by EPA SW-846 Method 8082

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## Batch QC List

Attention Scot Fitzgerald  
 Department Organic, Volatiles

Group # WSCF121230

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
208456	208457	1	BLANK	82689	BLANK		SW-846 8260B Volatiles
208456	208457	2	LCS	82690	LCS		SW-846 8260B Volatiles
208456	208457	3	MS	82691	B2M129(121223013MS)	121223013	SW-846 8260B Volatiles
208456	208457	4	MSD	82692	B2M129(121223013MSD)	121223013	SW-846 8260B Volatiles
208456	208457	10	SAMPLE	121230001	B2M123		SW-846 8260B Volatiles
208756	208757	1	BLANK	82983	BLANK		Gasoline Range (W)
208756	208757	2	LCS	82984	LCS		Gasoline Range (W)
208756	208757	3	MS	82985	B2M129(121223013MS)	121223013	Gasoline Range (W)
208756	208757	4	MSD	82986	B2M129(121223013MSD)	121223013	Gasoline Range (W)
208756	208757	5	DUP	82987	B2M129(121223013DUP)	121223013	Gasoline Range (W)
208756	208757	10	SAMPLE	121230001	B2M123		Gasoline Range (W)

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## Batch QC List

Attention Scot Fitzgerald  
Department Wet Chemistry

Group # WSCF121230

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
208268	208268	2	BLANK	82439	BLANK		Total Organic Carbon
208268	208268	3	LCS	82440	LCS		Total Organic Carbon
208268	208268	4	MS	82441	B2M218(121226007MS)	121226007	Total Organic Carbon
208268	208268	5	MSD	82442	B2M218(121226007MSD)	121226007	Total Organic Carbon
208268	208268	14	SAMPLE	121230001	B2M123		Total Organic Carbon
208268	208268	15	SAMPLE	121230003	B2M212		Total Organic Carbon
208268	208268	17	MS	82444	B2M213(121230004MS)	121230004	Total Organic Carbon
208268	208268	18	MSD	82445	B2M213(121230004MSD)	121230004	Total Organic Carbon
208268	208268	19	SAMPLE	121230004	B2M213		Total Organic Carbon
208268	208268	20	SAMPLE	121230005	B2M214		Total Organic Carbon
208476	208482	1	BLANK	82749	BLANK		Cyanide (W) by Midi/Spectrophotometer
208476	208482	4	LCS	82752	LCS		Cyanide (W) by Midi/Spectrophotometer
208476	208482	5	MS	82753	B2LDT5(121203010MS)	121203010	Cyanide (W) by Midi/Spectrophotometer
208476	208482	6	MSD	82754	B2LDT5(121203010MSD)	121203010	Cyanide (W) by Midi/Spectrophotometer
208476	208482	16	SAMPLE	121230001	B2M123		Cyanide (W) by Midi/Spectrophotometer
208754	208754	1	LCS	82975	LCS		Total Alkalinity as mg/L CaCO3 (Water)
208754	208754	3	SAMPLE	121230001	B2M123		Total Alkalinity as mg/L CaCO3 (Water)
208754	208754	9	DUP	82976	B2M0Y9(121239002DUP)	121239002	Total Alkalinity as mg/L CaCO3 (Water)
208754	208754	13	LCS	82977	LCS		Total Alkalinity as mg/L CaCO3 (Water)
208754	208754	24	LCS	82978	LCS		Total Alkalinity as mg/L CaCO3 (Water)

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Attention Scot Fitzgerald  
Department Inorganic

Group # WSCF121230

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-523-444	Total Organic Halides Based on SW-846 Method 9020B		
	EPA SW-846	9020B	Total Organic Halides (TOX)
	HEIS	9020_TOX	Total Organic Halides (TOX)
LA-523-470	Chemical Oxygen Demand		
	EPA-600/4-79-020	410.4	Chemical Oxygen Demand
	HEIS	410.4_COD	Chemical Oxygen Demand

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>

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

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

LA-523-427	Polychlorinated Biphenyls (PCB'S) by Gas Chromatography		
	EPA SW-846	3510C	Separatory Funnel Liquid-Liquid Extraction
	EPA SW-846	3545	Pressurized Fluid Extraction (PFE)
	EPA SW-846	3665A	Sulfuric Acid/Permanganate Cleanup
	EPA SW-846	8000B	Determinative Chromatographic Separations
	EPA SW-846	8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography
	HEIS	8082_PCB_GC	Polychlorinated Biphenyls (PCBs) by Gas Chromatography
LA-523-456	Semivolatile Sample Analysis by SW-846 Method 8270D		
	EPA SW-846	8000B	Determinative Chromagraphic Separations
	EPA SW-846	3510C	Separatory Funnel Liquid-Liquid Extraction
	EPA SW-846	8270D	Semivolatile Organic Compounds by Gas
	EPA SW-846	3545	Pressurized Fluid Extraction (PFE)
			Chromatography/Mass Spectrometry (GC/MS)
	HEIS	8270_SVOA_GCMS	Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry(GC/MS)
LA-523-493	NWTPH-Dx, Extractible Diesel and Petroleum Productions Analysis in Soil and Water		
	WDOE	WDOE	Total Petroleum Hydrocarbons in Diesel
	HEIS	WTPH_DIESEL	TPH Diesel

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

REVISED121230 -

Attention Scot Fitzgerald  
Department Organic, Volatiles

Group # WSCF121230

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

LA-523-443	Gas Chromatography Analysis of Gasoline Range Total Petroleum Hydrocarbons in Water		
	EPA	NWTPH-G	"Analytical Methods for Petroleum Hydrocarbons, June 1997, NWTPH-G, Volatile Petroleum Products Method for Soil and Water
	HEIS	WTPH_GASOLINE	Total Petroleum Hydrocarbons, Gasoline
LA-523-455	Volatile Sample Analysis by SW-846 Method 8260B		
	EPA SW-846	8000B	Determinative Chromographic Separations
	EPA SW-846	8260B	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
	HEIS	8260_VOA_GCMS	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

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>

REVISED121230 -

Attention Scot Fitzgerald  
Department Wet Chemistry

Group # WSCF121230

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-344-406	Total Organic Carbon (TOC) Based on SW-846		
	EPA SW-846	9060	Total Organic Carbon
	HEIS	9060_TOC	Total Organic Carbon
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>

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Inorganic

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>ICPAES Prep (W)</b>										10/04/12
<b>ICP-6010 - All possible metals</b>										
Iron	7439-89-6	LA-505-411	B	77.9		ug/L	1	19	95	10/05/12
Magnesium	7439-95-4	LA-505-411		15000		ug/L	1	4.0	20	10/05/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Nickel	7440-02-0	LA-505-411	B	6.60		ug/L	1	4.0	20	10/05/12
Potassium	7440-09-7	LA-505-411		6500		ug/L	1	76	380	10/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Sodium	7440-23-5	LA-505-411		24200		ug/L	1	10	50	10/05/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	10/05/12
Barium	7440-39-3	LA-505-411		57.7		ug/L	1	4.0	20	10/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Chromium	7440-47-3	LA-505-411	B	10.8		ug/L	1	5.0	25	10/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Vanadium	7440-62-2	LA-505-411	B	16.7		ug/L	1	5.0	25	10/05/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	10/05/12
Calcium	7440-70-2	LA-505-411		51800		ug/L	1	49	240	10/05/12
Strontium	7440-24-6	LA-505-411		236		ug/L	1	9.0	45	10/05/12

MDL = Minimum Detection Limit

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

U - Analyzed for but not detected above limiting criteria.

RQ = Result Qualifier

C - Analyte was found in the Associated Blank. (Inorganic)

X,Y or Z - See comment detail and/or narrative.

TP Err = Total Propagated Error

D - Analyte was reported at a secondary dilution factor.

PQL is equivalent to Estimated Quantitation Limit (EQL)

DF = Dilution Factor

E - Analyte is an estimate, see comment section.

o - LCS recovery outside established laboratory acceptance limits.

+ - Indicates more than nine qualifier

N - MS and/or MSD recovery outside control limits.

o - LCS recovery outside established laboratory acceptance limits.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Inorganic

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Titanium	7440-32-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
<b>ICPMS Prep (W)</b>										
<b>ICP-2008 MS All possible metal</b>										
Aluminum	7429-90-5	LA-505-412	BDC	20.8		ug/L	2	10	100	10/09/12
Manganese	7439-96-5	LA-505-412	BD	1.98		ug/L	2	0.20	2.0	10/09/12
Nickel	7440-02-0	LA-505-412	D	4.83		ug/L	2	0.20	2.0	10/09/12
Silver	7440-22-4	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/09/12
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	10/09/12
Barium	7440-39-3	LA-505-412	D	55.6		ug/L	2	0.40	4.0	10/09/12
Beryllium	7440-41-7	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	10/09/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/09/12
Chromium	7440-47-3	LA-505-412	D	8.39		ug/L	2	0.20	2.0	10/09/12
Cobalt	7440-48-4	LA-505-412	BD	0.162		ug/L	2	0.10	0.50	10/09/12
Copper	7440-50-8	LA-505-412	BDC	0.680		ug/L	2	0.20	2.0	10/09/12
Vanadium	7440-62-2	LA-505-412	D	19.7		ug/L	2	0.40	4.0	10/09/12
Zinc	7440-66-6	LA-505-412	UD	<2.0		ug/L	2	2.0	20	10/09/12
Lead	7439-92-1	LA-505-412	BD	0.176		ug/L	2	0.10	1.0	10/09/12
Molybdenum	7439-98-7	LA-505-412	D	6.72		ug/L	2	0.10	1.0	10/09/12

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.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Inorganic

**Group #** WSCF121230

**Sample #** 121230001  
**SAF#** W13-010  
**Sample ID** B2M123

**Matrix** WATER  
**Sampled** 10/03/12  
**Received** 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium	7440-24-6	LA-505-412	D	232		ug/L	2	0.20	2.0	10/09/12
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/09/12
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/09/12
Arsenic	7440-38-2	LA-505-412	D	4.34		ug/L	2	0.40	4.0	10/09/12
Selenium	7782-49-2	LA-505-412	BD	4.30		ug/L	2	2.0	20	10/09/12
<b>Preparation for COD (W)</b>										<b>10/11/12</b>
<b>Chemical Oxygen Demand</b>										
Chemical Oxygen Demand	COD	LA-523-470	U	<10		mg/L	1	10	50	10/11/12
<b>Preparation for TOX (W)</b>										<b>10/08/12</b>
<b>Total Organic Halides</b>										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	10/08/12

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.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Inorganic

**Group #** WSCF121230

<b>Sample #</b>	121230002	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M125	<b>Received</b>	10/03/12

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
<b>ICPAES Prep (W)</b>										10/04/12
<b>ICP-6010 - All possible metals</b>										
Iron	7439-89-6	LA-505-411	B	21.4		ug/L	1	19	95	10/05/12
Magnesium	7439-95-4	LA-505-411		14400		ug/L	1	4.0	20	10/05/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Nickel	7440-02-0	LA-505-411	B	6.80		ug/L	1	4.0	20	10/05/12
Potassium	7440-09-7	LA-505-411		6360		ug/L	1	76	380	10/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Sodium	7440-23-5	LA-505-411		23900		ug/L	1	10	50	10/05/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	10/05/12
Barium	7440-39-3	LA-505-411		55.7		ug/L	1	4.0	20	10/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	10/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Vanadium	7440-62-2	LA-505-411	B	15.2		ug/L	1	5.0	25	10/05/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	10/05/12
Calcium	7440-70-2	LA-505-411		48700		ug/L	1	49	240	10/05/12
Strontium	7440-24-6	LA-505-411		215		ug/L	1	9.0	45	10/05/12

MDL = Minimum Detection Limit

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

U - Analyzed for but not detected above limiting criteria.

RQ = Result Qualifier

C - Analyte was found in the Associated Blank. (Inorganic)

X,Y or Z - See comment detail and/or narrative.

TP Err = Total Propagated Error

D - Analyte was reported at a secondary dilution factor.

PQL is equivalent to Estimated Quantitation Limit (EQL)

DF = Dilution Factor

E - Analyte is an estimate, see comment section.

o - LCS recovery outside established laboratory acceptance limits.

