

JULY 24, 2012

WSCF Laboratory

PO Box 650 S3-30
Richland, WA 99352



July 24, 2012

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

Dear Scot Fitzgerald,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF120829

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 WSCF120829

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

Very truly yours,

A handwritten signature in black ink, appearing to read "Joseph Hale", is positioned above the typed name.

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 # WSCF120829
 Data Deliverable Date 08/09/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
W12-007	B2L9M2	120829001	WATER	06/25/12	06/25/12
W12-007	B2L8P3	120829002	WATER	06/25/12	06/25/12
W12-007	B2L9M1	120829003	WATER	06/25/12	06/25/12
W12-007	B2L9M0	120829004	WATER	06/25/12	06/25/12
W12-007	B2L8P1	120829005	WATER	06/25/12	06/25/12
W12-007	B2L9L7	120829006	WATER	06/25/12	06/25/12
W12-007	B2L9L8	120829007	WATER	06/25/12	06/25/12
W12-007	B2L9L9	120829008	WATER	06/25/12	06/25/12
W12-007	B2L9L4	120829009	WATER	06/25/12	06/25/12
W12-007	B2L9L5	120829010	WATER	06/25/12	06/25/12
W12-007	B2L9L6	120829011	WATER	06/25/12	06/25/12
W12-007	B2L8N9	120829012	WATER	06/25/12	06/25/12
W12-007	B2L8N7	120829013	WATER	06/25/12	06/25/12
W12-007	B2L9L1	120829014	WATER	06/25/12	06/25/12
W12-007	B2L9L2	120829015	WATER	06/25/12	06/25/12
W12-007	B2L9L3	120829016	WATER	06/25/12	06/25/12

ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Master Contract 39818, Revision 3, "Laboratory Analytical Services to CHPRC Soil and Groundwater Remediation Project."*

The narrative (Attachment 2) will address sample characteristics, analyses requested and general information in performance of the analytical methods. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

It should be noted that the attached chain of custody was not stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving. However, based on procedure LO-090-403 form "NOTICE OF IMPROPER SAMPLE SUBMITTAL" was not submitted and was not stamped "NOT ICED". No anomaly was noted during sample receipt.

The following generic data qualifiers (i.e., B, C, D, J and U) may be applicable to this report, as appropriate.

- **B** – Sample results with a concentration greater than the MDL but less than the PQL are B flagged (applies to inorganic and wet chemical analyses), as appropriate.
- **C** – Analyte was detected in the blank and was evaluated. Affected sample results in the batch were C flagged (applies to inorganic and wet chemical analyses).
- **D** – Sample results are D flagged if dilution(s) were required, as appropriate.
- **J** – Sample results with a concentration greater than the MDL but less than the PQL are J flagged (applies to organic analyses), as appropriate.
- **B (organic analyses)** – Analyte was detected in the blank and was evaluated. Affected sample results in the batch were B flagged.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

Attachment 2
Narrative
WSCF120829

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.

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

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 45 pages
Including cover page

JULY 24, 2012

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Scot Fitzgerald

Contract # MOA-FH-CHPRC-2008
Group # WSCF120829
Report Date July 24, 2012

Analytical: Electronically signed by Joseph Hale

Client Services: Electronically signed by Marisol Avila

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

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7005. Information designation of this report is the responsibility of the customer.

Batch QC List

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
204551	204552	1	BLANK	77945	BLANK		Total Organic Halides
204551	204552	2	LCS	77946	LCS		Total Organic Halides
204551	204552	10	MS	77950	B2L9M2(120829001MS)	120829001	Total Organic Halides
204551	204552	11	MSD	77951	B2L9M2(120829001MSD)	120829001	Total Organic Halides
204551	204552	12	SAMPLE	120829001	B2L9M2		Total Organic Halides
204551	204552	13	SAMPLE	120829002	B2L8P3		Total Organic Halides
204551	204552	14	SAMPLE	120829003	B2L9M1		Total Organic Halides
204551	204552	15	SAMPLE	120829004	B2L9M0		Total Organic Halides
204551	204552	16	SAMPLE	120829005	B2L8P1		Total Organic Halides
204551	204552	17	SAMPLE	120829006	B2L9L7		Total Organic Halides
204551	204552	18	SAMPLE	120829007	B2L9L8		Total Organic Halides
204551	204552	19	SAMPLE	120829008	B2L9L9		Total Organic Halides
204554	204555	1	BLANK	77961	BLANK		Total Organic Halides
204554	204555	2	LCS	77962	LCS		Total Organic Halides
204554	204555	4	MS	77964	B2L9L4(120829009MS)	120829009	Total Organic Halides
204554	204555	5	MSD	77965	B2L9L4(120829009MSD)	120829009	Total Organic Halides
204554	204555	6	SAMPLE	120829009	B2L9L4		Total Organic Halides
204554	204555	7	SAMPLE	120829010	B2L9L5		Total Organic Halides
204554	204555	8	SAMPLE	120829011	B2L9L6		Total Organic Halides
204554	204555	9	SAMPLE	120829012	B2L8N9		Total Organic Halides
204554	204555	10	SAMPLE	120829013	B2L8N7		Total Organic Halides
204554	204555	11	SAMPLE	120829014	B2L9L1		Total Organic Halides
204554	204555	12	SAMPLE	120829015	B2L9L2		Total Organic Halides

