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,

REVISED121242 - 698984 [Report ID: 121242]

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 WSCF121242

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

Very truly yours,

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

Attachments 4
CC: w/Attachments

File/LB

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages

Including cover page

WSCF SAF Number Cross Reference

Group # WSCF121242
Data Deliverable Date 11/05/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
W13-010	B2M8J3	121242001	WATER	10/04/12	10/04/12
W13-010	B2M8J2	121242002	WATER	10/04/12	10/04/12
W13-010	B2M225	121242003	WATER	10/04/12	10/04/12
W13-010	B2M226	121242004	WATER	10/04/12	10/04/12
W13-010	B2M149	121242005	WATER	10/04/12	10/04/12
W13-010	B2M224	121242006	WATER	10/04/12	10/04/12
W13-010	B2M147	121242007	WATER	10/04/12	10/04/12

ATTACHMENT 2

NARRATIVE

Consisting of 9 pages
Including cover page

Attachment 2
Narrative Rev2
WSCF121242

Revision 2: This case narrative replaces the prior in its entirety. 1,4-Dioxane was added per SDR13-064 to sample B2M147.

Revision 1: This case narrative replaces the prior in its entirety. P&D correction is adding Kerosene to sample B2M147.

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.

Attachment 2
Narrative Rev2
WSCF121242

- **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 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):

- Sodium was detected in the Blank and evaluated.
- All other applicable QC controls are within the established limits.

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

- Batch QC 208453
  - Vanadium was detected in the Blank and evaluated.
- Batch QC 208900
  - Sample Issue Resolution Form SDR13-018 regarding Mercury LCS failure is attached to this report.
  - All other applicable QC controls are within the established limits.

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Narrative Rev2
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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.

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 B2M147 (121242007) 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.

Attachment 2
Narrative Rev2
WSCF121242

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.

We certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

Attachment 2
Narrative Rev2
WSCF121242

SAMPLE ISSUE RESOLUTION

SIR NUM	SDR13-018
REV NUM	0
DATE INITIATED	10/22/2012

SAMPLE EVENT INFORMATION

SAF NUM(S)	I13-001, W13-010
OPERABLE UNIT(S)	100-KR-4
PROJECT(S)	CERC13, RCRA13
SAMPLE EVENT TITLE(S)	CERC13, RCRA13
LABORATORY	Waste Sampling & Characterization

SAMPLING INFORMATION

NUMBER OF SAMPLES	5
SAMPLE NUMBERS	B2M2W1, B2M2W4, B2M8J2, B2M8J3, B2M8J8
SAMPLE MATRIX	WATER
COLLECTION DATE	10/4/2012 - 10/10/2012
SDG NUM	WSCF121242, WSCF121270, WSCF121274

ISSUE BACKGROUND

CLASS	Laboratory Issue
TYPE	Quality Control Failure
DESCRIPTION	The 200.8 Mercury LCS was slightly low at 84.4% with control limits of 85-115%. The MS (94.8%) and MSD (94.4%) were with the control limits of 70-130%. The blank was non-detect.

DISPOSITION

DESCRIPTION	Proposed Disposition: Report the data as-is and note the LCS failure in the case narrative.
JUSTIFICATION	Accepted Disposition: Accept proposed resolution.

Submitted by: Marisol Avila/WSCF Date: 10/22/12
Accepted by: Karen Waters-Husted/CHPRC Date: 10/22/12
Scot Fitzgerald/CHPRC Date: 10/22/12

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Attachment 2
Narrative Rev2
WSCF121242

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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Attachment 2
Narrative Rev2
WSCF121242

Problem and Discrepancy Report

WSCF

SDG WSCF121242

11/06/2012

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1. The data package has the following issues:

a) TPHKEROSENE for sample number B2M147 was not reported in the electronic or hardcopy data packages.

Resolution: *Provide appropriate correction*

Lab Response: **the result has been added**

Attachment 2
Narrative Rev2
WSCF121242

SAMPLE ISSUE RESOLUTION

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

SAMPLE EVENT INFORMATION

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

SAMPLING INFORMATION

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

ISSUE BACKGROUND

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

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

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ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 86 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Scot Fitzgerald

Contract # MOA-FH-CHPRC-2008
Group # WSCF121242
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.

Batch QC List

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
208285	208308	5	BLANK	82497	BLANK		ICP-6010 - All possible metals
208285	208308	7	LCS	82499	LCS		ICP-6010 - All possible metals
208285	208308	9	MS	82500	B2M6C8(121234009MS)	121234009	ICP-6010 - All possible metals
208285	208308	10	MSD	82501	B2M6C8(121234009MSD	121234009	ICP-6010 - All possible metals
208285	208308	28	SAMPLE	121242005	B2M149		ICP-6010 - All possible metals
208285	208308	29	SAMPLE	121242007	B2M147		ICP-6010 - All possible metals
208453	208753	1	BLANK	82677	BLANK		ICP-2008 MS All possible metal
208453	208753	2	LCS	82678	LCS		ICP-2008 MS All possible metal
208453	208753	10	MS	82679	B2MBW9(121266007MS)	121266007	ICP-2008 MS All possible metal
208453	208753	11	MSD	82680	B2MBW9(121266007MS	121266007	ICP-2008 MS All possible metal
208453	208753	25	SAMPLE	121242005	B2M149		ICP-2008 MS All possible metal
208453	208753	26	SAMPLE	121242007	B2M147		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	19	SAMPLE	121242007	B2M147		Chemical Oxygen Demand
208900	208911	4	BLANK	83185	BLANK		ICP-2008 MS All possible metal
208900	208911	5	LCS	83186	LCS		ICP-2008 MS All possible metal
208900	208911	7	MS	83187	B2M8K4(121223011MS)	121223011	ICP-2008 MS All possible metal
208900	208911	8	MSD	83188	B2M8K4(121223011MSD)	121223011	ICP-2008 MS All possible metal
208900	208911	9	SAMPLE	121242001	B2M8J3		ICP-2008 MS All possible metal
208900	208911	10	SAMPLE	121242002	B2M8J2		ICP-2008 MS All possible metal

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Batch QC List

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
209194	209204	1	BLANK	83816	BLANK		Total Organic Halides
209194	209204	2	LCS	83817	LCS		Total Organic Halides
209194	209204	4	MS	83818	B2M225(121242003MS)	121242003	Total Organic Halides
209194	209204	5	MSD	83819	B2M225(121242003MSD)	121242003	Total Organic Halides
209194	209204	6	SAMPLE	121242003	B2M225		Total Organic Halides
209194	209204	7	SAMPLE	121242004	B2M226		Total Organic Halides
209194	209204	8	SAMPLE	121242006	B2M224		Total Organic Halides
209194	209204	9	SAMPLE	121242007	B2M147		Total Organic Halides