+ - Indicates more than nine qualifier

N - MS and/or MSD recovery outside control limits.

o - LCS recovery outside established laboratory acceptance limits.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Inorganic

**Group #** WSCF121230

<b>Sample #</b>	121230002	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M125	<b>Received</b>	10/03/12

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Titanium	7440-32-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/05/12
<b>ICPMS Prep (W)</b>										
<b>ICP-2008 MS All possible metal</b>										
Aluminum	7429-90-5	LA-505-412	BDC	13.2		ug/L	2	10	100	10/09/12
Manganese	7439-96-5	LA-505-412	BD	0.756		ug/L	2	0.20	2.0	10/09/12
Nickel	7440-02-0	LA-505-412	D	2.66		ug/L	2	0.20	2.0	10/09/12
Silver	7440-22-4	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/09/12
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	10/09/12
Barium	7440-39-3	LA-505-412	D	55.1		ug/L	2	0.40	4.0	10/09/12
Beryllium	7440-41-7	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	10/09/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/09/12
Chromium	7440-47-3	LA-505-412	D	4.59		ug/L	2	0.20	2.0	10/09/12
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	10/09/12
Copper	7440-50-8	LA-505-412	BDC	0.404		ug/L	2	0.20	2.0	10/09/12
Vanadium	7440-62-2	LA-505-412	D	19.7		ug/L	2	0.40	4.0	10/09/12
Zinc	7440-66-6	LA-505-412	UD	<2.0		ug/L	2	2.0	20	10/09/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/09/12
Molybdenum	7439-98-7	LA-505-412	D	6.79		ug/L	2	0.10	1.0	10/09/12

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.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Inorganic

**Group #** WSCF121230

**Sample #** 121230002  
**SAF#** W13-010  
**Sample ID** B2M125

**Matrix** WATER  
**Sampled** 10/03/12  
**Received** 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium	7440-24-6	LA-505-412	D	234		ug/L	2	0.20	2.0	10/09/12
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/09/12
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/09/12
Arsenic	7440-38-2	LA-505-412	D	4.30		ug/L	2	0.40	4.0	10/09/12
Selenium	7782-49-2	LA-505-412	BD	4.30		ug/L	2	2.0	20	10/09/12

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.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Inorganic

**Group #** WSCF121230

**Sample #** 121230003  
**SAF#** W13-010  
**Sample ID** B2M212

**Matrix** WATER  
**Sampled** 10/03/12  
**Received** 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for TOX (W)</b>										10/08/12
<b>Total Organic Halides</b>										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	10/08/12

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.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Inorganic

**Group #** WSCF121230

**Sample #** 121230004  
**SAF#** W13-010  
**Sample ID** B2M213

**Matrix** WATER  
**Sampled** 10/03/12  
**Received** 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for TOX (W)</b>										10/08/12
<b>Total Organic Halides</b>										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	10/08/12

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.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Inorganic

**Group #** WSCF121230

**Sample #** 121230005  
**SAF#** W13-010  
**Sample ID** B2M214

**Matrix** WATER  
**Sampled** 10/03/12  
**Received** 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for TOX (W)</b>										10/08/12
<b>Total Organic Halides</b>										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	10/08/12

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.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Inorganic

**Group #** WSCF121230

**Sample #** 121230006  
**SAF#** W13-010  
**Sample ID** B2M8H0

**Matrix** WATER  
**Sampled** 10/03/12  
**Received** 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										10/09/12
ICP-2008 MS All possible metal										
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	10/09/12

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.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Inorganic

**Group #** WSCF121230

**Sample #** 121230007  
**SAF#** W13-010  
**Sample ID** B2M8H1

**Matrix** WATER  
**Sampled** 10/03/12  
**Received** 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										10/09/12
ICP-2008 MS All possible metal										
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	10/09/12

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.

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REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for 8082 (W) SPE</b>										10/09/12
<b>PCBs by EPA SW-846 Method 8082</b>										
Aroclor-1016	12674-11-2	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	10/17/12
Aroclor-1221	11104-28-2	LA-523-427	U	<0.2		ug/L	1	0.2	0.4	10/17/12
Aroclor-1232	11141-16-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	10/17/12
Aroclor-1242	53469-21-9	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	10/17/12
Aroclor-1248	12672-29-6	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	10/17/12
Aroclor-1254	11097-69-1	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	10/17/12
Aroclor-1260	11096-82-5	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	10/17/12
<b>Preparation for 8270 (W) CLE</b>										10/10/12
<b>SW-846 8270D Semivolatiles</b>										
4-Nitrophenol	100-02-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Phenol	108-95-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Pyrene	129-00-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12

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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).

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X,Y or Z - See comment detail and/or narrative.

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REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
n-Nitroso-di-n-propylamine	621-64-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Acenaphthene	83-32-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Pentachlorophenol	87-86-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2-Chlorophenol	95-57-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
4-Nitroaniline	100-01-6	LA-523-456	U	<0.9		ug/L	1	0.9	2	10/16/12
4-Bromophenyl-phenylether	101-55-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2,4-Dimethylphenol	105-67-9	LA-523-456	U	<1		ug/L	1	1	2	10/16/12
4-Chloroaniline	106-47-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Bis(1-Chloro-2-propyl)ether	108-60-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Bis-(2-Chloroethyl)ether	111-44-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Bis-(2-Chloroethoxy)methane	111-91-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Di-n-octylphthalate	117-84-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Hexachlorobenzene	118-74-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Anthracene	120-12-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2,4-Dichlorophenol	120-83-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12

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REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Dimethylphthalate	131-11-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Dibenzofuran	132-64-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Benzo(g,h,i)perylene	191-24-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Indeno(1,2,3-cd)pyrene	193-39-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Benzo(b)fluoranthene	205-99-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Fluoranthene	206-44-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Benzo(k)fluoranthene	207-08-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Acenaphthylene	208-96-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Chrysene	218-01-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Benzo(a)pyrene	50-32-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2,4-Dinitrophenol	51-28-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Dibenzo(a,h)anthracene	53-70-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
4,6-Dinitro-2-methylphenol	534-52-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
1,3-Dichlorobenzene	541-73-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Benzo(a)anthracene	56-55-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2,6-Dinitrotoluene	606-20-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
4-Chlorophenyl-phenylether	7005-72-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12

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REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Hexachlorocyclopentadiene	77-47-4	LA-523-456	U	<0.9		ug/L	1	0.9	2	10/16/12
Isophorone	78-59-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Diethyl phthalate	84-66-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Di-n-butylphthalate	84-74-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Phenanthrene	85-01-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Butylbenzylphthalate	85-68-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Fluorene	86-73-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Carbazole	86-74-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Hexachlorobutadiene	87-68-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2-Nitroaniline	88-74-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2-Nitrophenol	88-75-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Naphthalene	91-20-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2-Methylnaphthalene	91-57-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2-Chloronaphthalene	91-58-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
3,3-Dichlorobenzidine	91-94-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2-Methylphenol	95-48-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
1,2-Dichlorobenzene	95-50-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2,4,5-Trichlorophenol	95-95-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Nitrobenzene	98-95-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12

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REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
3-Nitroaniline	99-09-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
3 & 4 Methylphenol, Total	65794-96-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Hexachloroethane	67-72-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2,4,6-Trichlorophenol	88-06-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Benzyl alcohol	100-51-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Tributyl phosphate	126-73-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2-Naphthylamine	91-59-8	LA-523-456	U	<1		ug/L	1	1	2	10/16/12
Pyridine	110-86-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
n-Nitrosopiperidine	100-75-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
n-Nitrosomethylethylamine	10595-95-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
p-Phenylenediamine	106-50-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2-Picoline	109-06-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
3,3-Dimethylbenzidine	119-93-7	LA-523-456	U	<4		ug/L	1	4	6	10/16/12
Isosafrole	120-58-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Phentermine	122-09-8	LA-523-456	U	<5		ug/L	1	5	9	10/16/12
1,4-Dioxane	123-91-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
1,4-Naphthoquinone	130-15-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12

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REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
1-Naphthylamine	134-32-7	LA-523-456	U	<1		ug/L	1	1	2	10/16/12
Aramite	140-57-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Kepone	143-50-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Hexachloropropene	1888-71-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Diallate	2303-16-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Pronamide	23950-58-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Isodrin	465-73-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Chlorobenzilate	510-15-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2-Acetylaminofluorene	53-96-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
n-Nitrosodiethylamine	55-18-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
3-Methylcholanthrene	56-49-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
4-Nitroquinoline-1-oxide	56-57-5	LA-523-456	U	<0.9		ug/L	1	0.9	2	10/16/12
7,12-Dimethylbenz(a)anthracene	57-97-6	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
2,3,4,6-Tetrachlorophenol	58-90-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
n-Nitrosomorpholine	59-89-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Pentachlorobenzene	608-93-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Phenacetin	62-44-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12

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REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Ethyl methanesulfonate	62-50-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Aniline	62-53-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
n-Nitrosodimethylamine	62-75-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Methyl methanesulfonate	66-27-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Pentachloroethane	76-01-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Pentachloronitrobenzene	82-68-8	LA-523-456	U	<1		ug/L	1	1	2	10/16/12
2,6-Dichlorophenol	87-65-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Dinoseb(..dinitromethyl phenol)	88-85-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
4-Aminobiphenyl	92-67-1	LA-523-456	U	<1		ug/L	1	1	2	10/16/12
n-Nitrosodibutylamine	924-16-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
n-Nitrosopyrrolidine	930-55-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Safrole	94-59-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
o-Toluidine	95-53-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
1,2,4,5-Tetrachlorobenzene	95-94-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Acetophenone	98-86-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
1,3,5-Trinitrobenzene	99-35-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE

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.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed	
2-Methyl-5-nitroaniline	99-55-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12	
1,3-Dinitrobenzene	99-65-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12	
O,O,O-Triethylthiophosphate	126-68-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12	
Parathion	56-38-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12	
Dimethylaminoazobenzene	60-11-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12	
Dimethoate	60-51-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12	
Thionazin	297-97-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12	
Methyl parathion	298-00-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12	
Phorate	298-02-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12	
Disulfoton	298-04-4	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12	
Sulfotep	3689-24-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12	
Famfur	52-85-7	LA-523-456	U	<5		ug/L	1	5	9	10/16/12	
N-Nitrosodiphenylamin/Di phenyl Methaprylene	91-80-5	DPA+NNDPA	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
<b>Total Petroleum Hydrocarbons (Water Prep)</b>										<b>10/04/12</b>	
<b>Extractable Diesel and Petroleum</b>											
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	10/05/12	

MDL = Minimum Detection Limit

B - Analyte was detected in both the BLANK and SAMPLE

T - MS/MSD recovery outside control limits(GC/MS only).

RQ = Result Qualifier

D - Analyte was reported at a secondary dilution factor.

U - Analyzed for but not detected above limiting criteria.

TP Err = Total Propagated Error

E - The calibration exceeds the calibration range (GC/MS).

X,Y or Z - See comment detail and/or narrative.

DF = Dilution Factor

J - Analyte < lowest calibration but >= MDL.

PQL is equivalent to Estimated Quantitation Limit (EQL)

+ - Indicates more than nine qualifier

N - Presumed evidence based on MS library search(GC/MS only)

o - LCS recovery outside established laboratory acceptance limits.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

**Sample #** 121230001  
**SAF#** W13-010  
**Sample ID** B2M123

**Matrix** WATER  
**Sampled** 10/03/12  
**Received** 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Kerosene	TPHKEROSEN LA-523-493		U	<70		ug/L	1	70	100	10/05/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

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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).

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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.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Volatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Gasoline Range Prep (W)</b>										10/16/12
<b>Gasoline Range (W)</b>										
Gasoline	TPHGASOLIN	LA-523-443	U	<50		ug/L	1	50	200	10/16/12
<b>Preparation for 8260B (W)</b>										10/11/12
<b>SW-846 8260B Volatiles</b>										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	10/16/12

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B - Analyte was detected in both the BLANK and SAMPLE

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E - The calibration exceeds the calibration range (GC/MS).

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

N - Presumed evidence based on MS library search(GC/MS only)

T - GC/MS or N - Non GC/MS - MS/MSD recovery outside control limits

U - Analyzed for but not detected above limiting criteria.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Volatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
2-Hexanone	591-78-6	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Chloromethane	74-87-3	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Chloroethane	75-00-3	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Bromodichloromethane	75-27-4	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	10/16/12

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REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Volatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	10/16/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	10/16/12
Trichlorofluoromethane	75-69-4	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Acetonitrile	75-05-8	LA-523-455	U	<2		ug/L	1	2	10	10/16/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	10/16/12
Isobutyl alcohol	78-83-1	LA-523-455	U	<200		ug/L	1	200	1.E3	10/16/12
Iodomethane	74-88-4	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
1,1,1,2-Tetrachloroethane	630-20-6	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
1,2,3-Trichloropropane	96-18-4	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
1,2-Dibromo-3-chloropropane	96-12-8	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
1,2-Dibromoethane	106-93-4	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Acrolein	107-02-8	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Acrylonitrile	107-13-1	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Allyl chloride	107-05-1	LA-523-455	U	<1		ug/L	1	1	5	10/16/12

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

N - Presumed evidence based on MS library search(GC/MS only)

T - GC/MS or N - Non GC/MS - MS/MSD recovery outside control limits

U - Analyzed for but not detected above limiting criteria.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Volatiles

**Group #** WSCF121230

<b>Sample #</b>	121230001	<b>Matrix</b>	WATER
<b>SAF#</b>	W13-010	<b>Sampled</b>	10/03/12
<b>Sample ID</b>	B2M123	<b>Received</b>	10/03/12

<b>Test Performed</b>	<b>CAS #</b>	<b>Method</b>	<b>RQ</b>	<b>Result</b>	<b>TP Err</b>	<b>Units</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Analyzed</b>
Methylene bromide	74-95-3	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Dichlorodifluoromethane	75-71-8	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Ethyl methacrylate	97-63-2	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Methacrylonitrile	126-98-7	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Methyl methacrylate	80-62-6	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Trans-1,4-dichloro-2-butene	110-57-6	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Vinyl acetate	108-05-4	LA-523-455	U	<1		ug/L	1	1	5	10/16/12
Chloroprene	126-99-8	LA-523-455	U	<1		ug/L	1	1	5	10/16/12

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TP Err = Total Propagated Error

DF = Dilution Factor

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B - Analyte was detected in both the BLANK and SAMPLE

D - Analyte was reported at a secondary dilution factor.

E - The calibration exceeds the calibration range (GC/MS).