Batch QC List

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
204554	204555	13	SAMPLE	120829016	B2L9L3		Total Organic Halides

Batch QC List

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
204929	204929	2	BLANK	78300	BLANK		Total Organic Carbon
204929	204929	3	LCS	78301	LCS		Total Organic Carbon
204929	204929	4	MS	78302	B2L8P1(120829005MS)	120829005	Total Organic Carbon
204929	204929	5	MSD	78303	B2L8P1(120829005MSD)	120829005	Total Organic Carbon
204929	204929	6	SAMPLE	120829005	B2L8P1		Total Organic Carbon
204929	204929	7	SAMPLE	120829006	B2L9L7		Total Organic Carbon
204929	204929	8	SAMPLE	120829007	B2L9L8		Total Organic Carbon
204929	204929	9	SAMPLE	120829008	B2L9L9		Total Organic Carbon
204929	204929	10	SAMPLE	120829009	B2L9L4		Total Organic Carbon
204929	204929	11	SAMPLE	120829010	B2L9L5		Total Organic Carbon
204929	204929	12	SAMPLE	120829011	B2L9L6		Total Organic Carbon
204929	204929	13	SAMPLE	120829012	B2L8N9		Total Organic Carbon
204929	204929	14	SAMPLE	120829013	B2L8N7		Total Organic Carbon
204929	204929	15	SAMPLE	120829014	B2L9L1		Total Organic Carbon
204929	204929	17	MS	78312	B2L9L2(120829015MS)	120829015	Total Organic Carbon
204929	204929	18	MSD	78313	B2L9L2(120829015MSD)	120829015	Total Organic Carbon
204929	204929	19	SAMPLE	120829015	B2L9L2		Total Organic Carbon
204929	204929	20	SAMPLE	120829016	B2L9L3		Total Organic Carbon
204957	204957	2	BLANK	78356	BLANK		Total Organic Carbon
204957	204957	3	LCS	78357	LCS		Total Organic Carbon
204957	204957	4	MS	78358	B2L9N1(120838018MS)	120838018	Total Organic Carbon
204957	204957	5	MSD	78359	B2L9N1(120838018MSD)	120838018	Total Organic Carbon
204957	204957	7	SAMPLE	120829004	B2L9M0		Total Organic Carbon

Batch QC List

Attention Scot Fitzgerald
 Department Wet Chemistry

Group # WSCF120829

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
205012	205012	2	BLANK	78538	BLANK		Total Organic Carbon
205012	205012	3	LCS	78539	LCS		Total Organic Carbon
205012	205012	4	MS	78540	B2L9M2(120829001MS)	120829001	Total Organic Carbon
205012	205012	5	MSD	78541	B2L9M2(120829001MSD)	120829001	Total Organic Carbon
205012	205012	6	SAMPLE	120829001	B2L9M2		Total Organic Carbon
205012	205012	7	SAMPLE	120829002	B2L8P3		Total Organic Carbon
205012	205012	17	MS	78543	B2L9M1(120829003MS)	120829003	Total Organic Carbon
205012	205012	18	MSD	78544	B2L9M1(120829003MSD)	120829003	Total Organic Carbon
205012	205012	19	SAMPLE	120829003	B2L9M1		Total Organic Carbon

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

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-523-444	Total Organic Halides Based on SW-846 Method 9020B		
	EPA SW-846	9020B	Total Organic Halides (TOX)
	HEIS	9020_TOX	Total Organic Halides (TOX)