Batch QC List

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
208276	208284	1	BLANK	82474	BLANK		Extractable Diesel and Petroleum
208276	208284	2	LCS	82475	LCS		Extractable Diesel and Petroleum
208276	208284	3	MS	82476	B2M0Y3(121239001MS)	121239001	Extractable Diesel and Petroleum
208276	208284	4	MSD	82477	B2M0Y3(121239001MSD	121239001	Extractable Diesel and Petroleum
208276	208284	8	SAMPLE	121242007	B2M147		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	15	SAMPLE	121242007	B2M147		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	13	SAMPLE	121242007	B2M147		PCBs by EPA SW-846 Method 8082

Batch QC List

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

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	15	SAMPLE	121242007	B2M147		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	14	SAMPLE	121242007	B2M147		Gasoline Range (W)

Batch QC List

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121242

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
208550	208550	2	BLANK	82945	BLANK		Total Organic Carbon
208550	208550	3	LCS	82946	LCS		Total Organic Carbon
208550	208550	4	MS	82947	B2MD49(121290001MS)	121290001	Total Organic Carbon
208550	208550	5	MSD	82948	B2MD49(121290001MSD	121290001	Total Organic Carbon
208550	208550	10	SAMPLE	121242003	B2M225		Total Organic Carbon
208550	208550	11	SAMPLE	121242004	B2M226		Total Organic Carbon
208550	208550	12	SAMPLE	121242006	B2M224		Total Organic Carbon
208550	208550	13	SAMPLE	121242007	B2M147		Total Organic Carbon
208754	208754	1	LCS	82975	LCS		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	14	SAMPLE	121242007	B2M147		Total Alkalinity as mg/L CaCO3 (Water)
208754	208754	24	LCS	82978	LCS		Total Alkalinity as mg/L CaCO3 (Water)
208883	208899	1	BLANK	83149	BLANK		Cyanide (W) by Midi/Spectrophotometer
208883	208899	4	LCS	83152	LCS		Cyanide (W) by Midi/Spectrophotometer
208883	208899	5	MS	83153	B2M147(121242007MS)	121242007	Cyanide (W) by Midi/Spectrophotometer
208883	208899	6	MSD	83154	B2M147(121242007MSD)	121242007	Cyanide (W) by Midi/Spectrophotometer
208883	208899	7	SAMPLE	121242007	B2M147		Cyanide (W) by Midi/Spectrophotometer

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

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

Method Reference

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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

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

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

Method Reference

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

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

Method Reference

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121242

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Sample # 121242001
SAF# W13-010
Sample ID B2M8J3

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										**10/19/12**
ICP-2008 MS All possible metal										
Mercury	7439-97-6	LA-505-412	UDo	<0.10		ug/L	2	0.10	0.40	10/19/12

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.

REVISED121242 -

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Sample # 121242002
SAF# W13-010
Sample ID B2M8J2

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										**10/19/12**
ICP-2008 MS All possible metal										
Mercury	7439-97-6	LA-505-412	UDo	<0.10		ug/L	2	0.10	0.40	10/19/12

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.

REVISED121242 -

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Sample # 121242003
SAF# W13-010
Sample ID B2M225

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										**10/16/12**
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	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 < 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.

REVISED121242 -

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Sample # 121242004
SAF# W13-010
Sample ID B2M226

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										**10/16/12**
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	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 < 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.

REVISED121242 -

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Sample # 121242005
SAF# W13-010
Sample ID B2M149

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**10/09/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	21.7		ug/L	1	19	95	10/10/12
Magnesium	7439-95-4	LA-505-411		16400		ug/L	1	4.0	20	10/10/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Potassium	7440-09-7	LA-505-411		7700		ug/L	1	76	380	10/10/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Sodium	7440-23-5	LA-505-411		25300		ug/L	1	10	50	10/10/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	10/10/12
Barium	7440-39-3	LA-505-411		54.0		ug/L	1	4.0	20	10/10/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Chromium	7440-47-3	LA-505-411	B	5.60		ug/L	1	5.0	25	10/10/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Vanadium	7440-62-2	LA-505-411	B	14.4		ug/L	1	5.0	25	10/10/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	10/10/12
Calcium	7440-70-2	LA-505-411		50500		ug/L	1	49	240	10/10/12
Strontium	7440-24-6	LA-505-411		254		ug/L	1	9.0	45	10/10/12

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.

REVISED121242 -

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Sample # 121242005
SAF# W13-010
Sample ID B2M149

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Titanium	7440-32-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
ICPMS Prep (W)										**10/12/12**
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	10/16/12
Manganese	7439-96-5	LA-505-412	BD	0.978		ug/L	2	0.20	2.0	10/16/12
Nickel	7440-02-0	LA-505-412	D	2.04		ug/L	2	0.20	2.0	10/16/12
Silver	7440-22-4	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/16/12
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	10/16/12
Barium	7440-39-3	LA-505-412	D	54.9		ug/L	2	0.40	4.0	10/16/12
Beryllium	7440-41-7	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	10/16/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/16/12
Chromium	7440-47-3	LA-505-412	D	4.56		ug/L	2	0.20	2.0	10/16/12
Cobalt	7440-48-4	LA-505-412	BD	0.156		ug/L	2	0.10	0.50	10/16/12
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	10/16/12
Vanadium	7440-62-2	LA-505-412	D	18.4		ug/L	2	0.40	4.0	10/16/12
Zinc	7440-66-6	LA-505-412	UD	<2.0		ug/L	2	2.0	20	10/16/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/16/12
Molybdenum	7439-98-7	LA-505-412	D	7.41		ug/L	2	0.10	1.0	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 < 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.

REVISED121242 -

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Sample # 121242005
SAF# W13-010
Sample ID B2M149

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium	7440-24-6	LA-505-412	D	278		ug/L	2	0.20	2.0	10/16/12
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/16/12
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/16/12
Arsenic	7440-38-2	LA-505-412	D	4.77		ug/L	2	0.40	4.0	10/16/12
Selenium	7782-49-2	LA-505-412	BD	5.12		ug/L	2	2.0	20	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 < 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.

REVISED121242 -

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Sample # 121242006
SAF# W13-010
Sample ID B2M224

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										**10/16/12**
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	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 < 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.

REVISED121242 -

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**10/09/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	45.0		ug/L	1	19	95	10/10/12
Magnesium	7439-95-4	LA-505-411		15900		ug/L	1	4.0	20	10/10/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Potassium	7440-09-7	LA-505-411		7540		ug/L	1	76	380	10/10/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Sodium	7440-23-5	LA-505-411		24700		ug/L	1	10	50	10/10/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	10/10/12
Barium	7440-39-3	LA-505-411		52.9		ug/L	1	4.0	20	10/10/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Chromium	7440-47-3	LA-505-411	B	10.1		ug/L	1	5.0	25	10/10/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Vanadium	7440-62-2	LA-505-411	B	18.5		ug/L	1	5.0	25	10/10/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	10/10/12
Calcium	7440-70-2	LA-505-411		48900		ug/L	1	49	240	10/10/12
Strontium	7440-24-6	LA-505-411		244		ug/L	1	9.0	45	10/10/12

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.