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

N - Presumed evidence based on MS library search(GC/MS only)

T - GC/MS or N - Non GC/MS - MS/MSD recovery outside control limits

U - Analyzed for but not detected above limiting criteria.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Wet Chemistry

**Group #** WSCF121230

**Sample #** 121230001  
**SAF#** W13-010  
**Sample ID** B2M123

**Matrix** WATER  
**Sampled** 10/03/12  
**Received** 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for Cyanide (W)</b>										10/10/12
<b>Cyanide (W) by Midi/Spectrophotometer</b>										10/15/12
Cyanide	57-12-5	LA-695-402	U	<4.0		ug/L	1	4.0	20	10/10/12
										10/15/12
<b>Total Alkalinity as mg/L CaCO<sub>3</sub> (Water)</b>										10/15/12
Total Alkalinity as CaCO <sub>3</sub>	ALKALINITY	LA-531-411		110		mg/L	1	1	10	10/15/12
										10/05/12
<b>Total Organic Carbon</b>										10/05/12
Total Organic Carbon	TOC	LA-344-406	B	0.133		mg/L	1	0.10	0.30	10/05/12

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.

REVISED121230 -

Attention Scot Fitzgerald  
Department Wet Chemistry

Group # WSCF121230

Sample # 121230003  
SAF# W13-010  
Sample ID B2M212

Matrix WATER  
Sampled 10/03/12  
Received 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Organic Carbon	TOC	LA-344-406	B	0.143		mg/L	1	0.10	0.30	10/05/12
10/05/12										

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.

REVISED121230 -

Attention Scot Fitzgerald  
Department Wet Chemistry

Group # WSCF121230

Sample # 121230004  
SAF# W13-010  
Sample ID B2M213

Matrix WATER  
Sampled 10/03/12  
Received 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Organic Carbon	TOC	LA-344-406	B	0.131		mg/L	1	0.10	0.30	10/05/12
10/05/12										

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

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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.

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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)

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REVISED121230 -

Attention Scot Fitzgerald  
Department Wet Chemistry

Group # WSCF121230

Sample # 121230005  
SAF# W13-010  
Sample ID B2M214

Matrix WATER  
Sampled 10/03/12  
Received 10/03/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Total Organic Carbon	TOC	LA-344-406	B	0.142		mg/L	1	0.10	0.30	10/05/12
10/05/12										

MDL = Minimum Detection Limit

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TP Err = Total Propagated Error

DF = Dilution Factor

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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.

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Attention Scot Fitzgerald  
 Department Inorganic

Group # WSCF121230

Analytical Batch 208205 (QC Batch: 208198) Test ICP-6010 - All possible metals  
 Associated Samples 121230001, 121230002

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										<b>QC Sample #82193</b>
Iron	7439-89-6	<19		ug/L				U		10/05/12
Magnesium	7439-95-4	<4.0		ug/L				U		10/05/12
Manganese	7439-96-5	<4.0		ug/L				U		10/05/12
Nickel	7440-02-0	<4.0		ug/L				U		10/05/12
Potassium	7440-09-7	<76		ug/L				U		10/05/12
Silver	7440-22-4	<4.0		ug/L				U		10/05/12
Sodium	7440-23-5	<10		ug/L				U		10/05/12
Antimony	7440-36-0	<36		ug/L				U		10/05/12
Barium	7440-39-3	<4.0		ug/L				U		10/05/12
Cadmium	7440-43-9	<4.0		ug/L				U		10/05/12
Chromium	7440-47-3	<5.0		ug/L				U		10/05/12
Cobalt	7440-48-4	<4.0		ug/L				U		10/05/12
Copper	7440-50-8	<4.0		ug/L				U		10/05/12
Vanadium	7440-62-2	<5.0		ug/L				U		10/05/12
Zinc	7440-66-6	<5.0		ug/L				U		10/05/12
Calcium	7440-70-2	<49		ug/L				U		10/05/12
Strontium	7440-24-6	<9.0		ug/L				U		10/05/12

\* - QC result out of range

n/a - Not Applicable

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Titanium	7440-32-6	<4.0		ug/L					U	10/05/12
Beryllium	7440-41-7	<4.0		ug/L					U	10/05/12
<b>LCS</b>										
<b>QC Sample #82195</b>										
Iron	7439-89-6	1010		ug/L	100.6	80 - 120				10/05/12
Magnesium	7439-95-4	10300		ug/L	103	80 - 120				10/05/12
Manganese	7439-96-5	1030		ug/L	102.7	80 - 120				10/05/12
Nickel	7440-02-0	997		ug/L	99.7	80 - 120				10/05/12
Potassium	7440-09-7	10900		ug/L	108.6	80 - 120				10/05/12
Silver	7440-22-4	1020		ug/L	102.2	80 - 120				10/05/12
Sodium	7440-23-5	10500		ug/L	105	80 - 120				10/05/12
Antimony	7440-36-0	1040		ug/L	103.9	80 - 120				10/05/12
Barium	7440-39-3	1040		ug/L	104.5	80 - 120				10/05/12
Cadmium	7440-43-9	1010		ug/L	100.9	80 - 120				10/05/12
Chromium	7440-47-3	1010		ug/L	101.2	80 - 120				10/05/12
Cobalt	7440-48-4	991		ug/L	99.1	80 - 120				10/05/12
Copper	7440-50-8	1030		ug/L	102.8	80 - 120				10/05/12
Vanadium	7440-62-2	1010		ug/L	100.6	80 - 120				10/05/12
Zinc	7440-66-6	1030		ug/L	103.3	80 - 120				10/05/12
Calcium	7440-70-2	20700		ug/L	103.7	80 - 120				10/05/12
Strontium	7440-24-6	988		ug/L	98.8	80 - 120				10/05/12
Titanium	7440-32-6	1030		ug/L	103.4	80 - 120				10/05/12
Beryllium	7440-41-7	1010		ug/L	101.4	80 - 120				10/05/12

\* - QC result out of range

n/a - Not Applicable

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Attention Scot Fitzgerald  
Department Inorganic

Group # WSCF121230

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>MS</b>										
<b>QC Sample #82196</b>										
<b>Original 121223007</b>										
Iron	7439-89-6	1010	ug/L	101.2	75 - 125					10/05/12
Magnesium	7439-95-4	10400	ug/L	104.5	75 - 125					10/05/12
Manganese	7439-96-5	1030	ug/L	103.4	75 - 125					10/05/12
Nickel	7440-02-0	988	ug/L	98.8	75 - 125					10/05/12
Potassium	7440-09-7	11000	ug/L	110	75 - 125					10/05/12
Silver	7440-22-4	1020	ug/L	102	75 - 125					10/05/12
Sodium	7440-23-5	9960	ug/L	99.6	75 - 125					10/05/12
Antimony	7440-36-0	1030	ug/L	103.4	75 - 125					10/05/12
Barium	7440-39-3	1030	ug/L	103.4	75 - 125					10/05/12
Cadmium	7440-43-9	1010	ug/L	101.2	75 - 125					10/05/12
Chromium	7440-47-3	1020	ug/L	102.4	75 - 125					10/05/12
Cobalt	7440-48-4	984	ug/L	98.4	75 - 125					10/05/12
Copper	7440-50-8	1020	ug/L	101.5	75 - 125					10/05/12
Vanadium	7440-62-2	1010	ug/L	101.5	75 - 125					10/05/12
Zinc	7440-66-6	1040	ug/L	103.7	75 - 125					10/05/12
Calcium	7440-70-2	21800	ug/L	108.8	75 - 125					10/05/12
Strontium	7440-24-6	1000	ug/L	100.3	75 - 125					10/05/12
Titanium	7440-32-6	1030	ug/L	103.1	75 - 125					10/05/12
Beryllium	7440-41-7	1030	ug/L	102.6	75 - 125					10/05/12
<b>MSD</b>										
<b>QC Sample #82197</b>										
<b>Original 121223007</b>										
<b>Paired 82196</b>										
Iron	7439-89-6	1000	ug/L	100.5	75 - 125	0.70	20			10/05/12

\* - QC result out of range

n/a - Not Applicable

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Magnesium	7439-95-4	10300	ug/L	103.3	75 - 125	0.50	20			10/05/12
Manganese	7439-96-5	1030	ug/L	102.9	75 - 125	0.50	20			10/05/12
Nickel	7440-02-0	984	ug/L	98.4	75 - 125	0.40	20			10/05/12
Potassium	7440-09-7	10900	ug/L	108.5	75 - 125	0.80	20			10/05/12
Silver	7440-22-4	1020	ug/L	101.7	75 - 125	0.30	20			10/05/12
Sodium	7440-23-5	9930	ug/L	99.3	75 - 125	0.10	20			10/05/12
Antimony	7440-36-0	1050	ug/L	104.6	75 - 125	1.20	20			10/05/12
Barium	7440-39-3	1030	ug/L	103.5	75 - 125	0.10	20			10/05/12
Cadmium	7440-43-9	1010	ug/L	101.3	75 - 125	0.10	20			10/05/12
Chromium	7440-47-3	1020	ug/L	102.1	75 - 125	0.30	20			10/05/12
Cobalt	7440-48-4	981	ug/L	98.1	75 - 125	0.30	20			10/05/12
Copper	7440-50-8	1010	ug/L	101.4	75 - 125	0.10	20			10/05/12
Vanadium	7440-62-2	1010	ug/L	101	75 - 125	0.50	20			10/05/12
Zinc	7440-66-6	1040	ug/L	103.8	75 - 125	0.10	20			10/05/12
Calcium	7440-70-2	21200	ug/L	105.8	75 - 125	0.90	20			10/05/12
Strontium	7440-24-6	999	ug/L	99.9	75 - 125	0.30	20			10/05/12
Titanium	7440-32-6	1030	ug/L	102.9	75 - 125	0.20	20			10/05/12
Beryllium	7440-41-7	1020	ug/L	102.5	75 - 125	0.10	20			10/05/12

\* - QC result out of range

n/a - Not Applicable

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**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

**Analytical Batch** 208258 (QC Batch: 208245)      **Test** Extractable Diesel and Petroleum  
**Associated Samples** 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>		<b>QC Sample #82350</b>								
Diesel	TPHDIESEL	<80		ug/L				U		10/05/12
Kerosene	TPHKEROSE	<80		ug/L				U		10/05/12
<b>LCS</b>		<b>QC Sample #82351</b>								
Diesel	TPHDIESEL	2800		ug/L	111.6	65 - 128				10/05/12
<b>MS</b>		<b>QC Sample #82352</b>								
		Original 121223013								
Diesel	TPHDIESEL	2400		ug/L	102.2	73 - 123				10/05/12
<b>MSD</b>		<b>QC Sample #82353</b>								
		Original 121223013								
Diesel	TPHDIESEL	2500		ug/L	105.7	73 - 123	3.40	20		10/05/12

\* - QC result out of range

n/a - Not Applicable

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Attention Scot Fitzgerald  
 Department Wet Chemistry

Group # WSCF121230

Analytical Batch 208268 (QC Batch: 208268) Test Total Organic Carbon  
 Associated Samples 121230001, 121230003, 121230004, 121230005

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>		<b>QC Sample #82439</b>								
Total Organic Carbon	TOC		<0.045	mg/L					U	10/05/12
<b>LCS</b>		<b>QC Sample #82440</b>								
Total Organic Carbon	TOC		2.20	mg/L	109.8	80 - 120				10/05/12
<b>MS</b>		<b>QC Sample #82441</b> <b>Original 121226007</b>								
Total Organic Carbon	TOC		2.21	mg/L	110.6	75 - 125				10/05/12
<b>MSD</b>		<b>QC Sample #82442</b> <b>Original 121226007</b>								
Total Organic Carbon	TOC		2.22	mg/L	111.1	75 - 125	0.40	20		10/05/12
<b>MS</b>		<b>QC Sample #82444</b> <b>Original 121230004</b>								
Total Organic Carbon	TOC	0.131	2.21	mg/L	110.3	75 - 125				10/05/12
<b>MSD</b>		<b>QC Sample #82445</b> <b>Original 121230004</b>								
Total Organic Carbon	TOC	0.131	2.20	mg/L	109.9	75 - 125	0.30	20		10/05/12

\* - QC result out of range

n/a - Not Applicable

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Attention Scot Fitzgerald  
 Department Inorganic

Group # WSCF121230

Analytical Batch 208292 (QC Batch: 208257) Test ICP-2008 MS All possible metal  
 Associated Samples 121230001, 121230002, 121230006, 121230007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										<b>QC Sample #82385</b>
Aluminum	7429-90-5		16.0	ug/L				B		10/09/12
Manganese	7439-96-5		<0.10	ug/L				U		10/09/12
Nickel	7440-02-0		<0.10	ug/L				U		10/09/12
Silver	7440-22-4		<0.050	ug/L				U		10/09/12
Antimony	7440-36-0		<0.30	ug/L				U		10/09/12
Barium	7440-39-3		<0.20	ug/L				U		10/09/12
Beryllium	7440-41-7		<0.10	ug/L				U		10/09/12
Cadmium	7440-43-9		<0.050	ug/L				U		10/09/12
Chromium	7440-47-3		<0.10	ug/L				U		10/09/12
Cobalt	7440-48-4		<0.050	ug/L				U		10/09/12
Copper	7440-50-8		0.155	ug/L				B		10/09/12
Vanadium	7440-62-2		0.315	ug/L				B		10/09/12
Zinc	7440-66-6		<1.0	ug/L				U		10/09/12
Lead	7439-92-1		<0.050	ug/L				U		10/09/12
Mercury	7439-97-6		<0.050	ug/L				U		10/09/12
Molybdenum	7439-98-7		<0.050	ug/L				U		10/09/12
Strontium	7440-24-6		0.242	ug/L				B		10/09/12