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 # WSCF120829

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

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

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829001
SAF# W12-007
Sample ID B2L9M2

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/26/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	B	8.22		ug/L	1	5.0	15	06/26/12

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

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

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

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829002
SAF# W12-007
Sample ID B2L8P3

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/26/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	B	5.27		ug/L	1	5.0	15	06/26/12

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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829003
SAF# W12-007
Sample ID B2L9M1

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/26/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	B	8.93		ug/L	1	5.0	15	06/26/12

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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829004
SAF# W12-007
Sample ID B2L9M0

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/26/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	B	6.12		ug/L	1	5.0	15	06/26/12

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

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

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

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829005
SAF# W12-007
Sample ID B2L8P1

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/26/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	B	5.82		ug/L	1	5.0	15	06/26/12

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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829006
SAF# W12-007
Sample ID B2L9L7

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/26/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	B	9.94		ug/L	1	5.0	15	06/26/12

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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829007
SAF# W12-007
Sample ID B2L9L8

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/26/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444		17.6		ug/L	1	5.0	15	06/26/12

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

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

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

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829008
SAF# W12-007
Sample ID B2L9L9

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/26/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444		18.8		ug/L	1	5.0	15	06/26/12

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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829009
SAF# W12-007
Sample ID B2L9L4

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/27/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	06/27/12

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

B - Analyte < 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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829010
SAF# W12-007
Sample ID B2L9L5

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/27/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	06/27/12

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

B - Analyte < 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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829011
SAF# W12-007
Sample ID B2L9L6

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/27/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	06/27/12

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

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

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

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829012
SAF# W12-007
Sample ID B2L8N9

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/27/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	06/27/12

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

B - Analyte < 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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829013
SAF# W12-007
Sample ID B2L8N7

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/27/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	B	5.49		ug/L	1	5.0	15	06/27/12

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

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

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

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829014
SAF# W12-007
Sample ID B2L9L1

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/27/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	B	6.62		ug/L	1	5.0	15	06/27/12

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

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

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

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829015
SAF# W12-007
Sample ID B2L9L2

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/27/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	06/27/12

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

B - Analyte < 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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Sample # 120829016
SAF# W12-007
Sample ID B2L9L3

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for TOX (W)										06/27/12
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	B	6.86		ug/L	1	5.0	15	06/27/12

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

B - Analyte < 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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829001
SAF# W12-007
Sample ID B2L9M2

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/19/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	U	<0.10		mg/L	1	0.10	0.30	07/19/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829002
SAF# W12-007
Sample ID B2L8P3

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/19/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	U	<0.10		mg/L	1	0.10	0.30	07/19/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829003
SAF# W12-007
Sample ID B2L9M1

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/19/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	U	<0.10		mg/L	1	0.10	0.30	07/19/12

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

B - Analyte < the 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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829004
SAF# W12-007
Sample ID B2L9M0

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	U	<0.10		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829005
SAF# W12-007
Sample ID B2L8P1

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.142		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829006
SAF# W12-007
Sample ID B2L9L7

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.141		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829007
SAF# W12-007
Sample ID B2L9L8

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.147		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829008
SAF# W12-007
Sample ID B2L9L9

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.160		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829009
SAF# W12-007
Sample ID B2L9L4

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.146		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829010
SAF# W12-007
Sample ID B2L9L5

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.145		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829011
SAF# W12-007
Sample ID B2L9L6

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.152		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829012
SAF# W12-007
Sample ID B2L8N9

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.115		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829013
SAF# W12-007
Sample ID B2L8N7

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406		0.313		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829014
SAF# W12-007
Sample ID B2L9L1

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406		0.353		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829015
SAF# W12-007
Sample ID B2L9L2

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406		0.331		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Sample # 120829016
SAF# W12-007
Sample ID B2L9L3

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
07/18/12										
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406		0.306		mg/L	1	0.10	0.30	07/18/12

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

B - Analyte < the RDL but >= the IDL/MDL.
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary diltution factor.
 N - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.
 PQL is equivalent to Estimated Quantitation Limit (EQL)