REVISED121242 -

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Titanium	7440-32-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	10/10/12
ICPMS Prep (W)										**10/12/12**
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	10/16/12
Manganese	7439-96-5	LA-505-412	BD	1.45		ug/L	2	0.20	2.0	10/16/12
Nickel	7440-02-0	LA-505-412	D	4.26		ug/L	2	0.20	2.0	10/16/12
Silver	7440-22-4	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	10/16/12
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	10/16/12
Barium	7440-39-3	LA-505-412	D	53.7		ug/L	2	0.40	4.0	10/16/12
Beryllium	7440-41-7	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	10/16/12
Cadmium	7440-43-9	LA-505-412	BD	0.186		ug/L	2	0.10	1.0	10/16/12
Chromium	7440-47-3	LA-505-412	D	10.3		ug/L	2	0.20	2.0	10/16/12
Cobalt	7440-48-4	LA-505-412	BD	0.404		ug/L	2	0.10	0.50	10/16/12
Copper	7440-50-8	LA-505-412	BD	0.402		ug/L	2	0.20	2.0	10/16/12
Vanadium	7440-62-2	LA-505-412	D	18.0		ug/L	2	0.40	4.0	10/16/12
Zinc	7440-66-6	LA-505-412	BD	10.1		ug/L	2	2.0	20	10/16/12
Lead	7439-92-1	LA-505-412	BD	0.270		ug/L	2	0.10	1.0	10/16/12
Molybdenum	7439-98-7	LA-505-412	D	7.59		ug/L	2	0.10	1.0	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 < 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.

REVISED121242 -

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium	7440-24-6	LA-505-412	D	275		ug/L	2	0.20	2.0	10/16/12
Thallium	7440-28-0	LA-505-412	BD	0.240		ug/L	2	0.10	1.0	10/16/12
Tin	7440-31-5	LA-505-412	BD	0.234		ug/L	2	0.10	1.0	10/16/12
Arsenic	7440-38-2	LA-505-412	D	4.92		ug/L	2	0.40	4.0	10/16/12
Selenium	7782-49-2	LA-505-412	BD	4.72		ug/L	2	2.0	20	10/16/12
Preparation for COD (W)										**10/11/12**
Chemical Oxygen Demand										
Chemical Oxygen Demand	COD	LA-523-470	U	<10		mg/L	1	10	50	10/11/12
Preparation for TOX (W)										**10/16/12**
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	10/16/12

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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.

REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8082 (W) SPE										**10/09/12**
PCBs by EPA SW-846 Method 8082										
Aroclor-1016	12674-11-2	LA-523-427	U	<0.09		ug/L	1	0.09	0.2	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
Preparation for 8270 (W) CLE										**10/10/12**
SW-846 8270D Semivolatiles										
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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Department Organic, Semivolatiles

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

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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Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
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Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Dimethylphthalate	131-11-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	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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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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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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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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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(..dinitromethylphenol)	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-Nitrosopyrolidine	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

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REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

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/Diphenyl	DPA+NNDPA	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Methapyrilene	91-80-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	10/16/12
Total Petroleum Hydrocarbons (Water Prep										**10/08/12**
Extractable Diesel and Petroleum										
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	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 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.

REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

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	10/08/12

MDL = Minimum Detection Limit
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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.
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o - LCS recovery outside established laboratory acceptance limits.

REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Gasoline Range Prep (W)										**10/16/12**
Gasoline Range (W)										
Gasoline	TPHGASOLIN	LA-523-443	U	<50		ug/L	1	50	200	10/16/12
Preparation for 8260B (W)										**10/11/12**
SW-846 8260B Volatiles										
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

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

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary dilution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

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

REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
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

MDL = Minimum Detection Limit
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DF = Dilution Factor
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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.

REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

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

MDL = Minimum Detection Limit
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TP Err = Total Propagated Error
DF = Dilution Factor
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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.

REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
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

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

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary dilution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

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

REVISED121242 -

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121242

Sample # 121242003
SAF# W13-010
Sample ID B2M225

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										10/15/12
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.142		mg/L	1	0.10	0.30	10/15/12

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.

REVISED121242 -

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121242

Sample # 121242004
SAF# W13-010
Sample ID B2M226

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										10/15/12
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.132		mg/L	1	0.10	0.30	10/15/12

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.
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o - LCS recovery outside established laboratory acceptance limits.

REVISED121242 -

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121242

Sample # 121242006
SAF# W13-010
Sample ID B2M224

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										10/15/12
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.134		mg/L	1	0.10	0.30	10/15/12

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

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

REVISED121242 -

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121242

Sample # 121242007
SAF# W13-010
Sample ID B2M147

Matrix WATER
Sampled 10/04/12
Received 10/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for Cyanide (W)										**10/17/12**
Cyanide (W) by Midi/Spectrophotometer										
Cyanide	57-12-5	LA-695-402	U	<4.0		ug/L	1	4.0	20	10/17/12
										10/15/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		120		mg/L	1	1	10	10/15/12
										10/15/12
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.142		mg/L	1	0.10	0.30	10/15/12

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)
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N - MS and/or MSD sample recovery outside control limits.
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REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

Analytical Batch 208284 (QC Batch: 208276) **Test** Extractable Diesel and Petroleum
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #82474**							
Diesel	TPHDIESEL		<80	ug/L					U	10/08/12
Kerosene	TPHKEROSE		<80	ug/L					U	10/08/12
LCS			**QC Sample #82475**							
Diesel	TPHDIESEL		2800	ug/L	113.3	65 - 128				10/08/12
MS			**QC Sample #82476**							
			Original 121239001							
Diesel	TPHDIESEL		2400	ug/L	103.2	73 - 123				10/08/12
MSD			**QC Sample #82477**							
			Original 121239001					**Paired 82476**		
Diesel	TPHDIESEL		2500	ug/L	106.6	73 - 123	3.30	20		10/08/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Analytical Batch 208308 (QC Batch: 208285) **Test** ICP-6010 - All possible metals
Associated Samples 121242005, 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #82497**						
Iron	7439-89-6		<19	ug/L				U	10/10/12
Magnesium	7439-95-4		<4.0	ug/L				U	10/10/12
Manganese	7439-96-5		<4.0	ug/L				U	10/10/12
Nickel	7440-02-0		<4.0	ug/L				U	10/10/12
Potassium	7440-09-7		<76	ug/L				U	10/10/12
Silver	7440-22-4		<4.0	ug/L				U	10/10/12
Sodium	7440-23-5		15.6	ug/L				B	10/10/12
Antimony	7440-36-0		<36	ug/L				U	10/10/12
Barium	7440-39-3		<4.0	ug/L				U	10/10/12
Cadmium	7440-43-9		<4.0	ug/L				U	10/10/12
Chromium	7440-47-3		<5.0	ug/L				U	10/10/12
Cobalt	7440-48-4		<4.0	ug/L				U	10/10/12
Copper	7440-50-8		<4.0	ug/L				U	10/10/12
Vanadium	7440-62-2		<5.0	ug/L				U	10/10/12
Zinc	7440-66-6		<5.0	ug/L				U	10/10/12
Calcium	7440-70-2		<49	ug/L				U	10/10/12
Strontium	7440-24-6		<9.0	ug/L				U	10/10/12