\* - QC result out of range

n/a - Not Applicable

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Group # WSCF121230

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Thallium	7440-28-0	<0.050	ug/L					U		10/09/12
Tin	7440-31-5	<0.050	ug/L					U		10/09/12
Arsenic	7440-38-2	<0.20	ug/L					U		10/09/12
Selenium	7782-49-2	<1.0	ug/L					U		10/09/12
<b>LCS</b>		<b>QC Sample #82386</b>								
Aluminum	7429-90-5	448	ug/L	112	85 - 115					10/09/12
Manganese	7439-96-5	42.3	ug/L	105.7	85 - 115					10/09/12
Nickel	7440-02-0	42.4	ug/L	105.9	85 - 115					10/09/12
Silver	7440-22-4	41.8	ug/L	104.6	85 - 115					10/09/12
Antimony	7440-36-0	41.1	ug/L	102.6	85 - 115					10/09/12
Barium	7440-39-3	43.4	ug/L	108.4	85 - 115					10/09/12
Beryllium	7440-41-7	44.0	ug/L	110	85 - 115					10/09/12
Cadmium	7440-43-9	41.7	ug/L	104.4	85 - 115					10/09/12
Chromium	7440-47-3	43.1	ug/L	107.8	85 - 115					10/09/12
Cobalt	7440-48-4	42.4	ug/L	106.1	85 - 115					10/09/12
Copper	7440-50-8	42.7	ug/L	106.8	85 - 115					10/09/12
Vanadium	7440-62-2	43.3	ug/L	108.3	85 - 115					10/09/12
Zinc	7440-66-6	39.6	ug/L	99	85 - 115					10/09/12
Lead	7439-92-1	44.5	ug/L	111.3	85 - 115					10/09/12
Mercury	7439-97-6	1.80	ug/L	89.8	85 - 115					10/09/12
Molybdenum	7439-98-7	42.2	ug/L	105.4	85 - 115					10/09/12
Strontium	7440-24-6	424	ug/L	106	85 - 115					10/09/12

\* - QC result out of range

n/a - Not Applicable

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Group #

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Thallium	7440-28-0	44.2	ug/L	110.4	85 - 115					10/09/12
Tin	7440-31-5	42.1	ug/L	105.2	85 - 115					10/09/12
Arsenic	7440-38-2	40.5	ug/L	101.2	85 - 115					10/09/12
Selenium	7782-49-2	37.7	ug/L	94.2	85 - 115					10/09/12
<b>MS</b>		<b>QC Sample #82387</b>								
		<b>Original 121223010</b>								
Aluminum	7429-90-5	453	ug/L	113.1	70 - 130					10/09/12
Manganese	7439-96-5	42.1	ug/L	105.3	70 - 130					10/09/12
Nickel	7440-02-0	40.8	ug/L	102.1	70 - 130					10/09/12
Silver	7440-22-4	39.8	ug/L	99.6	70 - 130					10/09/12
Antimony	7440-36-0	42.7	ug/L	106.7	70 - 130					10/09/12
Barium	7440-39-3	42.8	ug/L	107.1	70 - 130					10/09/12
Beryllium	7440-41-7	44.8	ug/L	112.1	70 - 130					10/09/12
Cadmium	7440-43-9	41.8	ug/L	104.6	70 - 130					10/09/12
Chromium	7440-47-3	43.4	ug/L	108.4	70 - 130					10/09/12
Cobalt	7440-48-4	41.7	ug/L	104.2	70 - 130					10/09/12
Copper	7440-50-8	39.8	ug/L	99.4	70 - 130					10/09/12
Vanadium	7440-62-2	44.4	ug/L	111	70 - 130					10/09/12
Zinc	7440-66-6	38.0	ug/L	95	70 - 130					10/09/12
Lead	7439-92-1	46.4	ug/L	115.9	70 - 130					10/09/12
Mercury	7439-97-6	1.91	ug/L	95.4	70 - 130					10/09/12
Molybdenum	7439-98-7	44.7	ug/L	111.7	70 - 130					10/09/12
Strontium	7440-24-6	427	ug/L	106.7	70 - 130					10/09/12

\* - QC result out of range

n/a - Not Applicable

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 Department Inorganic

Group # WSCF121230

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Thallium	7440-28-0	46.8	ug/L	116.9	70 - 130					10/09/12
Tin	7440-31-5	43.4	ug/L	108.5	70 - 130					10/09/12
Arsenic	7440-38-2	41.6	ug/L	103.9	70 - 130					10/09/12
Selenium	7782-49-2	38.2	ug/L	95.5	70 - 130					10/09/12
<b>MSD</b>		<b>QC Sample #82388</b>								
		<b>Original 121223010</b>								
								<b>Paired</b>	<b>82387</b>	
Aluminum	7429-90-5	453	ug/L	113.2	70 - 130		0.00	20		10/09/12
Manganese	7439-96-5	42.3	ug/L	105.7	70 - 130		0.40	20		10/09/12
Nickel	7440-02-0	40.9	ug/L	102.3	70 - 130		0.20	20		10/09/12
Silver	7440-22-4	40.0	ug/L	100	70 - 130		0.40	20		10/09/12
Antimony	7440-36-0	42.4	ug/L	106.1	70 - 130		0.60	20		10/09/12
Barium	7440-39-3	42.5	ug/L	106.4	70 - 130		0.20	20		10/09/12
Beryllium	7440-41-7	46.4	ug/L	116.1	70 - 130		3.50	20		10/09/12
Cadmium	7440-43-9	41.4	ug/L	103.6	70 - 130		0.90	20		10/09/12
Chromium	7440-47-3	43.3	ug/L	108.3	70 - 130		0.10	20		10/09/12
Cobalt	7440-48-4	41.5	ug/L	103.7	70 - 130		0.50	20		10/09/12
Copper	7440-50-8	39.8	ug/L	99.4	70 - 130		0.00	20		10/09/12
Vanadium	7440-62-2	44.7	ug/L	111.7	70 - 130		0.40	20		10/09/12
Zinc	7440-66-6	38.6	ug/L	96.6	70 - 130		1.70	20		10/09/12
Lead	7439-92-1	46.1	ug/L	115.3	70 - 130		0.60	20		10/09/12
Mercury	7439-97-6	1.89	ug/L	94.6	70 - 130		0.80	20		10/09/12
Molybdenum	7439-98-7	44.6	ug/L	111.6	70 - 130		0.10	20		10/09/12
Strontium	7440-24-6	434	ug/L	108.5	70 - 130		1.10	20		10/09/12

\* - QC result out of range

n/a - Not Applicable

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Thallium	7440-28-0	46.5	ug/L	116.2	70 - 130	0.60	20			10/09/12
Tin	7440-31-5	43.2	ug/L	108	70 - 130	0.50	20			10/09/12
Arsenic	7440-38-2	41.8	ug/L	104.5	70 - 130	0.60	20			10/09/12
Selenium	7782-49-2	38.3	ug/L	95.7	70 - 130	0.20	20			10/09/12

\* - QC result out of range

n/a - Not Applicable

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## Quality Control Report

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**Attention** Scot Fitzgerald  
**Department** Organic, Volatiles

**Group #** WSCF121230

**Analytical Batch** 208457 (QC Batch: 208456)      **Test** SW-846 8260B Volatiles  
**Associated Samples** 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										<b>QC Sample #82689</b>
1,1-Dichloroethene	75-35-4		<1	ug/L				U		10/16/12
Trichloroethene	79-01-6		<1	ug/L				U		10/16/12
Benzene	71-43-2		<1	ug/L				U		10/16/12
Toluene	108-88-3		<1	ug/L				U		10/16/12
Chlorobenzene	108-90-7		<1	ug/L				U		10/16/12
1,1-Dichloroethane	75-34-3		<1	ug/L				U		10/16/12
Ethylbenzene	100-41-4		<1	ug/L				U		10/16/12
Styrene	100-42-5		<1	ug/L				U		10/16/12
cis-1,3-Dichloropropene	10061-01-5		<1	ug/L				U		10/16/12
trans-1,3-Dichloropropene	10061-02-6		<1	ug/L				U		10/16/12
1,2-Dichloroethane	107-06-2		<1	ug/L				U		10/16/12
Methyl isobutyl ketone	108-10-1		<1	ug/L				U		10/16/12
Dibromochloromethane	124-48-1		<1	ug/L				U		10/16/12
Tetrachloroethene	127-18-4		<1	ug/L				U		10/16/12
Total Xylenes	1330-20-7		<1	ug/L				U		10/16/12

\* - QC result out of range

n/a - Not Applicable

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## Quality Control Report

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Attention Scot Fitzgerald  
 Department Organic, Volatiles

Group #

WSCF121230

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	10/16/12
Carbon tetrachloride	56-23-5	<1		ug/L				U	10/16/12
2-Hexanone	591-78-6	<1		ug/L				U	10/16/12
Acetone	67-64-1	<1		ug/L				U	10/16/12
Chloroform	67-66-3	<1		ug/L				U	10/16/12
1,1,1-Trichloroethane	71-55-6	<1		ug/L				U	10/16/12
Bromomethane	74-83-9	<1		ug/L				U	10/16/12
Chloromethane	74-87-3	<1		ug/L				U	10/16/12
Chloroethane	75-00-3	<1		ug/L				U	10/16/12
Vinyl chloride	75-01-4	<1		ug/L				U	10/16/12
Methylene chloride	75-09-2	<1		ug/L				U	10/16/12
Carbon disulfide	75-15-0	<1		ug/L				U	10/16/12
Bromoform	75-25-2	<1		ug/L				U	10/16/12
Bromodichloromethane	75-27-4	<1		ug/L				U	10/16/12
1,2-Dichloropropane	78-87-5	<1		ug/L				U	10/16/12
Methyl ethyl ketone	78-93-3	<1		ug/L				U	10/16/12
1,1,2-Trichloroethane	79-00-5	<1		ug/L				U	10/16/12
1,1,2,2-Tetrachloroethane	79-34-5	<1		ug/L				U	10/16/12
1-Butanol	71-36-3	<100		ug/L				U	10/16/12
Tetrahydrofuran	109-99-9	<2		ug/L				U	10/16/12
Trichlorofluoromethane	75-69-4	<1		ug/L				U	10/16/12

\* - QC result out of range

n/a - Not Applicable

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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	10/16/12
Acetonitrile	75-05-8		<2	ug/L				U	10/16/12
cis-1,2-Dichloroethene	156-59-2		<1	ug/L				U	10/16/12
Propionitrile	107-12-0		<2	ug/L				U	10/16/12
Isobutyl alcohol	78-83-1		<200	ug/L				U	10/16/12
Iodomethane	74-88-4		<1	ug/L				U	10/16/12
1,1,1,2-Tetrachloroethane	630-20-6		<1	ug/L				U	10/16/12
1,2,3-Trichloropropane	96-18-4		<1	ug/L				U	10/16/12
1,2-Dibromo-3-chloropropane	96-12-8		<1	ug/L				U	10/16/12
1,2-Dibromoethane	106-93-4		<1	ug/L				U	10/16/12
Acrolein	107-02-8		<1	ug/L				U	10/16/12
Acrylonitrile	107-13-1		<1	ug/L				U	10/16/12
Allyl chloride	107-05-1		<1	ug/L				U	10/16/12
Methylene bromide	74-95-3		<1	ug/L				U	10/16/12
Dichlorodifluoromethane	75-71-8		<1	ug/L				U	10/16/12
Ethyl methacrylate	97-63-2		<1	ug/L				U	10/16/12
Methacrylonitrile	126-98-7		<1	ug/L				U	10/16/12
Methyl methacrylate	80-62-6		<1	ug/L				U	10/16/12
Trans-1,4-dichloro-2-butene	110-57-6		<1	ug/L				U	10/16/12
Vinyl acetate	108-05-4		<1	ug/L				U	10/16/12

\* - QC result out of range

n/a - Not Applicable

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chloroprene	126-99-8	<1		ug/L					U	10/16/12
<b>LCS</b>										
			<b>QC Sample #82690</b>							
1,1-Dichloroethene	75-35-4	25		ug/L	99.9	75 - 125				10/16/12
Trichloroethene	79-01-6	24		ug/L	97.2	75 - 125				10/16/12
Benzene	71-43-2	26		ug/L	103.8	75 - 125				10/16/12
Toluene	108-88-3	25		ug/L	99.4	75 - 125				10/16/12
Chlorobenzene	108-90-7	25		ug/L	101.5	75 - 125				10/16/12
1,1-Dichloroethane	75-34-3	25		ug/L	100.4	75 - 125				10/16/12
Ethylbenzene	100-41-4	26		ug/L	102.4	75 - 125				10/16/12
Styrene	100-42-5	27		ug/L	109.9	75 - 125				10/16/12
trans-1,3-Dichloropropene	10061-02-6	27		ug/L	106.9	75 - 125				10/16/12
1,2-Dichloroethane	107-06-2	28		ug/L	111	75 - 125				10/16/12
1,1,1-Trichloroethane	71-55-6	26		ug/L	103.1	75 - 125				10/16/12
Dibromochloromethane	124-48-1	28		ug/L	111.1	75 - 125				10/16/12
Carbon disulfide	75-15-0	25		ug/L	99.2	75 - 125				10/16/12
Bromoform	75-25-2	31		ug/L	125	75 - 125				10/16/12
Bromodichloromethane	75-27-4	27		ug/L	107.9	75 - 125				10/16/12
1,2-Dichloropropane	78-87-5	27		ug/L	106.4	75 - 125				10/16/12
1,1,2-Trichloroethane	79-00-5	28		ug/L	110.6	75 - 125				10/16/12
1,1,2,2-Tetrachloroethane	79-34-5	29		ug/L	116.2	75 - 125				10/16/12