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Analytical Batch 204552 (QC Batch: 204551) **Test** Total Organic Halides
Associated Samples 120829001, 120829002, 120829003, 120829004, 120829005, 120829006, 120829007, 120829008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
			QC Sample #77945							
Total Organic Halides	59473-04-0		<5.0	ug/L					U	06/26/12
LCS										
			QC Sample #77946							
Total Organic Halides	59473-04-0		403	mg/L	100.9	80 - 120				06/26/12
MS										
			QC Sample #77950							
			Original 120829001							
Total Organic Halides	59473-04-0	8.22	44.7	ug/L	111.8	75 - 125				06/26/12
MSD										
			QC Sample #77951							
			Original 120829001							
			Paired 77950							
Total Organic Halides	59473-04-0	8.22	40.4	ug/L	101	75 - 125	8.70	20		06/26/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120829

Analytical Batch 204555 (QC Batch: 204554) **Test** Total Organic Halides
Associated Samples 120829009, 120829010, 120829011, 120829012, 120829013, 120829014, 120829015, 120829016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			QC Sample #77961							
Total Organic Halides	59473-04-0		<5.0	ug/L					U	06/27/12
LCS			QC Sample #77962							
Total Organic Halides	59473-04-0		387	mg/L	96.8	80 - 120				06/27/12
MS			QC Sample #77964							
			Original 120829009							
Total Organic Halides	59473-04-0	<5.0	36.9	ug/L	92.2	75 - 125				06/27/12
MSD			QC Sample #77965							
			Original 120829009							
			Paired 77964							
Total Organic Halides	59473-04-0	<5.0	39.6	ug/L	99	75 - 125	7.10	20		06/27/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Analytical Batch 204929 (QC Batch: 204929) **Test** Total Organic Carbon
Associated Samples 120829005, 120829006, 120829007, 120829008, 120829009, 120829010, 120829011, 120829012, 120829013, 120829014, 120829015, 120829016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			QC Sample #78300							
Total Organic Carbon LCS	TOC		<0.045	mg/L					U	07/18/12
			QC Sample #78301							
Total Organic Carbon MS	TOC		1.91	mg/L	95.4	80 - 120				07/18/12
			QC Sample #78302							
			Original 120829005							
Total Organic Carbon MSD	TOC	0.142	1.92	mg/L	95.9	75 - 125				07/18/12
			QC Sample #78303							
			Original 120829005							
Total Organic Carbon MS	TOC	0.142	1.94	mg/L	96.9	75 - 125	1.00	20		07/18/12
			QC Sample #78312							
			Original 120829015							
Total Organic Carbon MSD	TOC	0.331	2.11	mg/L	105.4	75 - 125				07/18/12
			QC Sample #78313							
			Original 120829015							
Total Organic Carbon	TOC	0.331	2.13	mg/L	106.4	75 - 125	0.80	20		07/18/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Analytical Batch 204957 (QC Batch: 204957)
Associated Samples 120829004

Test Total Organic Carbon

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #78356								
Total Organic Carbon	TOC		<0.045	mg/L					U	07/18/12
LCS		QC Sample #78357								
Total Organic Carbon	TOC		2.06	mg/L	103.1	80 - 120				07/18/12
MS		QC Sample #78358								
		Original 120838018								
Total Organic Carbon	TOC		2.04	mg/L	101.8	75 - 125				07/18/12
MSD		QC Sample #78359								
		Original 120838018								
		Paired 78358								
Total Organic Carbon	TOC		1.99	mg/L	99.4	75 - 125	1.90	20		07/18/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120829

Analytical Batch 205012 (QC Batch: 205012) **Test** Total Organic Carbon
Associated Samples 120829001, 120829002, 120829003

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
			QC Sample #78538							
Total Organic Carbon	TOC		<0.045	mg/L					U	07/19/12
LCS										
			QC Sample #78539							
Total Organic Carbon	TOC		2.10	mg/L	105	80 - 120				07/19/12
MS										
			QC Sample #78540							
			Original 120829001							
Total Organic Carbon	TOC	<0.10	2.14	mg/L	107.2	75 - 125				07/19/12
MSD										
									Paired 78540	
Total Organic Carbon	TOC	<0.10	2.10	mg/L	105.1	75 - 125	1.90	20		07/19/12
MS										
			QC Sample #78543							
			Original 120829003							
Total Organic Carbon	TOC	<0.10	2.24	mg/L	112	75 - 125				07/19/12
MSD										
									Paired 78543	
Total Organic Carbon	TOC	<0.10	2.16	mg/L	108	75 - 125	3.60	20		07/19/12

* - QC result out of range

n/a - Not Applicable

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 7 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 #: 120829