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

REVISED121242 -

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Titanium	7440-32-6		<4.0	ug/L					U	10/10/12
Beryllium	7440-41-7		<4.0	ug/L					U	10/10/12
LCS			**QC Sample #82499**							
Iron	7439-89-6		1050	ug/L	104.9	80 - 120				10/10/12
Magnesium	7439-95-4		10600	ug/L	106.3	80 - 120				10/10/12
Manganese	7439-96-5		1070	ug/L	106.6	80 - 120				10/10/12
Nickel	7440-02-0		1030	ug/L	102.8	80 - 120				10/10/12
Potassium	7440-09-7		11200	ug/L	112.2	80 - 120				10/10/12
Silver	7440-22-4		1070	ug/L	106.8	80 - 120				10/10/12
Sodium	7440-23-5		10700	ug/L	106.6	80 - 120				10/10/12
Antimony	7440-36-0		1070	ug/L	106.6	80 - 120				10/10/12
Barium	7440-39-3		1070	ug/L	107.4	80 - 120				10/10/12
Cadmium	7440-43-9		1040	ug/L	104.5	80 - 120				10/10/12
Chromium	7440-47-3		1060	ug/L	105.9	80 - 120				10/10/12
Cobalt	7440-48-4		1040	ug/L	103.9	80 - 120				10/10/12
Copper	7440-50-8		1060	ug/L	105.6	80 - 120				10/10/12
Vanadium	7440-62-2		1060	ug/L	105.9	80 - 120				10/10/12
Zinc	7440-66-6		1080	ug/L	107.9	80 - 120				10/10/12
Calcium	7440-70-2		21100	ug/L	105.5	80 - 120				10/10/12
Strontium	7440-24-6		1020	ug/L	102.4	80 - 120				10/10/12
Titanium	7440-32-6		1060	ug/L	105.9	80 - 120				10/10/12
Beryllium	7440-41-7		1050	ug/L	104.7	80 - 120				10/10/12

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

REVISED121242 -

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MS			**QC Sample #82500**							
			Original 121234009							
Iron	7439-89-6		1040	ug/L	104.5	75 - 125				10/10/12
Magnesium	7439-95-4		10600	ug/L	105.8	75 - 125				10/10/12
Manganese	7439-96-5		1050	ug/L	104.9	75 - 125				10/10/12
Nickel	7440-02-0		999	ug/L	99.9	75 - 125				10/10/12
Potassium	7440-09-7		11000	ug/L	110	75 - 125				10/10/12
Silver	7440-22-4		1050	ug/L	105	75 - 125				10/10/12
Sodium	7440-23-5		10400	ug/L	103.6	75 - 125				10/10/12
Antimony	7440-36-0		1060	ug/L	106.5	75 - 125				10/10/12
Barium	7440-39-3		1050	ug/L	105.5	75 - 125				10/10/12
Cadmium	7440-43-9		1030	ug/L	103.4	75 - 125				10/10/12
Chromium	7440-47-3		1040	ug/L	103.9	75 - 125				10/10/12
Cobalt	7440-48-4		1010	ug/L	101.2	75 - 125				10/10/12
Copper	7440-50-8		1030	ug/L	103.4	75 - 125				10/10/12
Vanadium	7440-62-2		1030	ug/L	103.3	75 - 125				10/10/12
Zinc	7440-66-6		1060	ug/L	106.1	75 - 125				10/10/12
Calcium	7440-70-2		21700	ug/L	108.4	75 - 125				10/10/12
Strontium	7440-24-6		1020	ug/L	101.6	75 - 125				10/10/12
Titanium	7440-32-6		1040	ug/L	104.3	75 - 125				10/10/12
Beryllium	7440-41-7		1040	ug/L	103.5	75 - 125				10/10/12
MSD			**QC Sample #82501**							
			Original 121234009					**Paired**	**82500**	
Iron	7439-89-6		1040	ug/L	104.5	75 - 125	0.00	20		10/10/12

* - QC result out of range

n/a - Not Applicable

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Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Magnesium	7439-95-4		10300	ug/L	103	75 - 125	1.40	20		10/10/12
Manganese	7439-96-5		1050	ug/L	104.6	75 - 125	0.30	20		10/10/12
Nickel	7440-02-0		994	ug/L	99.4	75 - 125	0.50	20		10/10/12
Potassium	7440-09-7		11000	ug/L	109.6	75 - 125	0.30	20		10/10/12
Silver	7440-22-4		1050	ug/L	104.9	75 - 125	0.10	20		10/10/12
Sodium	7440-23-5		10100	ug/L	101.4	75 - 125	1.40	20		10/10/12
Antimony	7440-36-0		1060	ug/L	105.8	75 - 125	0.70	20		10/10/12
Barium	7440-39-3		1050	ug/L	105	75 - 125	0.50	20		10/10/12
Cadmium	7440-43-9		1030	ug/L	103	75 - 125	0.40	20		10/10/12
Chromium	7440-47-3		1030	ug/L	103.2	75 - 125	0.60	20		10/10/12
Cobalt	7440-48-4		1010	ug/L	101.1	75 - 125	0.10	20		10/10/12
Copper	7440-50-8		1030	ug/L	103.1	75 - 125	0.30	20		10/10/12
Vanadium	7440-62-2		1030	ug/L	103.1	75 - 125	0.20	20		10/10/12
Zinc	7440-66-6		1060	ug/L	105.7	75 - 125	0.40	20		10/10/12
Calcium	7440-70-2		20600	ug/L	102.8	75 - 125	1.70	20		10/10/12
Strontium	7440-24-6		1010	ug/L	100.7	75 - 125	0.80	20		10/10/12
Titanium	7440-32-6		1040	ug/L	104	75 - 125	0.30	20		10/10/12
Beryllium	7440-41-7		1030	ug/L	103	75 - 125	0.50	20		10/10/12

* - QC result out of range

n/a - Not Applicable

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Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

Analytical Batch 208457 (QC Batch: 208456) **Test** SW-846 8260B Volatiles
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #82689**							
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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Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

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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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

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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Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

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
LCS			**QC Sample #82690**							
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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Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

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
MS			**QC Sample #82691**							
			Original 121223013							
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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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

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
MSD			**QC Sample #82692**							
			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

