

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 WSCF120838**

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 WSCF120838

- \* 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**

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Group #                      WSCF120838  
 Data Deliverable Date    08/10/12

<b>SAF #</b>	<b>Sample ID</b>	<b>Sample #</b>	<b>Matrix</b>	<b>Sampled</b>	<b>Received</b>
S12-007	B2LDV3	120838001	WATER	06/26/12	06/26/12
S12-007	B2LDV7	120838002	WATER	06/26/12	06/26/12
S12-007	B2LDW1	120838003	WATER	06/26/12	06/26/12
S12-007	B2LDW5	120838004	WATER	06/26/12	06/26/12
S12-007	B2LDX3	120838005	WATER	06/26/12	06/26/12
S12-007	B2LDV2	120838006	WATER	06/26/12	06/26/12
S12-007	B2LDV6	120838007	WATER	06/26/12	06/26/12
S12-007	B2LDW0	120838008	WATER	06/26/12	06/26/12
S12-007	B2LDW4	120838009	WATER	06/26/12	06/26/12
S12-007	B2LDX2	120838010	WATER	06/26/12	06/26/12
W12-007	B2L9M4	120838011	WATER	06/26/12	06/26/12
W12-007	B2L9M5	120838012	WATER	06/26/12	06/26/12
W12-007	B2L8P5	120838013	WATER	06/26/12	06/26/12
W12-007	B2L9M3	120838014	WATER	06/26/12	06/26/12
W12-007	B2L9M9	120838015	WATER	06/26/12	06/26/12
W12-007	B2L8P9	120838016	WATER	06/26/12	06/26/12
W12-007	B2L9N0	120838017	WATER	06/26/12	06/26/12
W12-007	B2L9N1	120838018	WATER	06/26/12	06/26/12

ATTACHMENT 2

**NARRATIVE**

Consisting of 4 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**  
WSCF120838

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

- Nitrate – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results near or below the minimum detectable level. No flags issued.
- All other 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):

- Magnesium and Sodium were 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):

- 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.

#### **Radiochemistry Comments**

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

#### **Gross Alpha / Gross Beta:**

- All applicable QC controls are within the established limits.

#### **Tritium:**

Attachment 2  
**Narrative**  
WSCF120838

- 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 61 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 #** WSCF120838  
**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 #** WSCF120838

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
203858	203858	2	BLANK	77455	BLANK		Anions by Ion Chromatography (Water)
203858	203858	3	LCS	77456	LCS		Anions by Ion Chromatography (Water)
203858	203858	4	DUP	77457	B2JVX5(120836002DUP)	120836002	Anions by Ion Chromatography (Water)
203858	203858	5	MS	77458	B2JVX5(120836002MS)	120836002	Anions by Ion Chromatography (Water)
203858	203858	6	MSD	77459	B2JVX5(120836002MSD)	120836002	Anions by Ion Chromatography (Water)
203858	203858	14	SAMPLE	120838001	B2LDV3		Anions by Ion Chromatography (Water)
203858	203858	15	SAMPLE	120838001	B2LDV3		Anions by Ion Chromatography (Water)
203858	203858	16	SAMPLE	120838002	B2LDV7		Anions by Ion Chromatography (Water)
203858	203858	17	SAMPLE	120838003	B2LDW1		Anions by Ion Chromatography (Water)
203858	203858	18	SAMPLE	120838004	B2LDW5		Anions by Ion Chromatography (Water)
203858	203858	19	SAMPLE	120838005	B2LDX3		Anions by Ion Chromatography (Water)
203881	204275	5	BLANK	77527	BLANK		ICP-6010 - All possible metals
203881	204275	7	LCS	77529	LCS		ICP-6010 - All possible metals
203881	204275	9	MS	77530	B2JVX6(120836006MS)	120836006	ICP-6010 - All possible metals
203881	204275	10	MSD	77531	B2JVX6(120836006MSD)	120836006	ICP-6010 - All possible metals
203881	204275	13	SAMPLE	120838006	B2LDV2		ICP-6010 - All possible metals
203881	204275	14	SAMPLE	120838007	B2LDV6		ICP-6010 - All possible metals
203881	204275	15	SAMPLE	120838008	B2LDW0		ICP-6010 - All possible metals
203881	204275	16	SAMPLE	120838009	B2LDW4		ICP-6010 - All possible metals
203881	204275	17	SAMPLE	120838010	B2LDX2		ICP-6010 - All possible metals
204261	204870	4	BLANK	77853	BLANK		ICP-2008 MS All possible metal
204261	204870	5	LCS	77854	LCS		ICP-2008 MS All possible metal
204261	204870	7	MS	77855	B2KJM3(120822008MS)	120822008	ICP-2008 MS All possible metal

**Batch QC List**

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

**Group #** WSCF120838

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
204261	204870	8	MSD	77856	B2KJM3(120822008MSD)	120822008	ICP-2008 MS All possible metal
204261	204870	27	SAMPLE	120838006	B2LDV2		ICP-2008 MS All possible metal
204261	204870	28	SAMPLE	120838007	B2LDV6		ICP-2008 MS All possible metal
204261	204870	29	SAMPLE	120838008	B2LDW0		ICP-2008 MS All possible metal
204262	204871	4	BLANK	77857	BLANK		ICP-2008 MS All possible metal
204262	204871	5	LCS	77858	LCS		ICP-2008 MS All possible metal
204262	204871	6	SAMPLE	120838009	B2LDW4		ICP-2008 MS All possible metal
204262	204871	7	MS	77859	B2LDW4(120838009MS)	120838009	ICP-2008 MS All possible metal
204262	204871	8	MSD	77860	B2LDW4(120838009MSD)	120838009	ICP-2008 MS All possible metal
204262	204871	9	SAMPLE	120838010	B2LDX2		ICP-2008 MS All possible metal
204551	204552	1	BLANK	77945	BLANK		Total Organic Halides
204551	204552	2	LCS	77946	LCS		Total Organic Halides
204551	204552	20	MS	77952	B2L9M4(120838011MS)	120838011	Total Organic Halides
204551	204552	21	MSD	77953	B2L9M4(120838011MSD)	120838011	Total Organic Halides
204551	204552	22	SAMPLE	120838011	B2L9M4		Total Organic Halides
204551	204552	23	SAMPLE	120838012	B2L9M5		Total Organic Halides
204551	204552	24	SAMPLE	120838013	B2L8P5		Total Organic Halides
204551	204552	25	SAMPLE	120838014	B2L9M3		Total Organic Halides
204554	204555	1	BLANK	77961	BLANK		Total Organic Halides
204554	204555	2	LCS	77962	LCS		Total Organic Halides
204554	204555	14	MS	77966	B2L9M9(120838015MS)	120838015	Total Organic Halides
204554	204555	15	MSD	77967	B2L9M9(120838015MSD)	120838015	Total Organic Halides
204554	204555	16	SAMPLE	120838015	B2L9M9		Total Organic Halides

Batch QC List

Attention Scot Fitzgerald  
 Department Inorganic

Group # WSCF120838

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
204554	204555	17	SAMPLE	120838016	B2L8P9		Total Organic Halides
204554	204555	18	SAMPLE	120838017	B2L9N0		Total Organic Halides
204554	204555	19	SAMPLE	120838018	B2L9N1		Total Organic Halides

**Batch QC List**

**Attention** Scot Fitzgerald  
**Department** Radiochemistry

**Group #** WSCF120838

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
203882	204353	1	BLANK	77532	BLANK		Tritium by LSC
203882	204353	2	LCS	77533	LCS		Tritium by LSC
203882	204353	4	DUP	77534	B2KW31(120825006DUP)	120825006	Tritium by LSC
203882	204353	5	MS	77535	B2KW31(120825006MS)	120825006	Tritium by LSC
203882	204353	9	SAMPLE	120838006	B2LDV2		Tritium by LSC
203882	204353	10	SAMPLE	120838007	B2LDV6		Tritium by LSC
203882	204353	11	SAMPLE	120838008	B2LDW0		Tritium by LSC
203882	204353	12	SAMPLE	120838009	B2LDW4		Tritium by LSC
203882	204353	13	SAMPLE	120838010	B2LDX2		Tritium by LSC
204070	204285	1	BLANK	77723	BLANK		Gross Alpha/Gross Beta
204070	204285	2	LCS	77724	LCS		Gross Alpha/Gross Beta
204070	204285	3	DUP	77725	B2JVX7(120836008DUP)	120836008	Gross Alpha/Gross Beta
204070	204285	8	SAMPLE	120838006	B2LDV2		Gross Alpha/Gross Beta
204070	204285	9	SAMPLE	120838006	B2LDV2		Gross Alpha/Gross Beta
204070	204285	10	SAMPLE	120838007	B2LDV6		Gross Alpha/Gross Beta
204070	204285	11	SAMPLE	120838007	B2LDV6		Gross Alpha/Gross Beta
204070	204285	12	SAMPLE	120838008	B2LDW0		Gross Alpha/Gross Beta
204070	204285	13	SAMPLE	120838008	B2LDW0		Gross Alpha/Gross Beta
204070	204285	14	SAMPLE	120838009	B2LDW4		Gross Alpha/Gross Beta
204070	204285	15	SAMPLE	120838009	B2LDW4		Gross Alpha/Gross Beta
204070	204285	16	SAMPLE	120838010	B2LDX2		Gross Alpha/Gross Beta
204070	204285	17	SAMPLE	120838010	B2LDX2		Gross Alpha/Gross Beta