Profile #: W12-007-11

Proj. Mgr.:

Phone:

The following samples were received from you on 6/25/2012 2:58:00 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		
120829001	B2L9M2	WATER	6/25/2012 14:21	6/25/2012 14:58
		TOC-W; TOX-W		
120829002	B2L8P3	WATER	6/25/2012 14:21	6/25/2012 14:58
		TOC-W; TOX-W		
120829003	B2L9M1	WATER	6/25/2012 14:21	6/25/2012 14:58
		TOC-W; TOX-W		
120829004	B2L9M0	WATER	6/25/2012 14:21	6/25/2012 14:58
		TOC-W; TOX-W		
120829005	B2L8P1	WATER	6/25/2012 11:42	6/25/2012 14:58
		TOC-W; TOX-W		
120829006	B2L9L7	WATER	6/25/2012 11:42	6/25/2012 14:58
		TOC-W; TOX-W		
120829007	B2L9L8	WATER	6/25/2012 11:42	6/25/2012 14:58
		TOC-W; TOX-W		
120829008	B2L9L9	WATER	6/25/2012 11:42	6/25/2012 14:58
		TOC-W; TOX-W		
120829009	B2L9L4	WATER	6/25/2012 12:39	6/25/2012 14:58
		TOC-W; TOX-W		
120829010	B2L9L5	WATER	6/25/2012 12:39	6/25/2012 14:58
		TOC-W; TOX-W		
120829011	B2L9L6	WATER	6/25/2012 12:39	6/25/2012 14:58

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

TOC-W; TOX-W				
120829012	B2L8N9	WATER	6/25/2012 12:39	6/25/2012 14:58
TOC-W; TOX-W				
120829013	B2L8N7	WATER	6/25/2012 13:31	6/25/2012 14:58
TOC-W; TOX-W				
120829014	B2L9L1	WATER	6/25/2012 13:31	6/25/2012 14:58
TOC-W; TOX-W				
120829015	B2L9L2	WATER	6/25/2012 13:31	6/25/2012 14:58
TOC-W; TOX-W				
120829016	B2L9L3	WATER	6/25/2012 13:31	6/25/2012 14:58
TOC-W; TOX-W				

Test Acronym Description

Test Acronym	Description
TOC-W	Total Organic Carbon (W)
TOX-W	Total Organic Halides (W)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

Collector: D.J. Woehle
CHPRC

SAF No. W12-007

Project Title: RCRA, JULY 2012

Shipped To (Lab): Waste Sampling & Characterization

Protocol: RCRA

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Contact/Requester: Karen Waters-Husted

Sampling Origin: Hanford Site

Logbook No.: IINF-N-506 48/31

Method of Shipment: GOVERNMENT VEHICLE

Priority: 45 Days

C.O.C. # **W12-007-110**

Page 1 of 1

Telephone No.: 376-4650

Purchase Order/Charge Code: 300071ES20

Ice Chest No.: N/A

Bill of Lading/Air Bill No.: N/A

Offsite Property No.: N/A

Total Activity Exemption: Yes No

POSSIBLE SAMPLE HAZARDS/REMARKS

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

SPECIAL INSTRUCTIONS Hold Time

Site Wide Generator Knowledge Information Form applies
The CACN for all analytical work at WSCF is 401647
FY11 and FY12 samples cannot be in the same SDG.

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Hold Time	Preservative
B2L9L1	5 N	6-25-12	1142	1x1-L aGs*	9020_TOX; TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9L1	↓ N			1x250-mL aG	9060_TOX; TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9L7	6 N			1x1-L aGs*	9020_TOX; TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9L7	↓ N			1x250-mL aG	9060_TOX; TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9L8	7 N			1x1-L aGs*	9020_TOX; TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9L8	↓ N			1x250-mL aG	9060_TOX; TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9L9	8 N			1x1-L aGs*	9020_TOX; TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9L9	↓ N	6-25-12	1142	1x250-mL aG	9060_TOX; TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C

Relinquished By: D.J. Woehle CHPRC Date/Time: JUN 25 2012 1458

Relinquished By: [Signature] Date/Time: JUN 25 2012 1458

Relinquished By: [Signature] Date/Time: JUN 25 2012 1458

Relinquished By: [Signature] Date/Time: JUN 25 2012 1458

Received By: [Signature] Date/Time: JUN 25 2012 1458

FINAL SAMPLE DISPOSITION

Disposition Method (e.g., Return to customer, per lab procedure, used in process)