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Analytical Batch 208508 (QC Batch: 208507) **Test** Chemical Oxygen Demand
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #82881**							
Chemical Oxygen Demand	COD		<10	mg/L					U	10/11/12
LCS			**QC Sample #82882**							
Chemical Oxygen Demand	COD		99.2	mg/L	99.2	80 - 120				10/11/12
MS			**QC Sample #82885**							
			Original 121223013							
Chemical Oxygen Demand	COD		252	mg/L	100.8	75 - 125				10/11/12
MSD			**QC Sample #82886**							
			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 # WSCF121242

Analytical Batch 208550 (QC Batch: 208550) **Test** Total Organic Carbon
Associated Samples 121242003, 121242004, 121242006, 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #82945**							
Total Organic Carbon	TOC		<0.045	mg/L					U	10/15/12
LCS			**QC Sample #82946**							
Total Organic Carbon	TOC		2.18	mg/L	109	80 - 120				10/15/12
MS			**QC Sample #82947**							
			Original 121290001							
Total Organic Carbon	TOC		1.89	mg/L	94.5	75 - 125				10/15/12
MSD			**QC Sample #82948**							
			Original 121290001					**Paired**	**82947**	
Total Organic Carbon	TOC		1.89	mg/L	94.5	75 - 125	0.00	20		10/15/12

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Analytical Batch 208753 (QC Batch: 208453) **Test** ICP-2008 MS All possible metal
Associated Samples 121242005, 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #82677**						
Aluminum	7429-90-5		<5.0	ug/L				U	10/16/12
Manganese	7439-96-5		<0.10	ug/L				U	10/16/12
Nickel	7440-02-0		<0.10	ug/L				U	10/16/12
Silver	7440-22-4		<0.050	ug/L				U	10/16/12
Antimony	7440-36-0		<0.30	ug/L				U	10/16/12
Barium	7440-39-3		<0.20	ug/L				U	10/16/12
Beryllium	7440-41-7		<0.10	ug/L				U	10/16/12
Cadmium	7440-43-9		<0.050	ug/L				U	10/16/12
Chromium	7440-47-3		<0.10	ug/L				U	10/16/12
Cobalt	7440-48-4		<0.050	ug/L				U	10/16/12
Copper	7440-50-8		<0.10	ug/L				U	10/16/12
Vanadium	7440-62-2		0.434	ug/L				B	10/16/12
Zinc	7440-66-6		<1.0	ug/L				U	10/16/12
Lead	7439-92-1		<0.050	ug/L				U	10/16/12
Molybdenum	7439-98-7		<0.050	ug/L				U	10/16/12
Strontium	7440-24-6		<0.10	ug/L				U	10/16/12
Thallium	7440-28-0		<0.050	ug/L				U	10/16/12

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

REVISED121242 -

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Tin	7440-31-5		<0.050	ug/L					U	10/16/12
Arsenic	7440-38-2		<0.20	ug/L					U	10/16/12
Selenium	7782-49-2		<1.0	ug/L					U	10/16/12
LCS			**QC Sample #82678**							
Aluminum	7429-90-5		418	ug/L	104.6	85 - 115				10/16/12
Manganese	7439-96-5		41.5	ug/L	103.8	85 - 115				10/16/12
Nickel	7440-02-0		40.9	ug/L	102.2	85 - 115				10/16/12
Silver	7440-22-4		41.9	ug/L	104.8	85 - 115				10/16/12
Antimony	7440-36-0		39.5	ug/L	98.7	85 - 115				10/16/12
Barium	7440-39-3		42.3	ug/L	105.8	85 - 115				10/16/12
Beryllium	7440-41-7		42.4	ug/L	106.1	85 - 115				10/16/12
Cadmium	7440-43-9		40.3	ug/L	100.8	85 - 115				10/16/12
Chromium	7440-47-3		41.3	ug/L	103.2	85 - 115				10/16/12
Cobalt	7440-48-4		40.8	ug/L	102	85 - 115				10/16/12
Copper	7440-50-8		40.8	ug/L	102	85 - 115				10/16/12
Vanadium	7440-62-2		41.9	ug/L	104.8	85 - 115				10/16/12
Zinc	7440-66-6		37.0	ug/L	92.5	85 - 115				10/16/12
Lead	7439-92-1		43.0	ug/L	107.6	85 - 115				10/16/12
Molybdenum	7439-98-7		41.3	ug/L	103.2	85 - 115				10/16/12
Strontium	7440-24-6		413	ug/L	103.2	85 - 115				10/16/12
Thallium	7440-28-0		42.7	ug/L	106.6	85 - 115				10/16/12
Tin	7440-31-5		41.0	ug/L	102.5	85 - 115				10/16/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Arsenic	7440-38-2		39.0	ug/L	97.6	85 - 115				10/16/12
Selenium	7782-49-2		36.4	ug/L	91.1	85 - 115				10/16/12
MS			**QC Sample #82679**							
			Original 121266007							
Aluminum	7429-90-5		397	ug/L	99.3	70 - 130				10/16/12
Manganese	7439-96-5		38.8	ug/L	97	70 - 130				10/16/12
Nickel	7440-02-0		36.4	ug/L	90.9	70 - 130				10/16/12
Silver	7440-22-4		38.2	ug/L	95.6	70 - 130				10/16/12
Antimony	7440-36-0		40.1	ug/L	100.2	70 - 130				10/16/12
Barium	7440-39-3		38.4	ug/L	96.1	70 - 130				10/16/12
Beryllium	7440-41-7		39.8	ug/L	99.5	70 - 130				10/16/12
Cadmium	7440-43-9		38.9	ug/L	97.2	70 - 130				10/16/12
Chromium	7440-47-3		38.7	ug/L	96.8	70 - 130				10/16/12
Cobalt	7440-48-4		37.7	ug/L	94.2	70 - 130				10/16/12
Copper	7440-50-8		35.6	ug/L	89	70 - 130				10/16/12
Vanadium	7440-62-2		39.5	ug/L	98.7	70 - 130				10/16/12
Zinc	7440-66-6		33.0	ug/L	82.5	70 - 130				10/16/12
Lead	7439-92-1		43.2	ug/L	108.1	70 - 130				10/16/12
Molybdenum	7439-98-7		42.0	ug/L	105.1	70 - 130				10/16/12
Strontium	7440-24-6		399	ug/L	99.8	70 - 130				10/16/12
Thallium	7440-28-0		43.3	ug/L	108.2	70 - 130				10/16/12
Tin	7440-31-5		40.6	ug/L	101.5	70 - 130				10/16/12
Arsenic	7440-38-2		39.6	ug/L	99	70 - 130				10/16/12