**Batch QC List**

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

**Group #** WSCF120838

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	17	MS	78312	B2L9L2(120829015MS)	120829015	Total Organic Carbon
204929	204929	18	MSD	78313	B2L9L2(120829015MSD)	120829015	Total Organic Carbon
204929	204929	22	SAMPLE	120838011	B2L9M4		Total Organic Carbon
204929	204929	23	SAMPLE	120838012	B2L9M5		Total Organic Carbon
204929	204929	24	SAMPLE	120838013	B2L8P5		Total Organic Carbon
204929	204929	25	SAMPLE	120838014	B2L9M3		Total Organic Carbon
204929	204929	26	SAMPLE	120838015	B2L9M9		Total Organic Carbon
204929	204929	27	SAMPLE	120838016	B2L8P9		Total Organic Carbon
204929	204929	28	SAMPLE	120838017	B2L9N0		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	6	SAMPLE	120838018	B2L9N1		Total Organic Carbon

**Method Reference**

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

**Group #** WSCF120838

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.

<b>LA-505-411</b>	Elemental Analysis by ICP Atomic Emission Spectroscopy (ICP AES)		
	EPA SW-846	6010C	Inductively Coupled Plasma-Atomic Emmission Spectrometry
	HEIS	6010_METALS_ICP	Inductively Coupled Plasma-Atomic Emmission Spectrometry
<b>LA-505-412</b>	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.
<b>LA-523-444</b>	Total Organic Halides Based on SW-846 Method 9020B		
	EPA SW-846	9020B	Total Organic Halides (TOX)
	HEIS	9020_TOX	Total Organic Halides (TOX)
<b>LA-533-410</b>	Anion Analysis by Ion Chromatography		
	EPA-600/R-94-111	300.0	Determination of Inorganic Anions by Ion Chromatography
	HEIS	300.0_ANIONS_IC	Determination of Inorganic Anions by Ion Chromatography

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

**Method Reference**

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**Attention** Scot Fitzgerald  
**Department** Radiochemistry

**Group #** WSCF120838

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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.

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<b>LA-508-421</b>	Operation of the Tri-Carb Model 2500TR Liquid Scintillation Analyzer		
	HEIS	ALPHA_LSC	A/B Liquid Scintillation
	HEIS	BETA_LSC	A/B Liquid Scintillation
	HEIS	TC99_3MDSK_LSC	TC99 by Liquid Scintillation
	HEIS	TRITIUM_EIE_LSC	Tritium, by Eichrome ion exchange, LSC
<b>LA-508-415</b>	Operation Of The Protean 2-Inch Alpha/Beta Counting System For Gross Alpha/ Beta Samples		
	HEIS	ALPHA_GPC	Gross Alpha by GPC
	HEIS	BETA_GPC	Gross Beta by GPC
	HEIS	SRTOT_SEP_PRECIP_GPC	Strontium beta isotopic, GPC

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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**

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

**Group #** WSCF120838

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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.

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

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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 #** WSCF120838

**Sample #** 120838001  
**SAF#** S12-007  
**Sample ID** B2LDV3

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>06/26/12</b>										
<b>Anions by Ion Chromatography (Water)</b>										
Fluoride	16984-48-8	LA-533-410	D	0.225		ug/mL	2	0.046	0.14	06/26/12
Chloride	16887-00-6	LA-533-410	D	21.1		ug/mL	2	0.12	0.81	06/26/12
Nitrite-N	NO2-N	LA-533-410	BD	0.0532		ug/mL	2	0.038	0.20	06/26/12
Nitrate-N	NO3-N	LA-533-410	D	12.4		ug/mL	10	0.19	0.99	06/26/12
Sulfate	14808-79-8	LA-533-410	D	48.2		ug/mL	2	0.22	2.1	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 #** WSCF120838

**Sample #** 120838002  
**SAF#** S12-007  
**Sample ID** B2LDV7

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>06/26/12</b>										
<b>Anions by Ion Chromatography (Water)</b>										
Fluoride	16984-48-8	LA-533-410	D	0.163		ug/mL	2	0.046	0.14	06/26/12
Chloride	16887-00-6	LA-533-410	D	19.1		ug/mL	2	0.12	0.81	06/26/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	06/26/12
Nitrate-N	NO3-N	LA-533-410	D	6.03		ug/mL	2	0.038	0.20	06/26/12
Sulfate	14808-79-8	LA-533-410	D	71.1		ug/mL	2	0.22	2.1	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 #** WSCF120838

**Sample #** 120838003  
**SAF#** S12-007  
**Sample ID** B2LDW1

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>06/26/12</b>										
<b>Anions by Ion Chromatography (Water)</b>										
Fluoride	16984-48-8	LA-533-410	D	0.174		ug/mL	2	0.046	0.14	06/26/12
Chloride	16887-00-6	LA-533-410	D	9.07		ug/mL	2	0.12	0.81	06/26/12
Nitrite-N	NO2-N	LA-533-410	BD	0.0511		ug/mL	2	0.038	0.20	06/26/12
Nitrate-N	NO3-N	LA-533-410	D	2.11		ug/mL	2	0.038	0.20	06/26/12
Sulfate	14808-79-8	LA-533-410	D	30.3		ug/mL	2	0.22	2.1	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 #** WSCF120838

**Sample #** 120838004  
**SAF#** S12-007  
**Sample ID** B2LDW5

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>06/26/12</b>										
<b>Anions by Ion Chromatography (Water)</b>										
Fluoride	16984-48-8	LA-533-410	D	0.165		ug/mL	2	0.046	0.14	06/26/12
Chloride	16887-00-6	LA-533-410	D	2.76		ug/mL	2	0.12	0.81	06/26/12
Nitrite-N	NO2-N	LA-533-410	BD	0.0586		ug/mL	2	0.038	0.20	06/26/12
Nitrate-N	NO3-N	LA-533-410	D	0.258		ug/mL	2	0.038	0.20	06/26/12
Sulfate	14808-79-8	LA-533-410	D	16.9		ug/mL	2	0.22	2.1	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 #** WSCF120838

**Sample #** 120838005  
**SAF#** S12-007  
**Sample ID** B2LDX3

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>06/26/12</b>										
<b>Anions by Ion Chromatography (Water)</b>										
Fluoride	16984-48-8	LA-533-410	D	0.167		ug/mL	2	0.046	0.14	06/26/12
Chloride	16887-00-6	LA-533-410	D	4.42		ug/mL	2	0.12	0.81	06/26/12
Nitrite-N	NO2-N	LA-533-410	BD	0.0675		ug/mL	2	0.038	0.20	06/26/12
Nitrate-N	NO3-N	LA-533-410	D	1.97		ug/mL	2	0.038	0.20	06/26/12
Sulfate	14808-79-8	LA-533-410	D	27.8		ug/mL	2	0.22	2.1	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 #** WSCF120838

**Sample #** 120838006  
**SAF#** S12-007  
**Sample ID** B2LDV2

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>ICPAES Prep (W)</b>										<b>07/09/12</b>
<b>ICP-6010 - All possible metals</b>										
Iron	7439-89-6	LA-505-411	B	41.6		ug/L	1	19	95	07/18/12
Magnesium	7439-95-4	LA-505-411		12500		ug/L	1	4.0	20	07/18/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Nickel	7440-02-0	LA-505-411	B	6.80		ug/L	1	4.0	20	07/18/12
Potassium	7440-09-7	LA-505-411		8040		ug/L	1	76	380	07/18/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Sodium	7440-23-5	LA-505-411		29700		ug/L	1	10	50	07/18/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	07/18/12
Barium	7440-39-3	LA-505-411		34.9		ug/L	1	4.0	20	07/18/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Chromium	7440-47-3	LA-505-411	B	9.80		ug/L	1	5.0	25	07/18/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Vanadium	7440-62-2	LA-505-411		27.6		ug/L	1	5.0	25	07/18/12
Zinc	7440-66-6	LA-505-411	B	5.30		ug/L	1	5.0	25	07/18/12
Calcium	7440-70-2	LA-505-411		41300		ug/L	1	49	240	07/18/12
Strontium	7440-24-6	LA-505-411		210		ug/L	1	9.0	45	07/18/12

MDL = Minimum Detection Limit	B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)	U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier	C - Analyte was found in the Associated Blank. (Inorganic)	X,Y or Z - See comment detail and/or narrative.
TP Err = Total Propagated Error	D - Analyte was reported at a secondary dilution factor.	PQL is equivalent to Estimated Quantitation Limit (EQL)
DF = Dilution Factor	E - Analyte is an estimate, see comment section.	
+ - Indicates more than nine qualifier	N - MS and/or MSD recovery outside control limits.	