Disposed By: [Signature] Date/Time: JUN 25 2012 1458

PRINTED ON: 5/31/2012

A-6004-842 (REV 2)

Sample Receipt

Chain of Custody

C.O.C.# **W12-007-109**
Page 1 of 1

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

CH2MHill Plateau Remediation Company

Collector: D.J. Woehle
CHPRC

SAF No. W12-007

Project Title: RCRA, JULY 2012

Shipped To (Lab): **Waste Sampling & Characterization**

Protocol: RCRA

Contact/Requester: Karen Walters-Husted
Telephone No. 376-4650

Sampling Origin: Ilanford Site
Purchase Order/Charge Code: 300071ES20

Logbook No. HNF-N-506 48/31
Ice Chest No. N/A

Method of Shipment: GOVERNMENT VEHICLE
Bill of Lading/Air Bill No. N/A

Priority: 45 Days
Offsite Property No. N/A

SPECIAL INSTRUCTIONS Hold Time: No
Total Activity Exemption: Yes No

POSSIBLE SAMPLE HAZARDS/REMARKS
** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993).
The CACN for all analytical work at WSCF is 401647.
FY11 and FY12 samples cannot be in the same SDX.

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2L9L4	N	6-25-12	1239	1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9L4	N			1x250-ml aG	9060_TOX: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9L5	N			1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9L5	N			1x250-ml aG	9060_TOX: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L8N9	N			1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L8N9	N			1x250-ml aG	9060_TOX: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9L6	N			1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9L6	N	6-25-12	1239	1x250-ml aG	9060_TOX: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C

Relinquished By: D.J. Woehle, CHPRC
Date/Time: JUN 25 2012 1458

Received By: C. D. Wynn, CHPRC
Date/Time: JUN 25 2012 1453

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: _____

A-6004-642 (REV 2)

Sample Receipt

Chain of Custody

CH2M Hill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# **W12-007-108** Page 1 of 1

Collector: D.J. Woshie CH-PRC
 SAF No.: W12-007
 Project Title: RCRA, JULY 2012
 Shipped To (Lab): Waste Sampling & Characterization
 Protocol: RCRA

Contact/Requester: Karen Waters-Husted
 Sampling Origin: Hanford Site
 Logbook No.: HNF-N-506 48/31
 Method of Shipment: GOVERNMENT VEHICLE
 Priority: 45 Days

Telephone No.: 376-4650
 Purchase Order/Charge Code: 300071ES20
 Ice Chest No.: N/A
 Bill of Lading/Air Bill No.: N/A
 Offsite Property No.: N/A

SPECIAL INSTRUCTIONS Hold Time: No Yes
 Site Wide Generator Knowledge Information Form applies
 The CACN for all analytical work at WSCP is 401647.
 FY11 and FY12 samples cannot be in the same SDG.

POSSIBLE SAMPLE HAZARDS/REMARKS
 *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (10901993) ***

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2L91.7	N	6-25-12	1331	1x1-L aGs*	9020_TOX_TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L91.8	N			1x250 mL aG	9060_TOX_TOX (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L91.9	N			1x1-L aGs*	9020_TOX_TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L91.10	N			1x250 mL aG	9060_TOX_TOX (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L91.11	N			1x1-L aGs*	9020_TOX_TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L91.12	N			1x250 mL aG	9060_TOX_TOX (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L91.13	N	6-25-12	1331	1x1-L aGs*	9020_TOX_TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C

Relinquished By: *D.J. Woshie* Date/Time: JUN 25 2012 1458
 Relinquished By: *CH-PRC* Date/Time: JUN 25 2012 1458
 Relinquished By: *CH-PRC* Date/Time: JUN 25 2012 1458
 Relinquished By: *CH-PRC* Date/Time: JUN 25 2012 1458

Received By: *C. Johnson* Date/Time: JUN 25 2012 1458
 Received By: *C. Johnson* Date/Time: JUN 25 2012 1458
 Received By: *C. Johnson* Date/Time: JUN 25 2012 1458
 Received By: *C. Johnson* Date/Time: JUN 25 2012 1458

Print Sign

Matrix #

S	Seal	DS	Drum Solids
SE	Sediment	DL	Drum Liquids
SO	Solid	I	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: 5/31/2012 A-6004-842 (REV 2)