* - QC result out of range

n/a - Not Applicable

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Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Selenium	7782-49-2		36.3	ug/L	90.7	70 - 130				10/16/12
MSD			**QC Sample #82680**							
			Original 121266007						**Paired 82679**	
Aluminum	7429-90-5		390	ug/L	97.4	70 - 130	1.90	20		10/16/12
Manganese	7439-96-5		37.4	ug/L	93.5	70 - 130	3.60	20		10/16/12
Nickel	7440-02-0		35.7	ug/L	89.2	70 - 130	1.90	20		10/16/12
Silver	7440-22-4		37.2	ug/L	93	70 - 130	2.80	20		10/16/12
Antimony	7440-36-0		39.0	ug/L	97.5	70 - 130	2.80	20		10/16/12
Barium	7440-39-3		36.6	ug/L	91.4	70 - 130	1.70	20		10/16/12
Beryllium	7440-41-7		39.2	ug/L	98.1	70 - 130	1.40	20		10/16/12
Cadmium	7440-43-9		38.1	ug/L	95.3	70 - 130	2.10	20		10/16/12
Chromium	7440-47-3		37.3	ug/L	93.4	70 - 130	2.90	20		10/16/12
Cobalt	7440-48-4		36.7	ug/L	91.7	70 - 130	2.60	20		10/16/12
Copper	7440-50-8		35.1	ug/L	87.9	70 - 130	1.30	20		10/16/12
Vanadium	7440-62-2		38.2	ug/L	95.5	70 - 130	2.00	20		10/16/12
Zinc	7440-66-6		32.0	ug/L	80.1	70 - 130	2.80	20		10/16/12
Lead	7439-92-1		42.2	ug/L	105.6	70 - 130	2.30	20		10/16/12
Molybdenum	7439-98-7		41.1	ug/L	102.9	70 - 130	2.00	20		10/16/12
Strontium	7440-24-6		384	ug/L	96.1	70 - 130	2.20	20		10/16/12
Thallium	7440-28-0		42.3	ug/L	105.8	70 - 130	2.20	20		10/16/12
Tin	7440-31-5		39.5	ug/L	98.8	70 - 130	2.60	20		10/16/12
Arsenic	7440-38-2		38.7	ug/L	96.7	70 - 130	2.20	20		10/16/12
Selenium	7782-49-2		34.5	ug/L	86.3	70 - 130	4.50	20		10/16/12

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

REVISED121242 -

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121242

Analytical Batch 208754 (QC Batch: 208754) **Test** Total Alkalinity as mg/L CaCO3 (Water)
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #82975**							
Total Alkalinity as CaCO3	ALKALINITY		97	mg/L	97	80 - 120				10/15/12
DUP			**QC Sample #82976**							
			Original 121239002							
Total Alkalinity as CaCO3	ALKALINITY		120	mg/L			0.00	20		10/15/12
LCS			**QC Sample #82977**							
Total Alkalinity as CaCO3	ALKALINITY		97	mg/L	97.5	80 - 120				10/15/12
LCS			**QC Sample #82978**							
Total Alkalinity as CaCO3	ALKALINITY		97	mg/L	97.2	80 - 120				10/15/12

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

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

Analytical Batch 208757 (QC Batch: 208756) **Test** Gasoline Range (W)
Associated Samples 121242007

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

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

Analytical Batch 208850 (QC Batch: 208488) **Test** SW-846 8270D Semivolatiles
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #82826**							
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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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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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Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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

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Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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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Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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-Nitrosopyrolidine	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

REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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
LCS			**QC Sample #82827**							
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

REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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

REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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
MS			**QC Sample #82828**							
			Original 121239001							
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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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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
MSD			**QC Sample #82829**								
			Original 121239001						**Paired**	**82828**	
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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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

Analytical Batch 208887 (QC Batch: 208650) **Test** PCBs by EPA SW-846 Method 8082
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #82953**							
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
LCS			**QC Sample #82954**							
Aroclor-1254	11097-69-1		1.7	ug/L	87.2	70 - 130				10/17/12
MS			**QC Sample #82955**							
			Original 121223013							
Aroclor-1254	11097-69-1		1.8	ug/L	93.6	60 - 130				10/17/12
MSD			**QC Sample #82956**							
			Original 121223013					**Paired 82955**		
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

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121242

Analytical Batch 208899 (QC Batch: 208883) **Test** Cyanide (W) by Midi/Spectrophotometer
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #83149**							
Cyanide	57-12-5		<4.0	ug/L					U	10/17/12
LCS			**QC Sample #83152**							
Cyanide	57-12-5		50.3	ug/L	100.6	85 - 115				10/17/12
MS			**QC Sample #83153**							
			Original 121242007							
Cyanide	57-12-5	<4.0	42.6	ug/L	106.4	75 - 125				10/17/12
MSD			**QC Sample #83154**							
			Original 121242007					**Paired**	**83153**	
Cyanide	57-12-5	<4.0	43.3	ug/L	108.2	75 - 125	1.70	20		10/17/12

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Analytical Batch 208911 (QC Batch: 208900) **Test** ICP-2008 MS All possible metal
Associated Samples 121242001, 121242002

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #83185**							
Mercury	7439-97-6		<0.050	ug/L					Uo	10/19/12
LCS			**QC Sample #83186**							
Mercury	7439-97-6		1.69	ug/L	84.4	85 - 115			o	10/19/12
MS			**QC Sample #83187**							
			Original 121223011							
Mercury	7439-97-6		1.90	ug/L	94.8	70 - 130			o	10/19/12
MSD			**QC Sample #83188**							
			Original 121223011					**Paired 83187**		
Mercury	7439-97-6		1.89	ug/L	94.4	70 - 130	0.40	20	o	10/19/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121242

Analytical Batch 209204 (QC Batch: 209194) **Test** Total Organic Halides
Associated Samples 121242003, 121242004, 121242006, 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #83816**								
Total Organic Halides	59473-04-0		<5.0	ug/L						U	10/16/12
LCS			**QC Sample #83817**								
Total Organic Halides	59473-04-0		371	mg/L	92.7	80 - 120					10/16/12
MS			**QC Sample #83818**								
			Original 121242003								
Total Organic Halides	59473-04-0	<5.0	48.3	ug/L	120.8	75 - 125					10/16/12
MSD			**QC Sample #83819**								
			Original 121242003						**Paired**	**83818**	
Total Organic Halides	59473-04-0	<5.0	41.8	ug/L	104.5	75 - 125	14.50	20			10/16/12

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

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

Analytical Batch 208284 (QC Batch: 208276) **Test** Extractable Diesel and Petroleum
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121242007**							
o-Terphenyl	84-15-1				97.2	70 - 130				10/08/12
BLANK			**QC Sample #82474**							
o-Terphenyl	84-15-1				105.8	70 - 130				10/08/12
LCS			**QC Sample #82475**							
o-Terphenyl	84-15-1				105.4	70 - 130				10/08/12
MS			**QC Sample #82476**							
			Original 121239001							
o-Terphenyl	84-15-1				96.2	70 - 130				10/08/12
MSD			**QC Sample #82477**							
			Original 121239001					**Paired**	**82476**	
o-Terphenyl	84-15-1				99.7	70 - 130	n/a			10/08/12