**WSCF Analytical Results Report**

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

**Group #** WSCF120838

**Sample #** 120838006  
**SAF#** S12-007  
**Sample ID** B2LDV2

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
<b>ICPMS Prep (W)</b>										<b>07/09/12</b>
<b>ICP-2008 MS All possible metal</b>										
Arsenic	7440-38-2	LA-505-412	D	8.23		ug/L	2	0.40	4.0	07/17/12

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 #** WSCF120838

**Sample #** 120838007  
**SAF#** S12-007  
**Sample ID** B2LDV6

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>ICPAES Prep (W)</b>										<b>07/09/12</b>
<b>ICP-6010 - All possible metals</b>										
Iron	7439-89-6	LA-505-411		314		ug/L	1	19	95	07/18/12
Magnesium	7439-95-4	LA-505-411		14400		ug/L	1	4.0	20	07/18/12
Manganese	7439-96-5	LA-505-411		93.4		ug/L	1	4.0	20	07/18/12
Nickel	7440-02-0	LA-505-411		237		ug/L	1	4.0	20	07/18/12
Potassium	7440-09-7	LA-505-411		8470		ug/L	1	76	380	07/18/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Sodium	7440-23-5	LA-505-411		18700		ug/L	1	10	50	07/18/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	07/18/12
Barium	7440-39-3	LA-505-411		55.4		ug/L	1	4.0	20	07/18/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Chromium	7440-47-3	LA-505-411		55.4		ug/L	1	5.0	25	07/18/12
Cobalt	7440-48-4	LA-505-411	B	5.20		ug/L	1	4.0	20	07/18/12
Copper	7440-50-8	LA-505-411		20.8		ug/L	1	4.0	20	07/18/12
Vanadium	7440-62-2	LA-505-411	B	11.1		ug/L	1	5.0	25	07/18/12
Zinc	7440-66-6	LA-505-411	B	21.7		ug/L	1	5.0	25	07/18/12
Calcium	7440-70-2	LA-505-411		48400		ug/L	1	49	240	07/18/12
Strontium	7440-24-6	LA-505-411		289		ug/L	1	9.0	45	07/18/12

MDL = Minimum Detection Limit	B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)	U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier	C - Analyte was found in the Associated Blank. (Inorganic)	X,Y or Z - See comment detail and/or narrative.
TP Err = Total Propagated Error	D - Analyte was reported at a secondary dilution factor.	PQL is equivalent to Estimated Quantitation Limit (EQL)
DF = Dilution Factor	E - Analyte is an estimate, see comment section.	
+ - Indicates more than nine qualifier	N - MS and/or MSD recovery outside control limits.	

**WSCF Analytical Results Report**

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

**Group #** WSCF120838

**Sample #** 120838007  
**SAF#** S12-007  
**Sample ID** B2LDV6

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
<b>ICPMS Prep (W)</b>										<b>07/09/12</b>
<b>ICP-2008 MS All possible metal</b>										
Arsenic	7440-38-2	LA-505-412	BD	3.34		ug/L	2	0.40	4.0	07/17/12

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 #** WSCF120838

**Sample #** 120838008  
**SAF#** S12-007  
**Sample ID** B2LDW0

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>ICPAES Prep (W)</b>										<b>07/09/12</b>
<b>ICP-6010 - All possible metals</b>										
Iron	7439-89-6	LA-505-411		101		ug/L	1	19	95	07/18/12
Magnesium	7439-95-4	LA-505-411		9570		ug/L	1	4.0	20	07/18/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Nickel	7440-02-0	LA-505-411	B	13.9		ug/L	1	4.0	20	07/18/12
Potassium	7440-09-7	LA-505-411		6140		ug/L	1	76	380	07/18/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Sodium	7440-23-5	LA-505-411		18100		ug/L	1	10	50	07/18/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	07/18/12
Barium	7440-39-3	LA-505-411		23.9		ug/L	1	4.0	20	07/18/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Chromium	7440-47-3	LA-505-411	B	22.8		ug/L	1	5.0	25	07/18/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Vanadium	7440-62-2	LA-505-411	B	11.8		ug/L	1	5.0	25	07/18/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	07/18/12
Calcium	7440-70-2	LA-505-411		31700		ug/L	1	49	240	07/18/12
Strontium	7440-24-6	LA-505-411		192		ug/L	1	9.0	45	07/18/12

MDL = Minimum Detection Limit	B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)	U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier	C - Analyte was found in the Associated Blank. (Inorganic)	X,Y or Z - See comment detail and/or narrative.
TP Err = Total Propagated Error	D - Analyte was reported at a secondary dilution factor.	PQL is equivalent to Estimated Quantitation Limit (EQL)
DF = Dilution Factor	E - Analyte is an estimate, see comment section.	
+ - Indicates more than nine qualifier	N - MS and/or MSD recovery outside control limits.	

**WSCF Analytical Results Report**

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

**Group #** WSCF120838

**Sample #** 120838008  
**SAF#** S12-007  
**Sample ID** B2LDW0

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
<b>ICPMS Prep (W)</b>										<b>07/09/12</b>
<b>ICP-2008 MS All possible metal</b>										
Arsenic	7440-38-2	LA-505-412	D	4.00		ug/L	2	0.40	4.0	07/17/12

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 #** WSCF120838

**Sample #** 120838009  
**SAF#** S12-007  
**Sample ID** B2LDW4

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>ICPAES Prep (W)</b>										<b>07/09/12</b>
<b>ICP-6010 - All possible metals</b>										
Iron	7439-89-6	LA-505-411	B	57.4		ug/L	1	19	95	07/18/12
Magnesium	7439-95-4	LA-505-411		7660		ug/L	1	4.0	20	07/18/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Nickel	7440-02-0	LA-505-411	B	7.70		ug/L	1	4.0	20	07/18/12
Potassium	7440-09-7	LA-505-411		5420		ug/L	1	76	380	07/18/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Sodium	7440-23-5	LA-505-411		9530		ug/L	1	10	50	07/18/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	07/18/12
Barium	7440-39-3	LA-505-411	B	14.8		ug/L	1	4.0	20	07/18/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Chromium	7440-47-3	LA-505-411		25.2		ug/L	1	5.0	25	07/18/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Vanadium	7440-62-2	LA-505-411	B	24.2		ug/L	1	5.0	25	07/18/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	07/18/12
Calcium	7440-70-2	LA-505-411		26300		ug/L	1	49	240	07/18/12
Strontium	7440-24-6	LA-505-411		125		ug/L	1	9.0	45	07/18/12

MDL = Minimum Detection Limit	B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)	U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier	C - Analyte was found in the Associated Blank. (Inorganic)	X,Y or Z - See comment detail and/or narrative.
TP Err = Total Propagated Error	D - Analyte was reported at a secondary dilution factor.	PQL is equivalent to Estimated Quantitation Limit (EQL)
DF = Dilution Factor	E - Analyte is an estimate, see comment section.	
+ - Indicates more than nine qualifier	N - MS and/or MSD recovery outside control limits.	

**WSCF Analytical Results Report**

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

**Group #** WSCF120838

**Sample #** 120838009  
**SAF#** S12-007  
**Sample ID** B2LDW4

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
<b>ICPMS Prep (W)</b>										<b>07/09/12</b>
<b>ICP-2008 MS All possible metal</b>										
Arsenic	7440-38-2	LA-505-412		7.99		ug/L	1	0.20	2.0	07/17/12

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 #** WSCF120838

**Sample #** 120838010  
**SAF#** S12-007  
**Sample ID** B2LDX2

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>ICPAES Prep (W)</b>										<b>07/09/12</b>
<b>ICP-6010 - All possible metals</b>										
Iron	7439-89-6	LA-505-411	B	54.6		ug/L	1	19	95	07/18/12
Magnesium	7439-95-4	LA-505-411		9300		ug/L	1	4.0	20	07/18/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Nickel	7440-02-0	LA-505-411	B	6.20		ug/L	1	4.0	20	07/18/12
Potassium	7440-09-7	LA-505-411		6720		ug/L	1	76	380	07/18/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Sodium	7440-23-5	LA-505-411		11000		ug/L	1	10	50	07/18/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	07/18/12
Barium	7440-39-3	LA-505-411		30.4		ug/L	1	4.0	20	07/18/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Chromium	7440-47-3	LA-505-411	B	11.6		ug/L	1	5.0	25	07/18/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
Vanadium	7440-62-2	LA-505-411		30.4		ug/L	1	5.0	25	07/18/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	07/18/12
Calcium	7440-70-2	LA-505-411		31600		ug/L	1	49	240	07/18/12
Strontium	7440-24-6	LA-505-411		159		ug/L	1	9.0	45	07/18/12

MDL = Minimum Detection Limit	B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)	U - Analyzed for but not detected above limiting criteria.
RQ = Result Qualifier	C - Analyte was found in the Associated Blank. (Inorganic)	X,Y or Z - See comment detail and/or narrative.
TP Err = Total Propagated Error	D - Analyte was reported at a secondary dilution factor.	PQL is equivalent to Estimated Quantitation Limit (EQL)
DF = Dilution Factor	E - Analyte is an estimate, see comment section.	
+ - Indicates more than nine qualifier	N - MS and/or MSD recovery outside control limits.	