\* - QC result out of range

n/a - Not Applicable

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
trans-1,2-Dichloroethene	156-60-5	25		ug/L	100.8	75 - 125				10/16/12
cis-1,2-Dichloroethene	156-59-2	25		ug/L	98.2	75 - 125				10/16/12
<b>MS</b>										
<b>QC Sample #82691</b>										
<b>Original 121223013</b>										
1,1-Dichloroethene	75-35-4	25		ug/L	100.2	75 - 125				10/16/12
Trichloroethene	79-01-6	25		ug/L	98.9	75 - 125				10/16/12
Benzene	71-43-2	26		ug/L	105.3	75 - 125				10/16/12
Toluene	108-88-3	25		ug/L	101.8	75 - 125				10/16/12
Chlorobenzene	108-90-7	26		ug/L	104.4	75 - 125				10/16/12
1,1-Dichloroethane	75-34-3	25		ug/L	101	75 - 125				10/16/12
Ethylbenzene	100-41-4	26		ug/L	104.5	75 - 125				10/16/12
Styrene	100-42-5	28		ug/L	110.6	75 - 125				10/16/12
trans-1,3-Dichloropropene	10061-02-6	26		ug/L	104.6	75 - 125				10/16/12
1,2-Dichloroethane	107-06-2	27		ug/L	106.5	75 - 125				10/16/12
1,1,1-Trichloroethane	71-55-6	26		ug/L	104.9	75 - 125				10/16/12
Dibromochloromethane	124-48-1	28		ug/L	110	75 - 125				10/16/12
Carbon disulfide	75-15-0	25		ug/L	98.6	75 - 125				10/16/12
Bromoform	75-25-2	30		ug/L	121.3	75 - 125				10/16/12
Bromodichloromethane	75-27-4	27		ug/L	107.4	75 - 125				10/16/12
1,2-Dichloropropane	78-87-5	27		ug/L	106.6	75 - 125				10/16/12
1,1,2-Trichloroethane	79-00-5	27		ug/L	109.8	75 - 125				10/16/12

\* - QC result out of range

n/a - Not Applicable

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Attention Scot Fitzgerald  
 Department Organic, Volatiles

Group #

WSCF121230

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,1,2,2-Tetrachloroethane	79-34-5	28		ug/L	111.6	75 - 125				10/16/12
trans-1,2-Dichloroethene	156-60-5	26		ug/L	104.4	75 - 125				10/16/12
cis-1,2-Dichloroethene	156-59-2	25		ug/L	98.5	75 - 125				10/16/12
<b>MSD</b>										
<b>QC Sample #82692</b>										
Original    121223013										
Paired    82691										
1,1-Dichloroethene	75-35-4	25		ug/L	101.7	75 - 125	1.40	20		10/16/12
Trichloroethene	79-01-6	24		ug/L	97	75 - 125	2.00	20		10/16/12
Benzene	71-43-2	26		ug/L	102.2	75 - 125	3.00	20		10/16/12
Toluene	108-88-3	25		ug/L	99.2	75 - 125	2.50	20		10/16/12
Chlorobenzene	108-90-7	25		ug/L	100.5	75 - 125	3.80	20		10/16/12
1,1-Dichloroethane	75-34-3	25		ug/L	100.5	75 - 125	0.60	20		10/16/12
Ethylbenzene	100-41-4	26		ug/L	102.4	75 - 125	2.00	20		10/16/12
Styrene	100-42-5	27		ug/L	107.1	75 - 125	3.20	20		10/16/12
trans-1,3-Dichloropropene	10061-02-6	25		ug/L	100.4	75 - 125	4.10	20		10/16/12
1,2-Dichloroethane	107-06-2	25		ug/L	101.8	75 - 125	4.40	20		10/16/12
1,1,1-Trichloroethane	71-55-6	26		ug/L	103	75 - 125	1.80	20		10/16/12
Dibromochloromethane	124-48-1	26		ug/L	105.3	75 - 125	4.40	20		10/16/12
Carbon disulfide	75-15-0	25		ug/L	98.6	75 - 125	0.00	20		10/16/12
Bromoform	75-25-2	28		ug/L	113.4	75 - 125	6.80	20		10/16/12
Bromodichloromethane	75-27-4	26		ug/L	104.5	75 - 125	2.80	20		10/16/12
1,2-Dichloropropane	78-87-5	26		ug/L	103.3	75 - 125	3.10	20		10/16/12

\* - QC result out of range

n/a - Not Applicable

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**Quality Control Report****DECEMBER 18, 2012****REVISION 2****Attention** Scot Fitzgerald  
**Department** Organic, Volatiles**Group #**

WSCF121230

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,1,2-Trichloroethane	79-00-5	26		ug/L	104.2	75 - 125	5.20	20		10/16/12
1,1,2,2-Tetrachloroethane	79-34-5	26		ug/L	103.4	75 - 125	7.60	20		10/16/12
trans-1,2-Dichloroethene	156-60-5	24		ug/L	97.2	75 - 125	7.10	20		10/16/12
cis-1,2-Dichloroethene	156-59-2	25		ug/L	98.6	75 - 125	0.10	20		10/16/12

\* - QC result out of range

n/a - Not Applicable

**REVISED121230 -**

**Attention** Scot Fitzgerald  
**Department** Wet Chemistry

**Group #** WSCF121230

**Analytical Batch** 208482 (QC Batch: 208476)      **Test** Cyanide (W) by Midi/Spectrophotometer  
**Associated Samples** 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										<b>QC Sample #82749</b>
Cyanide LCS										<4.0 ug/L
										<b>QC Sample #82752</b>
Cyanide MS	57-12-5		52.4	ug/L	104.8	85 - 115				10/10/12
										<b>QC Sample #82753</b>
										Original 121203010
Cyanide MSD	57-12-5		40.4	ug/L	100.9	75 - 125				10/10/12
										<b>QC Sample #82754</b>
										Original 121203010
Cyanide	57-12-5		40.8	ug/L	102	75 - 125	1.10	20		Paired 82753
										10/10/12

\* - QC result out of range

n/a - Not Applicable

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## Quality Control Report

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Attention Scot Fitzgerald  
 Department Inorganic

Group # WSCF121230

Analytical Batch 208508 (QC Batch: 208507) Test Chemical Oxygen Demand  
 Associated Samples 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										<b>QC Sample #82881</b>
Chemical Oxygen Demand	COD		<10	mg/L					U	10/11/12
<b>LCS</b>										<b>QC Sample #82882</b>
Chemical Oxygen Demand	COD		99.2	mg/L	99.2	80 - 120				10/11/12
<b>MS</b>										<b>QC Sample #82885</b>
Original 121223013										
Chemical Oxygen Demand	COD		252	mg/L	100.8	75 - 125				10/11/12
<b>MSD</b>										<b>QC Sample #82886</b>
Original 121223013										Paired 82885
Chemical Oxygen Demand	COD		247	mg/L	99	75 - 125	1.90	20		10/11/12

\* - QC result out of range

n/a - Not Applicable

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Attention Scot Fitzgerald  
 Department Wet Chemistry

Group # WSCF121230

Analytical Batch 208754 (QC Batch: 208754) Test Total Alkalinity as mg/L CaCO<sub>3</sub> (Water)  
 Associated Samples 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed	
<b>LCS</b>										<b>QC Sample #82975</b>	
Total Alkalinity as CaCO <sub>3</sub>	ALKALINITY	97	mg/L	97	80 - 120					10/15/12	
<b>DUP</b>										<b>QC Sample #82976</b>	
		<b>Original 121239002</b>									
Total Alkalinity as CaCO <sub>3</sub>	ALKALINITY	120	mg/L				0.00	20		10/15/12	
<b>LCS</b>										<b>QC Sample #82977</b>	
Total Alkalinity as CaCO <sub>3</sub>	ALKALINITY	97	mg/L	97.5	80 - 120					10/15/12	
<b>LCS</b>										<b>QC Sample #82978</b>	
Total Alkalinity as CaCO <sub>3</sub>	ALKALINITY	97	mg/L	97.2	80 - 120					10/15/12	

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

Attention Scot Fitzgerald  
 Department Organic, Volatiles

Group # WSCF121230

Analytical Batch 208757 (QC Batch: 208756) Test Gasoline Range (W)  
 Associated Samples 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed		
<b>BLANK</b>										<b>QC Sample #82983</b>		
Gasoline	TPHGASOLI	<50		ug/L					U	10/16/12		
<b>LCS</b>			<b>QC Sample #82984</b>									
Gasoline	TPHGASOLI	2300		ug/L	93.6	80 - 120				10/16/12		
<b>MS</b>			<b>QC Sample #82985</b>									
			<b>Original 121223013</b>									
Gasoline	TPHGASOLI	1900		ug/L	78	75 - 125				10/16/12		
<b>MSD</b>			<b>QC Sample #82986</b>									
			<b>Original 121223013</b>									
Gasoline	TPHGASOLI	2100		ug/L	85.1	75 - 125	8.70	20		10/16/12		
<b>DUP</b>			<b>QC Sample #82987</b>									
			<b>Original 121223013</b>									
Gasoline	TPHGASOLI	<50		ug/L			0.00	20	U	10/16/12		

\* - QC result out of range

n/a - Not Applicable

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Attention Scot Fitzgerald  
 Department Organic, Semivolatiles

Group # WSCF121230

Analytical Batch 208850 (QC Batch: 208488) Test SW-846 8270D Semivolatiles  
 Associated Samples 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										<b>QC Sample #82826</b>
4-Nitrophenol	100-02-7		<1	ug/L				U		10/16/12
Phenol	108-95-2		<1	ug/L				U		10/16/12
1,2,4-Trichlorobenzene	120-82-1		<1	ug/L				U		10/16/12
2,4-Dinitrotoluene	121-14-2		<1	ug/L				U		10/16/12
1,4-Dichlorobenzene	106-46-7		<1	ug/L				U		10/16/12
Pyrene	129-00-0		<1	ug/L				U		10/16/12
4-Chloro-3-methylphenol	59-50-7		<1	ug/L				U		10/16/12
n-Nitroso-di-n-propylamine	621-64-7		<1	ug/L				U		10/16/12
Acenaphthene	83-32-9		<1	ug/L				U		10/16/12
Pentachlorophenol	87-86-5		<1	ug/L				U		10/16/12
2-Chlorophenol	95-57-8		<1	ug/L				U		10/16/12
4-Nitroaniline	100-01-6		<1	ug/L				U		10/16/12
4-Bromophenyl-phenylether	101-55-3		<1	ug/L				U		10/16/12
2,4-Dimethylphenol	105-67-9		<2	ug/L				U		10/16/12
4-Chloroaniline	106-47-8		<1	ug/L				U		10/16/12

\* - QC result out of range

n/a - Not Applicable

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Attention Scot Fitzgerald  
 Department Organic, Semivolatiles

Group #

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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	10/16/12
Bis-(2-Chloroethyl)ether	111-44-4		<1	ug/L				U	10/16/12
Bis-(2-Chloroethoxy)methane	111-91-1		<1	ug/L				U	10/16/12
Bis-(2-Ethylhexyl)phthalate	117-81-7		<1	ug/L				U	10/16/12
Di-n-octylphthalate	117-84-0		<1	ug/L				U	10/16/12
Hexachlorobenzene	118-74-1		<1	ug/L				U	10/16/12
Anthracene	120-12-7		<1	ug/L				U	10/16/12
2,4-Dichlorophenol	120-83-2		<1	ug/L				U	10/16/12
Dimethylphthalate	131-11-3		<1	ug/L				U	10/16/12
Dibenzofuran	132-64-9		<1	ug/L				U	10/16/12
Benzo(g,h,i)perylene	191-24-2		<1	ug/L				U	10/16/12
Indeno(1,2,3-cd)pyrene	193-39-5		<1	ug/L				U	10/16/12
Benzo(b)fluoranthene	205-99-2		<1	ug/L				U	10/16/12
Fluoranthene	206-44-0		<1	ug/L				U	10/16/12
Benzo(k)fluoranthene	207-08-9		<1	ug/L				U	10/16/12
Acenaphthylene	208-96-8		<1	ug/L				U	10/16/12
Chrysene	218-01-9		<1	ug/L				U	10/16/12
Benzo(a)pyrene	50-32-8		<1	ug/L				U	10/16/12
2,4-Dinitrophenol	51-28-5		<1	ug/L				U	10/16/12

\* - QC result out of range

n/a - Not Applicable

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## Quality Control Report

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Attention Scot Fitzgerald  
 Department Organic, Semivolatiles

Group #

WSCF121230

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	10/16/12
4,6-Dinitro-2-methylphenol	534-52-1		<1	ug/L				U	10/16/12
1,3-Dichlorobenzene	541-73-1		<1	ug/L				U	10/16/12
Benzo(a)anthracene	56-55-3		<1	ug/L				U	10/16/12
2,6-Dinitrotoluene	606-20-2		<1	ug/L				U	10/16/12
4-Chlorophenyl-phenylether	7005-72-3		<1	ug/L				U	10/16/12
Hexachlorocyclopentadiene	77-47-4		<1	ug/L				U	10/16/12
Isophorone	78-59-1		<1	ug/L				U	10/16/12
Diethyl phthalate	84-66-2		<1	ug/L				U	10/16/12
Di-n-butylphthalate	84-74-2		<1	ug/L				U	10/16/12
Phenanthrene	85-01-8		<1	ug/L				U	10/16/12
Butylbenzylphthalate	85-68-7		<1	ug/L				U	10/16/12
Fluorene	86-73-7		<1	ug/L				U	10/16/12
Carbazole	86-74-8		<1	ug/L				U	10/16/12
Hexachlorobutadiene	87-68-3		<1	ug/L				U	10/16/12
2-Nitroaniline	88-74-4		<1	ug/L				U	10/16/12
2-Nitrophenol	88-75-5		<1	ug/L				U	10/16/12
Naphthalene	91-20-3		<1	ug/L				U	10/16/12
2-Methylnaphthalene	91-57-6		<1	ug/L				U	10/16/12
2-Chloronaphthalene	91-58-7		<1	ug/L				U	10/16/12
3,3-Dichlorobenzidine	91-94-1		<1	ug/L				U	10/16/12