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

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

Analytical Batch 208457 (QC Batch: 208456) **Test** SW-846 8260B Volatiles
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121242007**							
1,2-Dichloroethane-d4	17060-07-0				102.8	75 - 125				10/16/12
Toluene-d8	2037-26-5				97.4	75 - 125				10/16/12
4-Bromofluorobenzene	460-00-4				100.4	75 - 125				10/16/12
BLANK			**QC Sample #82689**							
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
LCS			**QC Sample #82690**							
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
MS			**QC Sample #82691**							
			Original 121223013							
4-Bromofluorobenzene	460-00-4				95.3	75 - 125				10/16/12

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

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
MSD			**QC Sample #82692**							
			Original 121223013					**Paired 82691**		
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

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Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

Analytical Batch 208757 (QC Batch: 208756) **Test** Gasoline Range (W)
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121242007**							
4-Bromofluorobenzene	460-00-4				97.7	50 - 150				10/16/12
BLANK			**QC Sample #82983**							
4-Bromofluorobenzene	460-00-4				99.1	50 - 150				10/16/12
LCS			**QC Sample #82984**							
4-Bromofluorobenzene	460-00-4				97.1	50 - 150				10/16/12
MS			**QC Sample #82985**							
			Original 121223013							
4-Bromofluorobenzene	460-00-4				96.7	50 - 150				10/16/12
MSD			**QC Sample #82986**							
			Original 121223013					**Paired**	**82985**	
4-Bromofluorobenzene	460-00-4				98.5	50 - 150	n/a			10/16/12
DUP			**QC Sample #82987**							
			Original 121223013							

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

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Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121242

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

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

Analytical Batch 208850 (QC Batch: 208488) **Test** SW-846 8270D Semivolatiles
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121242007**							
2-Fluorophenol	367-12-4				51.1	44 - 135				10/16/12
Phenol-d5	4165-62-2				38.1	41 - 136			X	10/16/12
Nitrobenzene-d5	4165-60-0				74.3	53 - 129				10/16/12
2-Methylnaphthalene-d10	7297-45-2				75.9	50 - 140				10/16/12
2-Fluorobiphenyl	321-60-8				76.5	36 - 141				10/16/12
2,4,6-Tribromophenol	118-79-6				65.6	17 - 142				10/16/12
Fluoranthene-d10	93951-69-0				81.2	50 - 140				10/16/12
Terphenyl-d14	98904-43-9				87.1	61 - 142				10/16/12
BLANK			**QC Sample #82826**							
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

REVISED121242 -

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

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
LCS			**QC Sample #82827**							
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
MS			**QC Sample #82828**							
			Original 121239001							
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

REVISED121242 -

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MSD			**QC Sample #82829**							
			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

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF121242

Analytical Batch 208887 (QC Batch: 208650) **Test** PCBs by EPA SW-846 Method 8082
Associated Samples 121242007

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121242007**							
Tetrachloro-m-xylene	877-09-8				84.3	60 - 140				10/17/12
Decachlorobiphenyl	2051-24-3				92.6	60 - 140				10/17/12
BLANK			**QC Sample #82953**							
Tetrachloro-m-xylene	877-09-8				78.2	60 - 140				10/17/12
Decachlorobiphenyl	2051-24-3				91.9	60 - 140				10/17/12
LCS			**QC Sample #82954**							
Tetrachloro-m-xylene	877-09-8				75.5	60 - 140				10/17/12
Decachlorobiphenyl	2051-24-3				94	60 - 140				10/17/12
MS			**QC Sample #82955**							
			Original 121223013							
Tetrachloro-m-xylene	877-09-8				81.9	60 - 140				10/17/12
Decachlorobiphenyl	2051-24-3				95.8	60 - 140				10/17/12
MSD			**QC Sample #82956**							
			Original 121223013					**Paired 82955**		
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

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

REVISED121242 -

Attention: Scot Fitzgerald **Group #** WSCF121242

121242007	**B2M147**
Department	Organic, Semivolatiles

Analyte Phenol-d5 - SW-846 8270D Semivolatiles

[1] Surrogate recovery outside of established laboratory control limits.

Attention: Scot Fitzgerald **Group #** WSCF121242

Quality Control Comments

Department Organic, Semivolatiles

82826 BLANK for HBN 208488 [ORGP/202

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

82828 B2M0Y3(121239001MS)

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

82829 B2M0Y3(121239001MSD)

Analyte 4-Nitrophenol - SW-846 8270D Semivolatiles
[1] Matrix Spike RPD outside established laboratory limits No flags assigned.

Analyte Pentachlorophenol - SW-846 8270D Semivolatiles
[1] Matrix Spike RPD outside established laboratory limits No flags assigned.

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

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 5 pages
Including cover page

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

ACKNOWLEDGEMENT OF SAMPLES RECEIVED

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

ATTN: Scot Fitzgerald

Customer Code: CHPRC
PO #: 401647
Work Order #: 121242
Profile #: W13-010-189
Proj. Mgr.:
Phone:

The following samples were received from you on 10/4/2012 3:00:00 PM. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
		Tests scheduled		
121242001	B2M8J3	WATER	10/4/2012 12:05	10/4/2012 15:00
		2008-W		
121242002	B2M8J2	WATER	10/4/2012 12:05	10/4/2012 15:00
		2008-W		
121242003	B2M225	WATER	10/4/2012 12:05	10/4/2012 15:00
		TOC-W; TOX-W		
121242004	B2M226	WATER	10/4/2012 12:05	10/4/2012 15:00
		TOC-W; TOX-W		
121242005	B2M149	WATER	10/4/2012 12:05	10/4/2012 15:00
		2008-W; 6010-W		
121242006	B2M224	WATER	10/4/2012 12:05	10/4/2012 15:00
		TOC-W; TOX-W		
121242007	B2M147	WATER	10/4/2012 12:05	10/4/2012 15:00
		2008-W; 6010-W; 8260V-W; 8270SV-W; ALK-W; CN-W; COD-W; PCB-W; TOC-W; TOX-W; TPHDWA-W; TPHGWA-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)

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)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W13-010-189 Page 1 of 2

Collector	Roy Shepard	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 51 / 10	Ice Chest No.	N/A
Shipped To (Lab)	Waste Sampling & Characterization	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	RCRA	Priority:	31 Days **PRIORITY**	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