**WSCF Analytical Results Report**

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

**Group #** WSCF120838

**Sample #** 120838010  
**SAF#** S12-007  
**Sample ID** B2LDX2

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/18/12
<b>ICPMS Prep (W)</b>										<b>07/09/12</b>
<b>ICP-2008 MS All possible metal</b>										
Arsenic	7440-38-2	LA-505-412	D	10.4		ug/L	2	0.40	4.0	07/17/12

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 #** WSCF120838

**Sample #** 120838011  
**SAF#** W12-007  
**Sample ID** B2L9M4

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for TOX (W)</b>										<b>06/26/12</b>
<b>Total Organic Halides</b>										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	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 #** WSCF120838

**Sample #** 120838012  
**SAF#** W12-007  
**Sample ID** B2L9M5

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for TOX (W)</b>										<b>06/26/12</b>
<b>Total Organic Halides</b>										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	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 #** WSCF120838

**Sample #** 120838013  
**SAF#** W12-007  
**Sample ID** B2L8P5

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for TOX (W)</b>										<b>06/26/12</b>
<b>Total Organic Halides</b>										
Total Organic Halides	59473-04-0	LA-523-444	B	5.62		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 #** WSCF120838

**Sample #** 120838014  
**SAF#** W12-007  
**Sample ID** B2L9M3

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for TOX (W)</b>										<b>06/26/12</b>
<b>Total Organic Halides</b>										
Total Organic Halides	59473-04-0	LA-523-444	B	6.46		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 #** WSCF120838

**Sample #** 120838015  
**SAF#** W12-007  
**Sample ID** B2L9M9

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for TOX (W)</b>										<b>06/27/12</b>
<b>Total Organic Halides</b>										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	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 #** WSCF120838

**Sample #** 120838016  
**SAF#** W12-007  
**Sample ID** B2L8P9

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for TOX (W)</b>										<b>06/27/12</b>
<b>Total Organic Halides</b>										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	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 #** WSCF120838

**Sample #** 120838017  
**SAF#** W12-007  
**Sample ID** B2L9N0

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for TOX (W)</b>										<b>06/27/12</b>
<b>Total Organic Halides</b>										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	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 #** WSCF120838

**Sample #** 120838018  
**SAF#** W12-007  
**Sample ID** B2L9N1

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

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

**Group #** WSCF120838

**Sample #** 120838006  
**SAF#** S12-007  
**Sample ID** B2LDV2

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for Alpha/Beta (Gross) (W)</b>										<b>07/05/12</b>
<b>Gross Alpha/Gross Beta</b>										
Gross Alpha	12587-46-1	LA-508-415		4.2	2	pCi/L	1	2.3		07/13/12
Gross Beta	12587-47-2	LA-508-415		19	3.4	pCi/L	1	3.4		07/13/12
<b>Tritium by LSC EICHROM WA/LIQ PREP</b>										<b>07/02/12</b>
<b>Tritium by LSC</b>										
Tritium	10028-17-8	LA-508-421		4100	870	pCi/L	1	280		07/09/12

MDL = Minimum Detection Limit	B - Analyte was detected in both the BLANK and SAMPLE
RQ = Result Qualifier	U - Analyzed for but not detected above limiting criteria.
TP Err = Total Propagated Error	N - Spike Recovery is Outside Control Limits.
DF = Dilution Factor	X, Y or Z - See comment detail and/or narrative.
+ - Indicates more than nine qualifier	PQL is equivalent to Estimated Quantitation Limit (EQL)

**WSCF Analytical Results Report**

**Attention** Scot Fitzgerald  
**Department** Radiochemistry

**Group #** WSCF120838

**Sample #** 120838007  
**SAF#** S12-007  
**Sample ID** B2LDV6

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for Alpha/Beta (Gross) (W)</b>										<b>07/05/12</b>
<b>Gross Alpha/Gross Beta</b>										
Gross Alpha	12587-46-1	LA-508-415	U	1.6	1.5	pCi/L	1	2.3		07/13/12
Gross Beta	12587-47-2	LA-508-415		590	60	pCi/L	1	3.3		07/13/12
<b>Tritium by LSC EICHROM WA/LIQ PREP</b>										<b>07/02/12</b>
<b>Tritium by LSC</b>										
Tritium	10028-17-8	LA-508-421		1.0E4	2100	pCi/L	1	280		07/09/12

MDL = Minimum Detection Limit	B - Analyte was detected in both the BLANK and SAMPLE
RQ = Result Qualifier	U - Analyzed for but not detected above limiting criteria.
TP Err = Total Propagated Error	N - Spike Recovery is Outside Control Limits.
DF = Dilution Factor	X, Y or Z - See comment detail and/or narrative.
+ - Indicates more than nine qualifier	PQL is equivalent to Estimated Quantitation Limit (EQL)

**WSCF Analytical Results Report**

**Attention** Scot Fitzgerald  
**Department** Radiochemistry

**Group #** WSCF120838

**Sample #** 120838008  
**SAF#** S12-007  
**Sample ID** B2LDW0

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for Alpha/Beta (Gross) (W)</b>										<b>07/05/12</b>
<b>Gross Alpha/Gross Beta</b>										
Gross Alpha	12587-46-1	LA-508-415	U	1.3	1.3	pCi/L	1	2.1		07/13/12
Gross Beta	12587-47-2	LA-508-415		5.4	2.2	pCi/L	1	3.3		07/13/12
<b>Tritium by LSC EICHROM WA/LIQ PREP</b>										<b>07/02/12</b>
<b>Tritium by LSC</b>										
Tritium	10028-17-8	LA-508-421		3100	680	pCi/L	1	280		07/09/12

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

B - Analyte was detected in both the BLANK and SAMPLE  
 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** Radiochemistry

**Group #** WSCF120838

**Sample #** 120838009  
**SAF#** S12-007  
**Sample ID** B2LDW4

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for Alpha/Beta (Gross) (W)</b>										<b>07/05/12</b>
<b>Gross Alpha/Gross Beta</b>										
Gross Alpha	12587-46-1	LA-508-415	U	1.2	1.3	pCi/L	1	2.0		07/13/12
Gross Beta	12587-47-2	LA-508-415		5.8	2.2	pCi/L	1	3.2		07/13/12
<b>Tritium by LSC EICHROM WA/LIQ PREP</b>										<b>07/02/12</b>
<b>Tritium by LSC</b>										
Tritium	10028-17-8	LA-508-421		280	180	pCi/L	1	280		07/09/12

MDL = Minimum Detection Limit	B - Analyte was detected in both the BLANK and SAMPLE
RQ = Result Qualifier	U - Analyzed for but not detected above limiting criteria.
TP Err = Total Propagated Error	N - Spike Recovery is Outside Control Limits.
DF = Dilution Factor	X, Y or Z - See comment detail and/or narrative.
+ - Indicates more than nine qualifier	PQL is equivalent to Estimated Quantitation Limit (EQL)

**WSCF Analytical Results Report**

**Attention** Scot Fitzgerald  
**Department** Radiochemistry

**Group #** WSCF120838

**Sample #** 120838010  
**SAF#** S12-007  
**Sample ID** B2LDX2

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>Preparation for Alpha/Beta (Gross) (W)</b>										<b>07/05/12</b>
<b>Gross Alpha/Gross Beta</b>										
Gross Alpha	12587-46-1	LA-508-415	U	0.80	1.2	pCi/L	1	2.1		07/13/12
Gross Beta	12587-47-2	LA-508-415		5.7	2.3	pCi/L	1	3.2		07/13/12
<b>Tritium by LSC EICHROM WA/LIQ PREP</b>										<b>07/02/12</b>
<b>Tritium by LSC</b>										
Tritium	10028-17-8	LA-508-421		2000	470	pCi/L	1	280		07/09/12

MDL = Minimum Detection Limit	B - Analyte was detected in both the BLANK and SAMPLE
RQ = Result Qualifier	U - Analyzed for but not detected above limiting criteria.
TP Err = Total Propagated Error	N - Spike Recovery is Outside Control Limits.
DF = Dilution Factor	X, Y or Z - See comment detail and/or narrative.
+ - Indicates more than nine qualifier	PQL is equivalent to Estimated Quantitation Limit (EQL)

**WSCF Analytical Results Report**

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

**Group #** WSCF120838

**Sample #** 120838011  
**SAF#** W12-007  
**Sample ID** B2L9M4

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>07/18/12</b>										
<b>Total Organic Carbon</b>										
Total Organic Carbon	TOC	LA-344-406	B	0.161		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 #** WSCF120838