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

## Quality Control Report

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Attention Scot Fitzgerald  
 Department Organic, Semivolatiles

Group # WSCF121230

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
2-Methylphenol	95-48-7		<1	ug/L				U	10/16/12
1,2-Dichlorobenzene	95-50-1		<1	ug/L				U	10/16/12
2,4,5-Trichlorophenol	95-95-4		<1	ug/L				U	10/16/12
Nitrobenzene	98-95-3		<1	ug/L				U	10/16/12
3-Nitroaniline	99-09-2		<1	ug/L				U	10/16/12
3 & 4 Methylphenol, Total	65794-96-9		<1	ug/L				U	10/16/12
Hexachloroethane	67-72-1		<1	ug/L				U	10/16/12
2,4,6-Trichlorophenol	88-06-2		<1	ug/L				U	10/16/12
Benzyl alcohol	100-51-6		<1	ug/L				U	10/16/12
Tributyl phosphate	126-73-8		<1	ug/L				U	10/16/12
2-Naphthylamine	91-59-8		<2	ug/L				U	10/16/12
Pyridine	110-86-1		<1	ug/L				U	10/16/12
n-Nitrosopiperidine	100-75-4		<1	ug/L				U	10/16/12
n-Nitrosomethylethylamine	10595-95-6		<1	ug/L				U	10/16/12
p-Phenylenediamine	106-50-3		<1	ug/L				U	10/16/12
2-Picoline	109-06-8		<1	ug/L				U	10/16/12
3,3-Dimethylbenzidine	119-93-7		<4	ug/L				U	10/16/12
Isosafrole	120-58-1		<1	ug/L				U	10/16/12
Phentermine	122-09-8		<5	ug/L				U	10/16/12
1,4-Dioxane	123-91-1		<1	ug/L				U	10/16/12
1,4-Naphthoquinone	130-15-4		<1	ug/L				U	10/16/12

\* - QC result out of range

n/a - Not Applicable

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Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
1-Naphthylamine	134-32-7		<2	ug/L				U	10/16/12
Aramite	140-57-8		<1	ug/L				U	10/16/12
Kepone	143-50-0		<1	ug/L				U	10/16/12
Hexachloropropene	1888-71-7		<1	ug/L				U	10/16/12
Diallate	2303-16-4		<1	ug/L				U	10/16/12
Pronamide	23950-58-5		<1	ug/L				U	10/16/12
Isodrin	465-73-6		<1	ug/L				U	10/16/12
Chlorobenzilate	510-15-6		<1	ug/L				U	10/16/12
2-Acetylaminofluorene	53-96-3		<1	ug/L				U	10/16/12
n-Nitrosodiethylamine	55-18-5		<1	ug/L				U	10/16/12
3-Methylcholanthrene	56-49-5		<1	ug/L				U	10/16/12
4-Nitroquinoline-1-oxide	56-57-5		<1	ug/L				U	10/16/12
7,12-Dimethylbenz(a)anthracene	57-97-6		<1	ug/L				U	10/16/12
2,3,4,6-Tetrachlorophenol	58-90-2		<1	ug/L				U	10/16/12
n-Nitrosomorpholine	59-89-2		<1	ug/L				U	10/16/12
Pentachlorobenzene	608-93-5		<1	ug/L				U	10/16/12
Phenacetin	62-44-2		<1	ug/L				U	10/16/12
Ethyl methanesulfonate	62-50-0		<1	ug/L				U	10/16/12
Aniline	62-53-3		<1	ug/L				U	10/16/12
n-Nitrosodimethylamine	62-75-9		<1	ug/L				U	10/16/12

\* - QC result out of range

n/a - Not Applicable

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Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
Methyl methanesulfonate	66-27-3		<1	ug/L				U	10/16/12
Pentachloroethane	76-01-7		<1	ug/L				U	10/16/12
Pentachloronitrobenzene	82-68-8		<2	ug/L				U	10/16/12
2,6-Dichlorophenol	87-65-0		<1	ug/L				U	10/16/12
Dinoseb(..dinitromethylphenol)	88-85-7		<1	ug/L				U	10/16/12
4-Aminobiphenyl	92-67-1		<2	ug/L				U	10/16/12
n-Nitrosodibutylamine	924-16-3		<1	ug/L				U	10/16/12
n-Nitrosopyridine	930-55-2		<1	ug/L				U	10/16/12
Safrole	94-59-7		<1	ug/L				U	10/16/12
o-Toluidine	95-53-4		<1	ug/L				U	10/16/12
1,2,4,5-Tetrachlorobenzene	95-94-3		<1	ug/L				U	10/16/12
Acetophenone	98-86-2		<1	ug/L				U	10/16/12
1,3,5-Trinitrobenzene	99-35-4		<1	ug/L				U	10/16/12
2-Methyl-5-nitroaniline	99-55-8		<1	ug/L				U	10/16/12
1,3-Dinitrobenzene	99-65-0		<1	ug/L				U	10/16/12
O,O,O-Triethylthiophosphate	126-68-1		<1	ug/L				U	10/16/12
Parathion	56-38-2		<1	ug/L				U	10/16/12
Dimethylaminoazobenzene	60-11-7		<1	ug/L				U	10/16/12
Dimethoate	60-51-5		<1	ug/L				U	10/16/12
Thionazin	297-97-2		<1	ug/L				U	10/16/12

\* - QC result out of range

n/a - Not Applicable

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Methyl parathion	298-00-0	<1		ug/L					U	10/16/12
Phorate	298-02-2	<1		ug/L					U	10/16/12
Disulfoton	298-04-4	<1		ug/L					U	10/16/12
Sulfotep	3689-24-5	<1		ug/L					U	10/16/12
Famfur	52-85-7	<5		ug/L					U	10/16/12
N-Nitrosodiphenylamin/ Diphenyl	DPA+NNDPA	<1		ug/L					U	10/16/12
Methapyrilene	91-80-5	<1		ug/L					U	10/16/12
<b>LCS</b>					<b>QC Sample #82827</b>					
4-Nitrophenol	100-02-7	14		ug/L	45.3	5 - 88				10/16/12
1,2,4-Trichlorobenzene	120-82-1	22		ug/L	73.4	50 - 105				10/16/12
Phenol	108-95-2	15		ug/L	48.7	18 - 89				10/16/12
1,4-Dichlorobenzene	106-46-7	15		ug/L	76.4	47 - 115				10/16/12
2,4-Dinitrotoluene	121-14-2	24		ug/L	81.3	59 - 110				10/16/12
Pyrene	129-00-0	26		ug/L	87.6	64 - 116				10/16/12
4-Chloro-3-methylphenol	59-50-7	25		ug/L	84.4	62 - 109				10/16/12
n-Nitroso-di-n-propylamine	621-64-7	24		ug/L	81.2	61 - 110				10/16/12
Acenaphthene	83-32-9	24		ug/L	78.6	59 - 113				10/16/12
Pentachlorophenol	87-86-5	22		ug/L	72.2	17 - 125				10/16/12
2-Chlorophenol	95-57-8	24		ug/L	78.4	55 - 109				10/16/12
1,4-Dioxane	123-91-1	20		ug/L	66.4	42 - 99				10/16/12

\* - QC result out of range

n/a - Not Applicable

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Group #

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
n-Nitrosodimethylamine	62-75-9	21	ug/L	71.3	40 - 103					10/16/12
Benzyl alcohol	100-51-6	25	ug/L	82.3	58 - 108					10/16/12
2-Methylphenol	95-48-7	24	ug/L	79.4	59 - 107					10/16/12
Hexachloroethane	67-72-1	20	ug/L	66	43 - 105					10/16/12
2-Nitrophenol	88-75-5	23	ug/L	77.6	48 - 113					10/16/12
2,4-Dimethylphenol	105-67-9	25	ug/L	84.6	58 - 113					10/16/12
2,4-Dichlorophenol	120-83-2	23	ug/L	78.2	52 - 110					10/16/12
Anthracene	120-12-7	26	ug/L	85.8	67 - 113					10/16/12
Naphthalene	91-20-3	23	ug/L	75.3	55 - 110					10/16/12
2-Nitroaniline	88-74-4	26	ug/L	87.1	57 - 114					10/16/12
Dibenzofuran	132-64-9	25	ug/L	82.4	61 - 113					10/16/12
Fluorene	86-73-7	25	ug/L	83.1	64 - 115					10/16/12
Tributyl phosphate	126-73-8	26	ug/L	87	65 - 108					10/16/12
Hexachlorobenzene	118-74-1	25	ug/L	84.2	60 - 117					10/16/12
Dimethoate	60-51-5	13	ug/L	86.9	64 - 108					10/16/12
Carbazole	86-74-8	27	ug/L	91.5	35 - 129					10/16/12
Di-n-butylphthalate	84-74-2	27	ug/L	88.3	70 - 116					10/16/12
3,3-Dichlorobenzidine	91-94-1	18	ug/L	58.5	16 - 117					10/16/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	28	ug/L	93	64 - 133					10/16/12
Di-n-octylphthalate	117-84-0	25	ug/L	83	57 - 134					10/16/12
Benzo(a)pyrene	50-32-8	26	ug/L	88.1	63 - 115					10/16/12
2-Picoline	109-06-8	24	ug/L	80	59 - 102					10/16/12

\* - QC result out of range

n/a - Not Applicable

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 Department Organic, Semivolatiles

Group # WSCF121230

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Bis(1-Chloro-2-propyl)ether	108-60-1	23		ug/L	76	58 - 111				10/16/12
4-Chloroaniline	106-47-8	26		ug/L	85.7	43 - 125				10/16/12
<b>MS</b>					<b>QC Sample #82828</b>					
					<b>Original 121239001</b>					
4-Nitrophenol	100-02-7	7.7		ug/L	27.3	15 - 57				10/16/12
1,2,4-Trichlorobenzene	120-82-1	19		ug/L	66.3	51 - 104				10/16/12
Phenol	108-95-2	9.9		ug/L	34.9	24 - 65				10/16/12
1,4-Dichlorobenzene	106-46-7	13		ug/L	70	52 - 114				10/16/12
2,4-Dinitrotoluene	121-14-2	21		ug/L	73.1	57 - 112				10/16/12
Pyrene	129-00-0	23		ug/L	79.9	58 - 119				10/16/12
4-Chloro-3-methylphenol	59-50-7	21		ug/L	75.2	56 - 115				10/16/12
n-Nitroso-di-n-propylamine	621-64-7	21		ug/L	72.5	60 - 112				10/16/12
Acenaphthene	83-32-9	20		ug/L	69.9	60 - 113				10/16/12
Pentachlorophenol	87-86-5	13		ug/L	45	32 - 127				10/16/12
2-Chlorophenol	95-57-8	20		ug/L	69.3	52 - 113				10/16/12
1,4-Dioxane	123-91-1	16		ug/L	56.8	39 - 93				10/16/12
n-Nitrosodimethylamine	62-75-9	17		ug/L	61	41 - 92				10/16/12
Benzyl alcohol	100-51-6	21		ug/L	73.4	56 - 107				10/16/12
2-Methylphenol	95-48-7	19		ug/L	67.1	46 - 114				10/16/12
Hexachloroethane	67-72-1	17		ug/L	58.9	48 - 102				10/16/12
2-Nitrophenol	88-75-5	19		ug/L	67.3	51 - 114				10/16/12

\* - QC result out of range

n/a - Not Applicable

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Group #

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
2,4-Dimethylphenol	105-67-9	21	ug/L	74.5	46 - 124					10/16/12
2,4-Dichlorophenol	120-83-2	19	ug/L	68.8	50 - 114					10/16/12
Anthracene	120-12-7	22	ug/L	77	64 - 116					10/16/12
Naphthalene	91-20-3	19	ug/L	67	57 - 110					10/16/12
2-Nitroaniline	88-74-4	22	ug/L	76.1	60 - 114					10/16/12
Dibenzofuran	132-64-9	21	ug/L	73.9	61 - 114					10/16/12
Fluorene	86-73-7	21	ug/L	73.9	63 - 116					10/16/12
Tributyl phosphate	126-73-8	23	ug/L	79.7	59 - 113					10/16/12
Hexachlorobenzene	118-74-1	22	ug/L	76.3	58 - 119					10/16/12
Dimethoate	60-51-5	11	ug/L	76.3	53 - 119					10/16/12
Carbazole	86-74-8	22	ug/L	79.3	41 - 122					10/16/12
Di-n-butylphthalate	84-74-2	23	ug/L	80.2	67 - 118					10/16/12
3,3-Dichlorobenzidine	91-94-1	18	ug/L	62.9	16 - 121					10/16/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	24	ug/L	85.1	64 - 134					10/16/12
Di-n-octylphthalate	117-84-0	22	ug/L	77.6	40 - 143					10/16/12
Benzo(a)pyrene	50-32-8	22	ug/L	79.1	61 - 117					10/16/12
2-Picoline	109-06-8	20	ug/L	70.9	50 - 104					10/16/12
Bis(1-Chloro-2-propyl)ether	108-60-1	19	ug/L	67.5	58 - 112					10/16/12
4-Chloroaniline	106-47-8	25	ug/L	87	43 - 118					10/16/12
<b>MSD</b>		<b>QC Sample #82829</b>								
		<b>Original 121239001</b>								
								<b>Paired 82828</b>		
4-Nitrophenol	100-02-7	11	ug/L	40.6	15 - 57	39.00	20	*	X	10/16/12