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

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

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

121242

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2M8J3	Y	W	10-4-12	1205	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B2M224	N	W			1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool~4C
B2M224	N	W			1x250-mL aG	9060_TOC: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool~4C
B2M147	N	W			1x500-mL G/P	200.8_METALS_ICPMS: List-1 (26)	6 Months	HNO3 to pH <2
B2M147	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2M147	N	W			1x500-mL G/P	410.4_COD: COD (1)	28 Days	H2SO4 to pH <2/Cool~4C
B2M147	N	W			1x250-mL P	4500E_CN: Cyanide (1)	14 Days	NaOH to pH >=12
B2M147	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2M147	N	W			4x1-L aG	8082_PCB_GC: List-1 (7)	None	Cool~4C
B2M147	N	W	10-4-12		1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool~4C
~~B2M147~~	~~N~~	~~W~~			~~1x250-mL G/P~~	~~9030_SULFIDE: Sulfide (1)~~	~~7 Days~~	~~ZnAc+NaOH to pH > 9/Cool~4C~~
B2M147	N	W	10-4-12	1205	1x250-mL aG	9060_TOC: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool~4C
B2M147	N	W	10-4-12		3x1-L aG	TPH-DieselKerosene Range - WTPH-D	14/40 Days	HCl to pH <2/Cool~4C
B2M147	N	W	10-4-12		4x40-mL aGs*	TPH-Gasoline Range - WTPH-G	14 Days	HCl to pH <2/Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Roy Shepard			OCT 04 2012 1500	Cynthia R Johnson			OCT 04 2012 1500
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

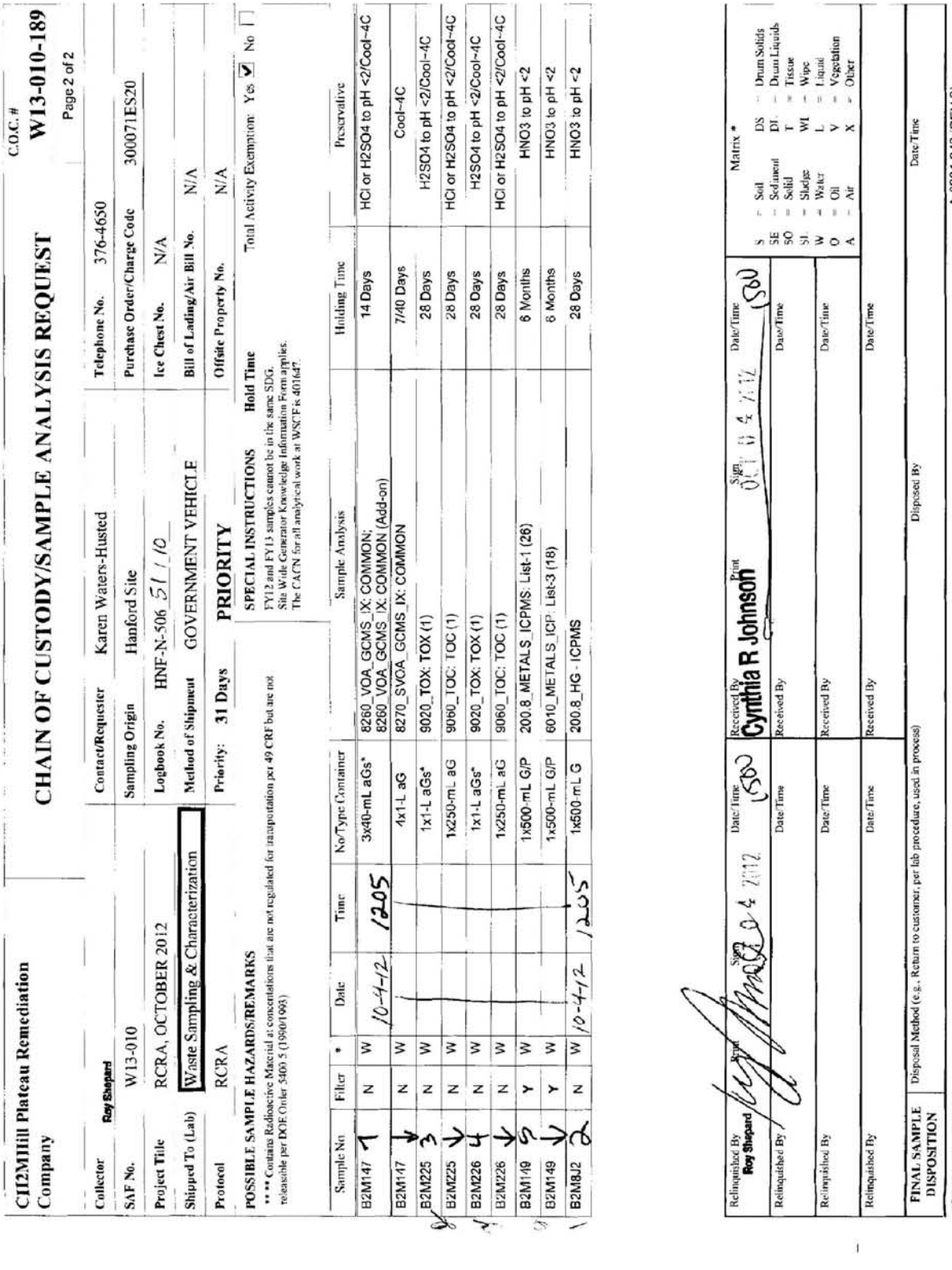
S = Soil	DS = Drum Solids		
SE = Sediment	DL = Drum Liquids		
SO = Solid	T = Tissue		
SL = Sludge	WI = Wipe		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

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

PRINTED ON 9/18/2012

A-6004-842 (REV 2)

Chain of Custody



CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W13-010-189

Page 2 of 2

Collector: Roy Shepard	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 51/10		Ice Chest No.: N/A		
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: GOVERNMENT VEHICLE		Bill of Lading/Air Bill No.: N/A		
Protocol: RCRA	Priority: 31 Days PRIORITY		Offsite Property No.: N/A		

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400.5 (10/90/1993)

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

Hold Time: Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2M147 1	N	W	10-4-12	1205	3x40-mL aGs*	8260_VOA_GCMS_IX: COMMON; 8260_VOA_GCMS_IX: COMMON (Add-on)	14 Days	HCl or H2SO4 to pH <2/Cool-4C
B2M147 ↓	N	W			4x1-L aG	8270_SVOA_GCMS_IX: COMMON	7/40 Days	Cool-4C
B2M225 3	N	W			1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2M225 ↓	N	W			1x250-mL aG	9060_TOC: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2M226 4	N	W			1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2M226 ↓	N	W			1x250-mL aG	9060_TOC: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2M149 5	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: List-1 (26)	6 Months	HNO3 to pH <2
B2M149 ↓	Y	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2M8J2 2	N	W	10-4-12	1205	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2

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

Relinquished By: Roy Shepard	Sign/Print	Date/Time: 10-4-2012 1500	Received By: Cynthia R Johnson Sign/Print: OCT 04 2012 Date/Time: 1500 (SDU)
Relinquished By		Date/Time	Received By / Date/Time
Relinquished By		Date/Time	Received By / Date/Time
Relinquished By		Date/Time	Received By / Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By / Date/Time

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A-6004-842 (REV 2)