**Sample #** 120838012  
**SAF#** W12-007  
**Sample ID** B2L9M5

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>07/18/12</b>										
<b>Total Organic Carbon</b>										
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 #** WSCF120838

**Sample #** 120838013  
**SAF#** W12-007  
**Sample ID** B2L8P5

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>07/18/12</b>										
<b>Total Organic Carbon</b>										
Total Organic Carbon	TOC	LA-344-406	B	0.168		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 #** WSCF120838

**Sample #** 120838014  
**SAF#** W12-007  
**Sample ID** B2L9M3

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>07/18/12</b>										
<b>Total Organic Carbon</b>										
Total Organic Carbon	TOC	LA-344-406	B	0.163		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 #** WSCF120838

**Sample #** 120838015  
**SAF#** W12-007  
**Sample ID** B2L9M9

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>07/18/12</b>										
<b>Total Organic Carbon</b>										
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 #** WSCF120838

**Sample #** 120838016  
**SAF#** W12-007  
**Sample ID** B2L8P9

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>07/18/12</b>										
<b>Total Organic Carbon</b>										
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 #** WSCF120838

**Sample #** 120838017  
**SAF#** W12-007  
**Sample ID** B2L9N0

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										<b>07/18/12</b>
<b>Total Organic Carbon</b>										
Total Organic Carbon	TOC	LA-344-406	B	0.112		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 #** WSCF120838

**Sample #** 120838018  
**SAF#** W12-007  
**Sample ID** B2L9N1

**Matrix** WATER  
**Sampled** 06/26/12  
**Received** 06/26/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
<b>07/18/12</b>										
<b>Total Organic Carbon</b>										
Total Organic Carbon	TOC	LA-344-406	B	0.109		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 #** WSCF120838

**Analytical Batch** 203858 (QC Batch: 203858)      **Test** Anions by Ion Chromatography (Water)  
**Associated Samples** 120838001, 120838002, 120838003, 120838004, 120838005

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>		<b>QC Sample #77455</b>								
Fluoride	16984-48-8	<0.023		ug/mL					U	06/26/12
Chloride	16887-00-6	<0.058		ug/mL					U	06/26/12
Nitrite-N	NO2-N	<0.019		ug/mL					U	06/26/12
Nitrate-N	NO3-N	<0.019		ug/mL					U	06/26/12
Sulfate	14808-79-8	<0.11		ug/mL					U	06/26/12
<b>LCS</b>		<b>QC Sample #77456</b>								
Fluoride	16984-48-8	0.927		ug/mL	93.6	90 - 110				06/26/12
Chloride	16887-00-6	1.97		ug/mL	99.4	90 - 110				06/26/12
Nitrite-N	NO2-N	0.988		ug/mL	100.9	90 - 110				06/26/12
Nitrate-N	NO3-N	0.880		ug/mL	99.4	90 - 110				06/26/12
Sulfate	14808-79-8	3.93		ug/mL	100.2	90 - 110				06/26/12
<b>DUP</b>		<b>QC Sample #77457</b>								
		<b>Original 120836002</b>								
Fluoride	16984-48-8	<0.046		ug/mL			0.00	20	UD	06/26/12
Chloride	16887-00-6	0.950		ug/mL			0.50	20	D	06/26/12
Nitrite-N	NO2-N	<0.038		ug/mL			200.00	20	* UD	06/26/12
Nitrate-N	NO3-N	0.0790		ug/mL			25.40	20	* BXD	06/26/12

\* - QC result out of range

n/a - Not Applicable

**Quality Control Report**

Attention Scot Fitzgerald  
 Department Inorganic

Group # WSCF120838

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Sulfate	14808-79-8		7.04	ug/mL			1.30	20	D	06/26/12
<b>MS</b>			<b>QC Sample #77458</b>							
			<b>Original 120836002</b>							
Fluoride	16984-48-8		0.958	ug/mL	95.8	80 - 120			D	06/26/12
Chloride	16887-00-6		2.00	ug/mL	99.8	80 - 120			D	06/26/12
Nitrite-N	NO2-N		1.04	ug/mL	105.3	80 - 120			D	06/26/12
Nitrate-N	NO3-N		0.885	ug/mL	99	80 - 120			D	06/26/12
Sulfate	14808-79-8		3.97	ug/mL	100.2	80 - 120			D	06/26/12
<b>MSD</b>			<b>QC Sample #77459</b>							
			<b>Original 120836002</b>						<b>Paired 77458</b>	
Fluoride	16984-48-8		0.890	ug/mL	89	80 - 120	7.40	20	D	06/26/12
Chloride	16887-00-6		1.97	ug/mL	98.3	80 - 120	1.00	20	D	06/26/12
Nitrite-N	NO2-N		1.04	ug/mL	105.7	80 - 120	0.00	20	D	06/26/12
Nitrate-N	NO3-N		0.866	ug/mL	96.8	80 - 120	1.90	20	D	06/26/12
Sulfate	14808-79-8		3.99	ug/mL	100.8	80 - 120	0.00	20	D	06/26/12

\* - QC result out of range

n/a - Not Applicable

**Quality Control Report**

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

**Group #** WSCF120838

**Analytical Batch** 204275 (QC Batch: 203881)      **Test** ICP-6010 - All possible metals  
**Associated Samples** 120838006, 120838007, 120838008, 120838009, 120838010

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>		<b>QC Sample #77527</b>								
Iron	7439-89-6	<19		ug/L					U	07/18/12
Magnesium	7439-95-4	10.7		ug/L					B	07/18/12
Manganese	7439-96-5	<4.0		ug/L					U	07/18/12
Nickel	7440-02-0	<4.0		ug/L					U	07/18/12
Potassium	7440-09-7	<76		ug/L					U	07/18/12
Silver	7440-22-4	<4.0		ug/L					U	07/18/12
Sodium	7440-23-5	20.5		ug/L					B	07/18/12
Antimony	7440-36-0	<36		ug/L					U	07/18/12
Barium	7440-39-3	<4.0		ug/L					U	07/18/12
Cadmium	7440-43-9	<4.0		ug/L					U	07/18/12
Chromium	7440-47-3	<5.0		ug/L					U	07/18/12
Cobalt	7440-48-4	<4.0		ug/L					U	07/18/12
Copper	7440-50-8	<4.0		ug/L					U	07/18/12
Vanadium	7440-62-2	<5.0		ug/L					U	07/18/12
Zinc	7440-66-6	<5.0		ug/L					U	07/18/12
Calcium	7440-70-2	<49		ug/L					U	07/18/12
Strontium	7440-24-6	<9.0		ug/L					U	07/18/12

\* - QC result out of range

n/a - Not Applicable

**Quality Control Report**

Attention Scot Fitzgerald  
 Department Inorganic

Group # WSCF120838

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Beryllium	7440-41-7		<4.0	ug/L					U	07/18/12
<b>LCS</b>			<b>QC Sample #77529</b>							
Iron	7439-89-6		1040	ug/L	104	80 - 120				07/18/12
Magnesium	7439-95-4		10900	ug/L	108.7	80 - 120				07/18/12
Manganese	7439-96-5		1050	ug/L	105	80 - 120				07/18/12
Nickel	7440-02-0		1030	ug/L	103	80 - 120				07/18/12
Potassium	7440-09-7		11700	ug/L	116.7	80 - 120				07/18/12
Silver	7440-22-4		1020	ug/L	102.1	80 - 120				07/18/12
Sodium	7440-23-5		11500	ug/L	114.8	80 - 120				07/18/12
Antimony	7440-36-0		1070	ug/L	107.1	80 - 120				07/18/12
Barium	7440-39-3		1070	ug/L	106.6	80 - 120				07/18/12
Cadmium	7440-43-9		1050	ug/L	104.8	80 - 120				07/18/12
Chromium	7440-47-3		1040	ug/L	104.1	80 - 120				07/18/12
Cobalt	7440-48-4		1020	ug/L	101.9	80 - 120				07/18/12
Copper	7440-50-8		1070	ug/L	107.3	80 - 120				07/18/12
Vanadium	7440-62-2		1040	ug/L	104	80 - 120				07/18/12
Zinc	7440-66-6		1080	ug/L	107.8	80 - 120				07/18/12
Calcium	7440-70-2		21000	ug/L	105.1	80 - 120				07/18/12
Strontium	7440-24-6		1020	ug/L	102	80 - 120				07/18/12
Beryllium	7440-41-7		1070	ug/L	107.2	80 - 120				07/18/12
<b>MS</b>			<b>QC Sample #77530</b>							
			<b>Original 120836006</b>							
Iron	7439-89-6		1050	ug/L	105.3	75 - 125				07/18/12