\* - QC result out of range

n/a - Not Applicable

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,2,4-Trichlorobenzene	120-82-1	20	ug/L	69.3	51 - 104	4.50	20			10/16/12
Phenol	108-95-2	11	ug/L	38.4	24 - 65	9.50	20			10/16/12
1,4-Dichlorobenzene	106-46-7	13	ug/L	71.3	52 - 114	1.90	20			10/16/12
2,4-Dinitrotoluene	121-14-2	22	ug/L	79.4	57 - 112	8.30	20			10/16/12
Pyrene	129-00-0	22	ug/L	76.3	58 - 119	4.60	20			10/16/12
4-Chloro-3-methylphenol	59-50-7	23	ug/L	80.6	56 - 115	6.90	20			10/16/12
n-Nitroso-di-n-propylamine	621-64-7	22	ug/L	76.8	60 - 112	5.80	20			10/16/12
Acenaphthene	83-32-9	21	ug/L	74.1	60 - 113	5.80	20			10/16/12
Pentachlorophenol	87-86-5	19	ug/L	67.7	32 - 127	40.30	20	*	X	10/16/12
2-Chlorophenol	95-57-8	21	ug/L	73.4	52 - 113	5.70	20			10/16/12
1,4-Dioxane	123-91-1	18	ug/L	63.2	39 - 93	10.80	20			10/16/12
n-Nitrosodimethylamine	62-75-9	19	ug/L	68.3	41 - 92	11.20	20			10/16/12
Benzyl alcohol	100-51-6	23	ug/L	80.5	56 - 107	9.30	20			10/16/12
2-Methylphenol	95-48-7	21	ug/L	72.9	46 - 114	8.20	20			10/16/12
Hexachloroethane	67-72-1	18	ug/L	61.9	48 - 102	5.00	20			10/16/12
2-Nitrophenol	88-75-5	20	ug/L	72.3	51 - 114	7.20	20			10/16/12
2,4-Dimethylphenol	105-67-9	22	ug/L	79.4	46 - 124	6.30	20			10/16/12
2,4-Dichlorophenol	120-83-2	21	ug/L	73.1	50 - 114	6.10	20			10/16/12
Anthracene	120-12-7	23	ug/L	80	64 - 116	3.80	20			10/16/12
Naphthalene	91-20-3	20	ug/L	70.9	57 - 110	5.60	20			10/16/12
2-Nitroaniline	88-74-4	23	ug/L	82.3	60 - 114	7.80	20			10/16/12

\* - QC result out of range

n/a - Not Applicable

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Group #

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Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Dibenzofuran	132-64-9	22	ug/L	77.8	61 - 114	5.20	20			10/16/12
Fluorene	86-73-7	22	ug/L	79.3	63 - 116	7.00	20			10/16/12
Tributyl phosphate	126-73-8	23	ug/L	81.6	59 - 113	2.40	20			10/16/12
Hexachlorobenzene	118-74-1	22	ug/L	78.4	58 - 119	2.70	20			10/16/12
Dimethoate	60-51-5	12	ug/L	83.5	53 - 119	9.00	20			10/16/12
Carbazole	86-74-8	25	ug/L	87.9	41 - 122	10.30	20			10/16/12
Di-n-butylphthalate	84-74-2	24	ug/L	83.3	67 - 118	3.90	20			10/16/12
3,3-Dichlorobenzidine	91-94-1	19	ug/L	66.7	16 - 121	6.00	20			10/16/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	23	ug/L	81.6	64 - 134	4.20	20			10/16/12
Di-n-octylphthalate	117-84-0	21	ug/L	75	40 - 143	3.50	20			10/16/12
Benzo(a)pyrene	50-32-8	23	ug/L	82.9	61 - 117	4.70	20			10/16/12
2-Picoline	109-06-8	23	ug/L	82	50 - 104	14.50	20			10/16/12
Bis(1-Chloro-2-propyl)ether	108-60-1	20	ug/L	70.3	58 - 112	4.00	20			10/16/12
4-Chloroaniline	106-47-8	26	ug/L	92.7	43 - 118	6.30	20			10/16/12

\* - QC result out of range

n/a - Not Applicable

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**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

**Analytical Batch** 208887 (QC Batch: 208650)      **Test** PCBs by EPA SW-846 Method 8082  
**Associated Samples** 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										
<b>QC Sample #82953</b>										
Aroclor-1016	12674-11-2	<0.1		ug/L				U		10/17/12
Aroclor-1221	11104-28-2	<0.2		ug/L				U		10/17/12
Aroclor-1232	11141-16-5	<0.1		ug/L				U		10/17/12
Aroclor-1242	53469-21-9	<0.1		ug/L				U		10/17/12
Aroclor-1248	12672-29-6	<0.1		ug/L				U		10/17/12
Aroclor-1254	11097-69-1	<0.1		ug/L				U		10/17/12
Aroclor-1260	11096-82-5	<0.1		ug/L				U		10/17/12
<b>LCS</b>										
<b>QC Sample #82954</b>										
Aroclor-1254	11097-69-1	1.7		ug/L	87.2	70 - 130				10/17/12
<b>MS</b>										
<b>QC Sample #82955</b>										
Original 121223013										
Aroclor-1254	11097-69-1	1.8		ug/L	93.6	60 - 130				10/17/12
<b>MSD</b>										
<b>QC Sample #82956</b>										
Original 121223013										
<b>Paired 82955</b>										
Aroclor-1254	11097-69-1	1.8		ug/L	95.1	60 - 130	1.60	20		10/17/12

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

## Quality Control Report

DECEMBER 18, 2012

REVISION 2

Attention Scot Fitzgerald  
 Department Inorganic

Group # WSCF121230

Analytical Batch 209144 (QC Batch: 209143) Test Total Organic Halides  
 Associated Samples 121230001, 121230003, 121230004, 121230005

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										
<b>QC Sample #83634</b>										
Total Organic Halides	59473-04-0	<5.0	ug/L						U	10/08/12
<b>LCS</b>										
<b>QC Sample #83635</b>										
Total Organic Halides	59473-04-0	405	mg/L	101.3	80 - 120					10/08/12
<b>MS</b>										
<b>QC Sample #83639</b>										
<b>Original 121226011</b>										
Total Organic Halides	59473-04-0	39.6	ug/L	99.1	75 - 125					10/08/12
<b>MSD</b>										
<b>QC Sample #83640</b>										
<b>Original 121226011</b>										
Total Organic Halides	59473-04-0	37.8	ug/L	94.5	75 - 125		4.80	20		10/08/12
<b>Paired 83639</b>										

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

## Quality Control Report

DECEMBER 18, 2012

REVISION 2

Attention Scot Fitzgerald  
Department Organic, Semivolatiles

Group # WSCF121230

Analytical Batch 208258 (QC Batch: 208245) Test Extractable Diesel and Petroleum  
Associated Samples 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE		Sample #121230001								
o-Terphenyl	84-15-1				96.4	70 - 130				10/05/12
BLANK		QC Sample #82350								
o-Terphenyl	84-15-1				94.7	70 - 130				10/05/12
LCS		QC Sample #82351								
o-Terphenyl	84-15-1				102.3	70 - 130				10/05/12
MS		QC Sample #82352								
		Original 121223013								
o-Terphenyl	84-15-1				94.3	70 - 130				10/05/12
MSD		QC Sample #82353								
		Original 121223013								
o-Terphenyl	84-15-1				96.6	70 - 130		n/a		10/05/12
Paired 82352										

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

**Attention** Scot Fitzgerald  
**Department** Organic, Volatiles

**Group #** WSCF121230

**Analytical Batch** 208457 (QC Batch: 208456)      **Test** SW-846 8260B Volatiles  
**Associated Samples** 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>SAMPLE</b>		<b>Sample #121230001</b>								
1,2-Dichloroethane-d4	17060-07-0				103.4	75 - 125				10/16/12
Toluene-d8	2037-26-5				98.8	75 - 125				10/16/12
4-Bromofluorobenzene	460-00-4				100.4	75 - 125				10/16/12
<b>BLANK</b>		<b>QC Sample #82689</b>								
1,2-Dichloroethane-d4	17060-07-0				101.4	75 - 125				10/16/12
Toluene-d8	2037-26-5				98.7	75 - 125				10/16/12
4-Bromofluorobenzene	460-00-4				98.6	75 - 125				10/16/12
<b>LCS</b>		<b>QC Sample #82690</b>								
1,2-Dichloroethane-d4	17060-07-0				107.9	75 - 125				10/16/12
Toluene-d8	2037-26-5				96.4	75 - 125				10/16/12
4-Bromofluorobenzene	460-00-4				95	75 - 125				10/16/12
<b>MS</b>		<b>QC Sample #82691</b> <b>Original 121223013</b>								
4-Bromofluorobenzene	460-00-4				95.3	75 - 125				10/16/12

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

## Quality Control Report

DECEMBER 18, 2012

REVISION 2

Attention Scot Fitzgerald  
 Department Organic, Volatiles

Group # WSCF121230

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,2-Dichloroethane-d4	17060-07-0				104.4	75 - 125				10/16/12
Toluene-d8	2037-26-5				97	75 - 125				10/16/12
<b>MSD</b>										
<b>QC Sample #82692</b>										
<b>Original 121223013 Paired 82691</b>										
1,2-Dichloroethane-d4	17060-07-0				103.9	75 - 125	n/a			10/16/12
Toluene-d8	2037-26-5				97.5	75 - 125	n/a			10/16/12
4-Bromofluorobenzene	460-00-4				96.2	75 - 125	n/a			10/16/12

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

## Quality Control Report

DECEMBER 18, 2012

REVISION 2

Attention Scot Fitzgerald  
 Department Organic, Volatiles

Group # WSCF121230

Analytical Batch 208757 (QC Batch: 208756) Test Gasoline Range (W)  
 Associated Samples 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE	<b>Sample #121230001</b>									
4-Bromofluorobenzene	460-00-4				95.3	50 - 150				10/16/12
BLANK	<b>QC Sample #82983</b>									
4-Bromofluorobenzene	460-00-4				99.1	50 - 150				10/16/12
LCS	<b>QC Sample #82984</b>									
4-Bromofluorobenzene	460-00-4				97.1	50 - 150				10/16/12
MS	<b>QC Sample #82985</b> Original 121223013									
4-Bromofluorobenzene	460-00-4				96.7	50 - 150				10/16/12
MSD	<b>QC Sample #82986</b> Original 121223013									
DUP	<b>Paired 82985</b>									
4-Bromofluorobenzene	460-00-4				98.5	50 - 150	n/a			10/16/12
DUP	<b>QC Sample #82987</b> Original 121223013									

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

**Quality Control Report****DECEMBER 18, 2012****REVISION 2****Attention** Scot Fitzgerald  
**Department** Organic, Volatiles**Group #**

WSCF121230

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
4-Bromofluorobenzene	460-00-4				96.9	50 - 150	n/a			10/16/12

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

**REVISED121230 -**

## Quality Control Report

DECEMBER 18, 2012

REVISION 2

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

**Analytical Batch** 208850 (QC Batch: 208488)      **Test** SW-846 8270D Semivolatiles  
**Associated Samples** 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>SAMPLE</b>		<b>Sample #121230001</b>								
2-Fluorophenol	367-12-4				56.4	44 - 135				10/16/12
Phenol-d5	4165-62-2				36.8	41 - 136		X		10/16/12
Nitrobenzene-d5	4165-60-0				76	53 - 129				10/16/12
2-Methylnaphthalene-d10	7297-45-2				76.9	50 - 140				10/16/12
2-Fluorobiphenyl	321-60-8				77.1	36 - 141				10/16/12
2,4,6-Tribromophenol	118-79-6				69.7	17 - 142				10/16/12
Fluoranthene-d10	93951-69-0				83	50 - 140				10/16/12
Terphenyl-d14	98904-43-9				80.3	61 - 142				10/16/12
<b>BLANK</b>		<b>QC Sample #82826</b>								
2-Fluorophenol	367-12-4				56.1	44 - 135				10/16/12
Phenol-d5	4165-62-2				40.6	41 - 136		X		10/16/12
Nitrobenzene-d5	4165-60-0				73.6	53 - 129				10/16/12
2-Methylnaphthalene-d10	7297-45-2				74.2	50 - 140				10/16/12
2-Fluorobiphenyl	321-60-8				73.9	36 - 141				10/16/12
2,4,6-Tribromophenol	118-79-6				64.9	17 - 142				10/16/12