\* - QC result out of range

n/a - Not Applicable

**Quality Control Report**

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

**Group #** WSCF120838

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Magnesium	7439-95-4		10900	ug/L	109.4	75 - 125				07/18/12
Manganese	7439-96-5		1060	ug/L	106.1	75 - 125				07/18/12
Nickel	7440-02-0		1040	ug/L	104.2	75 - 125				07/18/12
Potassium	7440-09-7		11600	ug/L	116.1	75 - 125				07/18/12
Silver	7440-22-4		1030	ug/L	103.1	75 - 125				07/18/12
Sodium	7440-23-5		11300	ug/L	112.5	75 - 125				07/18/12
Antimony	7440-36-0		1080	ug/L	108.4	75 - 125				07/18/12
Barium	7440-39-3		1070	ug/L	107.1	75 - 125				07/18/12
Cadmium	7440-43-9		1060	ug/L	106.4	75 - 125				07/18/12
Chromium	7440-47-3		1060	ug/L	105.8	75 - 125				07/18/12
Cobalt	7440-48-4		1030	ug/L	103.4	75 - 125				07/18/12
Copper	7440-50-8		1080	ug/L	107.5	75 - 125				07/18/12
Vanadium	7440-62-2		1050	ug/L	105	75 - 125				07/18/12
Zinc	7440-66-6		1090	ug/L	109.2	75 - 125				07/18/12
Calcium	7440-70-2		21700	ug/L	108.6	75 - 125				07/18/12
Strontium	7440-24-6		1030	ug/L	103.2	75 - 125				07/18/12
Beryllium	7440-41-7		1090	ug/L	108.6	75 - 125				07/18/12
<b>MSD</b>			<b>QC Sample #77531</b>							
			<b>Original</b>	<b>120836006</b>				<b>Paired</b>	<b>77530</b>	
Iron	7439-89-6		1040	ug/L	104.2	75 - 125	1.00	20		07/18/12
Magnesium	7439-95-4		10900	ug/L	109	75 - 125	0.00	20		07/18/12
Manganese	7439-96-5		1050	ug/L	105	75 - 125	0.90	20		07/18/12
Nickel	7440-02-0		1040	ug/L	103.8	75 - 125	0.00	20		07/18/12

\* - QC result out of range

n/a - Not Applicable

**Quality Control Report**

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

**Group #** WSCF120838

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7		11600	ug/L	116.4	75 - 125	0.00	20		07/18/12
Silver	7440-22-4		1020	ug/L	102.2	75 - 125	1.00	20		07/18/12
Sodium	7440-23-5		11300	ug/L	113.2	75 - 125	0.70	20		07/18/12
Antimony	7440-36-0		1070	ug/L	107.1	75 - 125	0.90	20		07/18/12
Barium	7440-39-3		1070	ug/L	106.6	75 - 125	0.00	20		07/18/12
Cadmium	7440-43-9		1060	ug/L	106	75 - 125	0.00	20		07/18/12
Chromium	7440-47-3		1040	ug/L	104.4	75 - 125	1.90	20		07/18/12
Cobalt	7440-48-4		1020	ug/L	102.4	75 - 125	1.00	20		07/18/12
Copper	7440-50-8		1070	ug/L	107.1	75 - 125	0.90	20		07/18/12
Vanadium	7440-62-2		1040	ug/L	103.9	75 - 125	1.00	20		07/18/12
Zinc	7440-66-6		1090	ug/L	108.6	75 - 125	0.00	20		07/18/12
Calcium	7440-70-2		21500	ug/L	107.7	75 - 125	0.50	20		07/18/12
Strontium	7440-24-6		1020	ug/L	102.2	75 - 125	0.90	20		07/18/12
Beryllium	7440-41-7		1080	ug/L	107.7	75 - 125	0.90	20		07/18/12

\* - QC result out of range

n/a - Not Applicable

**Quality Control Report**

**Attention** Scot Fitzgerald  
**Department** Radiochemistry

**Group #** WSCF120838

**Analytical Batch** 204285 (QC Batch: 204070)      **Test** Gross Alpha/Gross Beta  
**Associated Samples** 120838006, 120838007, 120838008, 120838009, 120838010

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>		<b>QC Sample #77723</b>								
Gross Alpha	12587-46-1		4.5E-3	pCi/L					U	07/13/12
Gross Beta	12587-47-2		0.80	pCi/L					U	07/13/12
<b>LCS</b>		<b>QC Sample #77724</b>								
Gross Alpha	12587-46-1		54	pCi/L	90.7	80 - 120				07/13/12
Gross Beta	12587-47-2		250	pCi/L	97.3	80 - 120				07/13/12
<b>DUP</b>		<b>QC Sample #77725</b>								
		<b>Original 120836008</b>								
Gross Alpha	12587-46-1		0.099	pCi/L			180.80	20	* U	07/13/12
Gross Beta	12587-47-2		2.2	pCi/L			154.80	20	* U	07/13/12

\* - QC result out of range

n/a - Not Applicable

**Quality Control Report**

**Attention** Scot Fitzgerald  
**Department** Radiochemistry

**Group #** WSCF120838

**Analytical Batch** 204353 (QC Batch: 203882)      **Test** Tritium by LSC  
**Associated Samples** 120838006, 120838007, 120838008, 120838009, 120838010

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										
			<b>QC Sample #77532</b>							
Tritium <b>LCS</b>	10028-17-8		-54	pCi/L					U	07/09/12
			<b>QC Sample #77533</b>							
Tritium <b>DUP</b>	10028-17-8		3000	pCi/L	95.5	80 - 120				07/09/12
			<b>QC Sample #77534</b>							
			<b>Original 120825006</b>							
Tritium <b>MS</b>	10028-17-8		2.0E4	pCi/L			10.50	20		07/09/12
			<b>QC Sample #77535</b>							
			<b>Original 120825006</b>							
Tritium	10028-17-8		19000	pCi/L	89.1	75 - 125				07/09/12

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

**Quality Control Report**

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

**Group #** WSCF120838

**Analytical Batch** 204552 (QC Batch: 204551)      **Test** Total Organic Halides  
**Associated Samples** 120838011, 120838012, 120838013, 120838014

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										
			<b>QC Sample #77945</b>							
Total Organic Halides	59473-04-0		<5.0	ug/L					U	06/26/12
<b>LCS</b>										
			<b>QC Sample #77946</b>							
Total Organic Halides	59473-04-0		403	mg/L	100.9	80 - 120				06/26/12
<b>MS</b>										
			<b>QC Sample #77952</b>							
			<b>Original 120838011</b>							
Total Organic Halides	59473-04-0	<5.0	41.8	ug/L	104.4	75 - 125				06/26/12
<b>MSD</b>										
			<b>QC Sample #77953</b>							
			<b>Original 120838011</b>							
			<b>Paired 77952</b>							
Total Organic Halides	59473-04-0	<5.0	39.3	ug/L	98.4	75 - 125	6.20	20		06/26/12

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

**Quality Control Report**

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

**Group #** WSCF120838

**Analytical Batch** 204555 (QC Batch: 204554)      **Test** Total Organic Halides  
**Associated Samples** 120838015, 120838016, 120838017, 120838018

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>		<b>QC Sample #77961</b>								
Total Organic Halides	59473-04-0		<5.0	ug/L					U	06/27/12
<b>LCS</b>		<b>QC Sample #77962</b>								
Total Organic Halides	59473-04-0		387	mg/L	96.8	80 - 120				06/27/12
<b>MS</b>		<b>QC Sample #77966</b>								
		<b>Original 120838015</b>								
Total Organic Halides	59473-04-0	<5.0	39.0	ug/L	97.6	75 - 125				06/27/12
<b>MSD</b>		<b>QC Sample #77967</b>								
		<b>Original 120838015</b>								
Total Organic Halides	59473-04-0	<5.0	40.0	ug/L	99.9	75 - 125	2.50	20	<b>Paired 77966</b>	06/27/12

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

**Quality Control Report**

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

**Group #** WSCF120838

**Analytical Batch** 204870 (QC Batch: 204261)  
**Associated Samples** 120838006, 120838007, 120838008

**Test** ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										
			<b>QC Sample #77853</b>							
Arsenic <b>LCS</b>	7440-38-2	<0.20		ug/L					U	07/17/12
			<b>QC Sample #77854</b>							
Arsenic <b>MS</b>	7440-38-2	37.8		ug/L	94.4	85 - 115				07/17/12
			<b>QC Sample #77855</b>							
			<b>Original 120822008</b>							
Arsenic <b>MSD</b>	7440-38-2	36.2		ug/L	90.5	70 - 130				07/17/12
			<b>QC Sample #77856</b>							
			<b>Original 120822008</b>							
Arsenic	7440-38-2	38.7		ug/L	96.7	70 - 130	6.20	20	<b>Paired 77855</b>	07/17/12

\* - QC result out of range

n/a - Not Applicable

**Quality Control Report**

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

**Group #** WSCF120838

**Analytical Batch** 204871 (QC Batch: 204262)  
**Associated Samples** 120838009, 120838010

**Test** ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>										
			<b>QC Sample #77857</b>							
Arsenic	7440-38-2		<0.20	ug/L					U	07/17/12
<b>LCS</b>										
			<b>QC Sample #77858</b>							
Arsenic	7440-38-2		37.1	ug/L	92.7	85 - 115				07/17/12
<b>MS</b>										
			<b>QC Sample #77859</b>							
			<b>Original 120838009</b>							
Arsenic	7440-38-2	7.99	39.2	ug/L	98	70 - 130				07/17/12
<b>MSD</b>										
			<b>QC Sample #77860</b>							
			<b>Original 120838009</b>							
									<b>Paired 77859</b>	
Arsenic	7440-38-2	7.99	39.1	ug/L	97.8	70 - 130	0.20	20		07/17/12

\* - QC result out of range

n/a - Not Applicable

**Quality Control Report**

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

**Group #** WSCF120838

**Analytical Batch** 204929 (QC Batch: 204929)      **Test** Total Organic Carbon  
**Associated Samples** 120838011, 120838012, 120838013, 120838014, 120838015, 120838016, 120838017

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>		<b>QC Sample #78300</b>								
Total Organic Carbon	TOC		<0.045	mg/L					U	07/18/12
<b>LCS</b>		<b>QC Sample #78301</b>								
Total Organic Carbon	TOC		1.91	mg/L	95.4	80 - 120				07/18/12
<b>MS</b>		<b>QC Sample #78312</b>								
		<b>Original 120829015</b>								
Total Organic Carbon	TOC		2.11	mg/L	105.4	75 - 125				07/18/12
<b>MSD</b>		<b>QC Sample #78313</b>								
		<b>Original 120829015</b>								
Total Organic Carbon	TOC		2.13	mg/L	106.4	75 - 125	0.80	20	<b>Paired 78312</b>	07/18/12

\* - QC result out of range

n/a - Not Applicable

**Quality Control Report**

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

**Group #** WSCF120838

**Analytical Batch** 204957 (QC Batch: 204957)  
**Associated Samples** 120838018

**Test** Total Organic Carbon

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
<b>BLANK</b>		<b>QC Sample #78356</b>								
Total Organic Carbon	TOC		<0.045	mg/L					U	07/18/12
<b>LCS</b>		<b>QC Sample #78357</b>								
Total Organic Carbon	TOC		2.06	mg/L	103.1	80 - 120				07/18/12
<b>MS</b>		<b>QC Sample #78358</b>								
		<b>Original 120838018</b>								
Total Organic Carbon	TOC	0.109	2.04	mg/L	101.8	75 - 125				07/18/12
<b>MSD</b>		<b>QC Sample #78359</b>								
		<b>Original 120838018</b>								
Total Organic Carbon	TOC	0.109	1.99	mg/L	99.4	75 - 125	1.90	20	<b>Paired 78358</b>	07/18/12

\* - QC result out of range

n/a - Not Applicable

Analytical Comment Report

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Attention: Scot Fitzgerald

Group #

WSCF120838

Quality Control Comments

Department Inorganic

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77457

B2JVX5(120836002DUP)

**Analyte** Nitrate-N - Anions by Ion Chromatography (Water)

- [1] Duplicate is flagged for RPD out-of-limits. RPD does not apply to samples concentrations below the calibration range. RPD is calculated on measured values and not applicable for a result below the RDL.

ATTACHMENT4

**SAMPLE RECEIPT**

Consisting of 15 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 #: 120838

Profile #: S12-007-200

Proj. Mgr.:

Phone:

The following samples were received from you on 6/26/2012 2:40:00 PM. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
<b>Tests scheduled</b>				
120838001	B2LDV3	WATER	6/26/2012 13:16	6/26/2012 14:40
		IC-W		
120838002	B2LDV7	WATER	6/26/2012 12:30	6/26/2012 14:40
		IC-W		
120838003	B2LDW1	WATER	6/26/2012 10:52	6/26/2012 14:40
		IC-W		
120838004	B2LDW5	WATER	6/26/2012 11:38	6/26/2012 14:40
		IC-W		
120838005	B2LDX3	WATER	6/26/2012 13:59	6/26/2012 14:40
		IC-W		
120838006	B2LDV2	WATER	6/26/2012 13:16	6/26/2012 14:40
		2008-W; 6010-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
120838007	B2LDV6	WATER	6/26/2012 12:30	6/26/2012 14:40
		2008-W; 6010-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
120838008	B2LDW0	WATER	6/26/2012 10:52	6/26/2012 14:40
		2008-W; 6010-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
120838009	B2LDW4	WATER	6/26/2012 11:38	6/26/2012 14:40
		2008-W; 6010-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
120838010	B2LDX2	WATER	6/26/2012 13:59	6/26/2012 14:40
		2008-W; 6010-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
120838011	B2L9M4	WATER	6/26/2012 08:27	6/26/2012 14:40

**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				
120838012	B2L9M5	WATER	6/26/2012 08:27	6/26/2012 14:40
TOC-W; TOX-W				
120838013	B2L8P5	WATER	6/26/2012 08:27	6/26/2012 14:40
TOC-W; TOX-W				
120838014	B2L9M3	WATER	6/26/2012 08:27	6/26/2012 14:40
TOC-W; TOX-W				
120838015	B2L9M9	WATER	6/26/2012 09:19	6/26/2012 14:40
TOC-W; TOX-W				
120838016	B2L8P9	WATER	6/26/2012 09:19	6/26/2012 14:40
TOC-W; TOX-W				
120838017	B2L9N0	WATER	6/26/2012 09:19	6/26/2012 14:40
TOC-W; TOX-W				
120838018	B2L9N1	WATER	6/26/2012 09:19	6/26/2012 14:40
TOC-W; TOX-W				

**Test Acronym Description**

Test Acronym	Description
2008-W	ICP-MS (W)
6010-W	ICP-AES (W)
GAB-AO-W	Gross Alpha/Beta (A only)(W)
GAB-BO-W	Gross Alpha/Beta (B only)(W)
H3-COL-W	Tritium by EICHRUM Column (W)
IC-W	Anions by IC (W)
TOC-W	Total Organic Carbon (W)
TOX-W	Total Organic Halides (W)

Sample Receipt

<b>CH2M Hill Plateau Remediation Company</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>		C.O.C. # <b>S12-007-200</b> Page 1 of 1
Collector <b>LD. Wall CHPRC</b>	Contact/Requester Karen Waters-Husted	Telephone No. 376-4650		
SAF No. S12-007	Sampling Origin Hanford Site	Purchase Order/Charge Code 300071ES20		
Project Title SURV, JULY 2012	Logbook No. INF-N-506 47 / 90	Ice Chest No. N/A		
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A		
Protocol CERCLA	Priority: 45 Days	Offsite Property No. N/A		
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> *** 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.				
Sample No. B2LDV3	Filter N	Date 6-26-12	Time 1316	No./Type Container 1x500-ml P
120838		Sample Analysis 300.0_ANIONS_IC; List-1 (5)	Holding Time 48 Hours	Preservative Cool-4C
SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.				

Relinquished By <b>LD. Wall CHPRC</b>	Date/Time JUN 26 2012	Received By JA Friedman	Date/Time JUN 26 2012 1443	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
Relinquished By [Signature]	Date/Time JUN 26 2012	Received By [Signature]	Date/Time JUN 26 2012 1443	
Relinquished By [Signature]	Date/Time JUN 26 2012	Received By [Signature]	Date/Time JUN 26 2012 1443	
Relinquished By [Signature]	Date/Time JUN 26 2012	Received By [Signature]	Date/Time JUN 26 2012 1443	
<b>FINAL SAMPLE DISPOSITION</b> Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Date/Time JUN 26 2012 1443
PRINTED ON 6/12/2012				A-6004-842 (REV 2)

Sample Receipt

Chain of Custody

<b>CH2M Hill Plateau Remediation Company</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>		C.O.C. # <b>S12-007-202</b>
Collector <b>LD. Wall CHPRC</b>		Contact/Requester Karen Waters-Illsted		Telephone No. 376-4650
SAF No. S12-007		Sampling Origin Hanford Site		Purchase Order/Charge Code 300071FS20
Project Title SURV, JULY 2012		Logbook No. HNF-N-506 <b>47/89</b>		Ice Chest No. N/A
Shipped To (Lab) Waste Sampling & Characterization		Method of Shipment GOVERNMENT VEHICLE		Bill of Lading/Air Bill No. N/A
Protocol CERCLA		Priority: 45 Days		Offsite Property No. N/A
SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input type="checkbox"/> No <input type="checkbox"/> Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401617.				
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 3401.5 (1990/1993)				
Sample No. B2LDV7	Filter N	Date 6-26-11	Time 1230	No/Type Container 1x500-mL P
Sample Analysis 300.0_ ANIONS_IC: List-1 (5)			Holding Time 48 Hours	Preservative Cool-4C

Relinquished By <b>LD. Wall CHPRC</b>	Date/Time JUN 26 2012 1440	Received By TA Frazee	Date/Time JUN 26 2012 1440	Matrix * S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge WT = Waste W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By [Signature]	Date/Time JUN 26 2012 1440	Received By [Signature]	Date/Time JUN 26 2012 1440	
Relinquished By [Signature]	Date/Time JUN 26 2012 1440	Received By [Signature]	Date/Time JUN 26 2012 1440	
FINAL SAMPLE DISPOSITION Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Date/Time