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

## Quality Control Report

DECEMBER 18, 2012

REVISION 2

Attention Scot Fitzgerald  
 Department Organic, Semivolatiles

Group #

WSCF121230

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Fluoranthene-d10	93951-69-0				83.9	50 - 140				10/16/12
Terphenyl-d14	98904-43-9				76.9	61 - 142				10/16/12
<b>LCS</b>										
<b>QC Sample #82827</b>										
2-Fluorophenol	367-12-4				64.3	44 - 135				10/16/12
Phenol-d5	4165-62-2				46.6	41 - 136				10/16/12
Nitrobenzene-d5	4165-60-0				81.8	53 - 129				10/16/12
2-Methylnaphthalene-d10	7297-45-2				81.7	50 - 140				10/16/12
2-Fluorobiphenyl	321-60-8				81.2	36 - 141				10/16/12
2,4,6-Tribromophenol	118-79-6				79.5	17 - 142				10/16/12
Fluoranthene-d10	93951-69-0				88.1	50 - 140				10/16/12
Terphenyl-d14	98904-43-9				90.7	61 - 142				10/16/12
<b>MS</b>										
<b>QC Sample #82828</b>										
<b>Original 121239001</b>										
2-Fluorophenol	367-12-4				50.8	44 - 135				10/16/12
Phenol-d5	4165-62-2				33.2	41 - 136		X		10/16/12
Nitrobenzene-d5	4165-60-0				70.9	53 - 129				10/16/12
2-Methylnaphthalene-d10	7297-45-2				72.3	50 - 140				10/16/12
2-Fluorobiphenyl	321-60-8				72.6	36 - 141				10/16/12
2,4,6-Tribromophenol	118-79-6				70.6	17 - 142				10/16/12
Fluoranthene-d10	93951-69-0				77.1	50 - 140				10/16/12
Terphenyl-d14	98904-43-9				84.6	61 - 142				10/16/12

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

## Quality Control Report

DECEMBER 18, 2012

REVISION 2

Attention Scot Fitzgerald  
 Department Organic, Semivolatiles

Group # WSCF121230

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>MSD</b>										
<b>QC Sample #82829</b>										
		Original		121239001				Paired	82828	
2-Fluorophenol	367-12-4				54.6	44 - 135	n/a			10/16/12
Phenol-d5	4165-62-2				37.3	41 - 136	n/a	X		10/16/12
Nitrobenzene-d5	4165-60-0				75.6	53 - 129	n/a			10/16/12
2-Methylnaphthalene-d10	7297-45-2				76.7	50 - 140	n/a			10/16/12
2-Fluorobiphenyl	321-60-8				75.4	36 - 141	n/a			10/16/12
2,4,6-Tribromophenol	118-79-6				76	17 - 142	n/a			10/16/12
Fluoranthene-d10	93951-69-0				85.5	50 - 140	n/a			10/16/12
Terphenyl-d14	98904-43-9				81.1	61 - 142	n/a			10/16/12

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

## Quality Control Report

DECEMBER 18, 2012

REVISION 2

**Attention** Scot Fitzgerald  
**Department** Organic, Semivolatiles

**Group #** WSCF121230

**Analytical Batch** 208887 (QC Batch: 208650)      **Test** PCBs by EPA SW-846 Method 8082  
**Associated Samples** 121230001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>SAMPLE</b>	<b>Sample #121230001</b>									
Tetrachloro-m-xylene	877-09-8				84.8	60 - 140				10/17/12
Decachlorobiphenyl	2051-24-3				94.7	60 - 140				10/17/12
<b>BLANK</b>	<b>QC Sample #82953</b>									
Tetrachloro-m-xylene	877-09-8				78.2	60 - 140				10/17/12
Decachlorobiphenyl	2051-24-3				91.9	60 - 140				10/17/12
<b>LCS</b>	<b>QC Sample #82954</b>									
Tetrachloro-m-xylene	877-09-8				75.5	60 - 140				10/17/12
Decachlorobiphenyl	2051-24-3				94	60 - 140				10/17/12
<b>MS</b>	<b>QC Sample #82955</b> <b>Original 121223013</b>									
Tetrachloro-m-xylene	877-09-8				81.9	60 - 140				10/17/12
Decachlorobiphenyl	2051-24-3				95.8	60 - 140				10/17/12
<b>MSD</b>	<b>QC Sample #82956</b> <b>Original 121223013</b>									
Tetrachloro-m-xylene	877-09-8				81.2	60 - 140	n/a			10/17/12
Decachlorobiphenyl	2051-24-3				96.8	60 - 140	n/a			10/17/12
<b>Paired 82955</b>										

\* - QC result out of range

n/a - Not Applicable

REVISED121230 -

**Tentatively Identified Peak Report****DECEMBER 18, 2012****REVISION 2****Attention** Scot Fitzgerald  
**Department** Organic, Volatiles**Group #** WSCF121230

Peak Name	CAS #	RT	RQ	Result	Units
121230001	B2M123	UNKNOWN-01	16.159	49	ug/L

REVISED121230 -

Attention: Scot Fitzgerald

Group #

WSCF121230

121230001	B2M123
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Department	Organic, Semivolatiles
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Analyte	Phenol-d5 - SW-846 8270D Semivolatiles
[1]	Surrogate recovery outside of established laboratory control limits.

REVISED121230 -

Attention: Scot Fitzgerald

Group #

WSCF121230

**Quality Control Comments****Department** Organic, Semivolatiles

82826	BLANK for HBN 208488 [ORGP/202
	<b>Analyte</b> Phenol-d5 - SW-846 8270D Semivolatiles
	[1] Surrogate recovery outside of established laboratory control limits.
82828	B2M0Y3(121239001MS)
	<b>Analyte</b> Phenol-d5 - SW-846 8270D Semivolatiles
	[1] Surrogate recovery outside of established laboratory control limits.
82829	B2M0Y3(121239001MSD)
	<b>Analyte</b> 4-Nitrophenol - SW-846 8270D Semivolatiles
	[1] Matrix Spike RPD outside established laboratory limits No flags assigned.
	<b>Analyte</b> Pentachlorophenol - SW-846 8270D Semivolatiles
	[1] Matrix Spike RPD outside established laboratory limits No flags assigned.
	<b>Analyte</b> Phenol-d5 - SW-846 8270D Semivolatiles
	[1] Surrogate recovery outside of established laboratory control limits.

REVISED121230 -

ATTACHMENT4

**SAMPLE RECEIPT**

Consisting of 5 pages  
Including cover page

REVISED121230 -

**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 #: 121230

Profile #: W13-010-181

Proj. Mgr.:

Phone:

The following samples were received from you on 10/3/2012 1:50:00 PM. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
<b>Tests scheduled</b>				
121230001	B2M123	WATER	10/3/2012 12:44	10/3/2012 13:50
2008-W; 6010-W; 8260V-W; 8270SV-W; ALK-W; CN-W; COD-W; PCB-W; TOC-W; TOX-W; TPHDWA-W; TPHGWA-W				
121230002	B2M125	WATER	10/3/2012 12:44	10/3/2012 13:50
2008-W; 6010-W				
121230003	B2M212	WATER	10/3/2012 12:44	10/3/2012 13:50
TOC-W; TOX-W				
121230004	B2M213	WATER	10/3/2012 12:44	10/3/2012 13:50
TOC-W; TOX-W				
121230005	B2M214	WATER	10/3/2012 12:44	10/3/2012 13:50
TOC-W; TOX-W				
121230006	B2M8H0	WATER	10/3/2012 12:44	10/3/2012 13:50
2008-W				
121230007	B2M8H1	WATER	10/3/2012 12:44	10/3/2012 13:50
2008-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)

REVISED121230 -

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

ALK-W	Total Alkalinity (W)
CN-W	Cyanide (Spectroscopy) (W)
COD-W	Chemical Oxygen Demand (W)
PCB-W	PCB (8082) (W)
TOC-W	Total Organic Carbon (W)
TOX-W	Total Organic Halides (W)
TPHDWA-W	TPHD-WA (W)
TPHGWA-W	TPHG-WA (Water)

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REVISED121230 -

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST												C.O.C. #	W13-010-181
												Page 1 of 2	
Collector	F.M. Hall	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650								
SAF No.	W13-010	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20								
Project Title	RCRA, OCTOBER 2012	Logbook No.	HNF-N-506 <u>51</u> / <u>C</u>	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:	<b>PRIORITY</b> 31 Days	SPECIAL INSTRUCTIONS	Hold Time	Total Activity Exemption:	Ycs <input checked="" type="checkbox"/>	No <input type="checkbox"/>					
POSSIBLE SAMPLE HAZARDS/REMARKS													
** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990) 1993.													
121230													
Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis							
B2M123	1	N	W10CT0320121244	1x500-mL G/P	1x200.8_METALS_ICPMS: List-1 (26)								
B2M123	N	W		1x250-mL G/P	>2320ALKALINITY: Alkalinity (1)								
B2M123	N	W		1x500-mL G/P	410.4 COD: COD (1)								
B2M123	N	W		1x250-mL P	>4500E_CN: Cyanide (1)								
B2M123	N	W		1x500-mL G/P	6010_METALS_ICP: List-3 (18)								
B2M123	N	W		4x1-L AG	>8082_PCB_GC: List-1 (7)								
B2M123	N	W		1x1-L aG*	>9020_TOX_TOX (1)								
B2M123	N	W		1x250-mL G/P	>9030_SULFATE-Sulfate (+)								
B2M123	N	W		1x250-mL aG	>9060_TOC_TOC (1)								
B2M123	N	W		3x1-L aG	>TPH-Diesel/Kerosene Range - WTPH-D								
B2M123	N	W		4x10-mL aG*	>TPH-Gasoline Range - WTPH-G								
B2M123	N	W		3x40-mL aG*	3260_VOA_GCMS_IK: COMMON; B260_VOA_GCMS_IK: COMMON [Add-on]								
B2M123	N	W		4x1-L aG	8270_SVOA_GCMS_IK: COMMON								
B2MBH0	N	W		1x500-mL G	200.8_HG - ICPMS								
Reinquished By	Print	Print	Date/Time	Date/Time	Received By	Print	Date/Time	Date/Time	Matrix *				
F.M. Hall		OCT 03 2012 12:50	Oct 03 2012	Oct 03 2012 12:50	Received By		Oct 03 2012	Oct 03 2012 12:50	S = Soil				
Reinquished By		Date/Time			Received By		Date/Time	Date/Time	SE = Sediment				
Reinquished By		Date/Time			Received By		Date/Time	Date/Time	SL = Solid				
Reinquished By		Date/Time			Received By		Date/Time	Date/Time	T = Tissue				
Reinquished By		Date/Time			Received By		Date/Time	Date/Time	W = Sludge				
Final Sample Disposition	Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By				W = Water				
DISPOSITION									L = Liquid				
PRINTED ON 9/18/2012									V = Vegetation				
									X = Other				
									Date/Time				
										Date/Time			

A-6004-842 (REV 2)

## Chain of Custody

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST											
											C.O.C. # <b>W13-010-181</b>
											Page 2 of 2
Collector	<b>F. M. Hall</b>	Contact/Requester	Karen Waters-Husted		Telephone No.	376-4650		Purchase Order/Charge Code	300071ES20		
SAF No.	W13-010	Sampling Origin	Hanford Site		Jee Chest No.	N/A					
Project Title	RCRA, OCTOBER 2012	Logbook No.	HINF-N-506-51 Q		Bill of Lading/Air Bill No.	N/A					
Shipped To (Lab)	Waste Sampling & Characterization	Method of shipment	GOVERNMENT VEHICLE		Offsite Property No.	N/A		Total Activity Exemption:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Protocol	RCRA	Priority:	31 Days	PRIORITY	SPECIAL INSTRUCTIONS	Hold Time					
FY12 and FY13 samples cannot be in the same SDG. Site Wast Generation Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.											
POSSIBLE SAMPLE HAZARDS/REMARKS  *** Certain Radioactive Material or concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1995)											
Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis		Holding Time		Preservative	
B2M213	Y	N	W <b>OCT 03 2012</b>	1244	1x1-L aGs*	9020_TOX_TOX (1)		28 Days		H2SO4 to pH <2/Cool-4C	
B2M213	Y	N	W		1x250-mL aG	9060_TOC_TOC (1)		28 Days		HCl or H2SO4 to pH <2/Cool-4C	
B2M212	3	N	W		1x1-L aGs*	9020_TOX_TOX (1)		28 Days		H2SO4 to pH <2/Cool-4C	
B2M212	3	N	W		1x250-mL aG	9060_TOC_TOC (1)		28 Days		HCl or H2SO4 to pH <2/Cool-4C	
B2M125	3	Y	W		1x500-mL G/P	200 g_MEALS_JCPMS: List-1 (26)		6 Months		HNO3 to pH <2	
B2M125	3	Y	W		1x500-mL G/P	6010_METALS_ICP: List-3 (18)		6 Months		HNO3 to pH <2	
B2M8H1	7	Y	W		1x500-mL G	200 g_HG -ICPMS		28 Days		HNO3 to pH <2	
B2M214	5	N	W		1x1-L aGs*	9020_TOX_TOX (1)		28 Days		H2SO4 to pH <2/Cool-4C	
B2M214	5	N	W		1x250-mL aG	9060_TOC_TOC (1)		28 Days		HCl or H2SO4 to pH <2/Cool-4C	

Reinquished By <b>F. M. Hall</b>	Print 	Sign 	Date/Time <b>OCT 03 2012 13:50</b>	Received By 	Date/Time <b>OCT 03 2012 13:50</b>	Print 	Sign 	Date/Time <b>OCT 03 2012 13:50</b>	Matrix *
Reinquished By				Received By		Received By			SE = Soil SO = Sediment SL = Sludge W = Water O = Oil A = Air
Reinquished By				Received By		Received By			DS = Drum Solids DL = Drum Liquids T = Tissue Wp = Wipes L = Liquid V = Vegetation X = Other
Reinquished By				Received By		Received By			Date/Time

FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process)  
PRINTED ON 9/18/2012

Deposited By \_\_\_\_\_ Date/TIME \_\_\_\_\_

A-6004-842 (REV 2)