PRINTED ON 6/12/2012

A-6004-812 (REV 2)

Sample Receipt

Chain of Custody

CH2M Hill Plateau Remediation Company		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>				C.O.C. # <b>SI2-007-204</b> Page 1 of 1
Collector <b>LD. Wall CHPRC</b>	Contact/Requester <b>Karen Walters-Husted</b>	Telephone No. <b>376-4650</b>				
SAF No. <b>SI2-007</b>	Sampling Origin <b>Hanford Site</b>	Purchase Order/Charge Code <b>30007IES20</b>				
Project Title <b>SURV, JULY 2012</b>	Logbook No. <b>HNF-N-506 47 / 89</b>	Ice Chest No. <b>N/A</b>				
Shipped To (Lab) <b>Waste Sampling &amp; Characterization</b>	Method of Shipment <b>GOVERNMENT VEHICLE</b>	Bill of Lading/Air Bill No. <b>N/A</b>				
Protocol <b>CERCLA</b>	Priority <b>45 Days</b>	Offsite Property No. <b>N/A</b>				
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> *** Contains Radioactive Material or components that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)		<b>SPECIAL INSTRUCTIONS</b> Hold Time Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 40(647).		Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Sample No. <b>B2LDW1 3</b>	Filter <b>N</b>	No./Type Container <b>W 1x500-mL P</b>	Time <b>1052</b>	Sample Analysis <b>300.0_ANIONS_IC_List-1 (5)</b>	Holding Time <b>48 Hours</b>	Preservative <b>Cool-4C</b>

Relinquished By <b>LD. Wall CHPRC</b>	Date/Time <b>JUN 26 2012 1440</b>	Received By <b>TA FARRINGTON</b>	Date/Time <b>JUN 26 2012 1440</b>	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	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
Relinquished By	Date/Time	Received By	Date/Time	
Relinquished By	Date/Time	Received By	Date/Time	
<b>FINAL SAMPLE DISPOSITION</b> 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)

Sample Receipt

Chain of Custody

<b>CH2MHill Plateau Remediation Company</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>		C.O.C. # <b>S12-007-206</b>
Collector <b>LD. Wall</b> <b>CH2MHC</b>		Contact/Requester Karen Waters-Husted	Telephone No. 376-4650	Page 1 of 1
SAF No. <b>S12-007</b>	Sampling Origin Hanford Site	Purchase Order/Charge Code 300071ES20		
Project Title SURV, JULY 2012	Loghook No. HNF-N-506 47 / 89	Ice Chest No. N/A		
Shipped To (Lab) <b>Waste Sampling &amp; Characterization</b>	Method of Shipment GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A		
Protocol CERCLA	Priority: 45 Days	Offsite Property No. N/A		
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> *** 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)				
<b>SPECIAL INSTRUCTIONS</b> Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Site: Waste Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.				
Sample No. <b>B2LDW5 4</b>	Filter N	* W	Date 6-26-12	Time 1138
No/Type Container 1x500-ml P		Sample Analysis 300.0 ANIONS_IC: List-1 (5)	Holding Time 48 Hours	Preservative Cool-4C

Relinquished By LD. Wall CH2MHC	Date/Time JUN 26 2012	Received By TA Fuzier (Signature)	Date/Time JUN 26 2012	Matrix * S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge WT = Waste W = Water L = Liquid O = Oil V = Volatiles A = Air X = Other
Relinquished By (Signature)	Date/Time JUN 26 2012	Received By (Signature)	Date/Time JUN 26 2012	
Relinquished By (Signature)	Date/Time JUN 26 2012	Received By (Signature)	Date/Time JUN 26 2012	
<b>FINAL SAMPLE DISPOSITION</b>				Date/Time
Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed By

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Sample Receipt

Chain of Custody

CH2M Hill Plateau Remediation Company		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>		C.O.C. # <b>S12-007-210</b>	
Collector <b>L.D. Wald CHPRC</b>		Contact/Requester Karen Waters-Husted	Telephone No. 376-4650	Page 1 of 1	
SAF No. S12-007	Sampling Origin Hanford Site	Logbook No. HNF-N-506 47 / 90	Purchase Order/Charge Code 300071ES20		
Project Title SURV, JULY 2012	Method of Shipment GOVERNMENT VEHICLE	Waste Sampling & Characterization CERCLA	Ice Chest No. N/A	Bill of Lading/Air Bill No. N/A	Offsite Property No. N/A
Protocol CERCLA		Priority: 45 Days	SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993). The CACN for all analytical work at WSCF is 401647.					
Sample No. B2LX3 5	Filter N W	Date 6-26-12	Time 1359	No./Type Container 1x500-mL P	300.0_ANIONS_IC_List-1 (5)
				Sample Analysis	Preservative Cool-4C

Relinquished By <b>L.D. Wald CHPRC</b>	Sign <i>L.D. Wald</i>	Date/Time JUN 26 2012 1440	Received By <b>TAFNAZIER</b>	Sign <i>Tafnazier</i>	Date/Time JUN 26 2012 1440
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)			
PRINTED ON 6/12/2012		A-6004-8/2 (REV 2)			

Sample Receipt

Chain of Custody

<b>CH2MHHI Plateau Remediation Company</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>		C.O.C. # <b>S12-007-199</b> Page 1 of 1	
Collector <b>LD. Wall CHPRC</b>	Contact/Requester Karen Waters-Husted	Telephone No. 376-4650	Purchase Order/Charge Code 300071ES20	Ice Chest No. N/A	Bill of Lading/Air Bill No. N/A
SAF No. S12-007	Sampling Origin Hanford Site	Logbook No. HNF-N-506 47 / 90	Method of Shipment GOVERNMENT VEHICLE	Offsite Property No. N/A	Total Activity Exemption: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Project Title SURV, JULY 2012	Priority: 45 Days	SPECIAL INSTRUCTIONS Hold Time			
Shipped To (Lab) Waste Sampling & Characterization	Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.				
Protocol CERCLA	POSSIBLE SAMPLE HAZARDS/REMARKS *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not reliable per DOE Order 5400.5 (1991)1983)				

  

Sample No.	Filter	* W	Date	Time	No./Type: Container	Sample Analysis	Holding Time	Preservative
B2LDV2 6	N	W	6-26-12	1316	1x500-mL GP	200.8_METALS_ICPMS; Arsenic (1)	6 Months	HNO3 to pH <2
B2LDV2	N	W			1x500 mL GP	6010_METALS_ICP; List-3 (18)	6 Months	HNO3 to pH <2
B2LDV2	N	W			1x500-mL GP	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2LDV2	N	W			1x250-mL G	TRITIUM_EIE_LSC; Tritium (1)	6 Months	None

Relinquished By <b>LD. Wall CHPRC</b>	Date/Time JUN 26 2012 1440	Received By JA Enzler	Date/Time JUN 26 2012 1440	Matrix * S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge W1 = Wipe W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
Relinquished By [Signature]	Date/Time JUN 26 2012 1440	Received By [Signature]	Date/Time JUN 26 2012 1440	Disposed By [Signature]
Relinquished By [Signature]	Date/Time JUN 26 2012 1440	Received By [Signature]	Date/Time JUN 26 2012 1440	Disposed By [Signature]
FINAL SAMPLE DISPOSITION Disposal Method (e.g. Return to customer, per lab procedure, used in process)				Date/Time A-6004-842 (REV 2)

Sample Receipt

Chain of Custody

**CH2MHill Plateau Remediation Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C. # **S12-007-201** Page 1 of 1

Collector **LD. Wall CHPRC** Telephone No. **376-4650**

SAF No. **S12-007** Sampling Origin **Hanford Site** Purchase Order/Charge Code **300071ES20**

Project Title **SURV, JULY 2012** Logbook No. **HNF-N-506 47/89** Ice Chest No. **N/A**

Shipped To (Lab) **Waste Sampling & Characterization** Method of Shipment **GOVERNMENT VEHICLE** Bill of Lading/Air Bill No. **N/A**

Protocol **CERCLA** Priority: **45 Days** Offsite Property No. **N/A**

**POSSIBLE SAMPLE HAZARDS/REMARKS**

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

\*\* Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1991/1993) Site-Wide Generator Knowledge Information: Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	* Date	Time	No/Type Container	Sample Analysis	Hold Time	Preservative
B2LDV6	N	6-26-12	1230	1x500-mL G/P	200.8_METALS_ICPMS; Arsenic (1)	6 Months	HNO3 to pH <2
B2LDV6	N			1x500-mL G/P	6010_METALS_ICP; List-3 (18)	6 Months	HNO3 to pH <2
B2LDV6	N			1x500-mL G/P	ALPHABETA_GPC; Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2LDV6	N			1x250-mL G	TRITIUM_EIE_LSC; Tritium (1)	6 Months	None

Relinquished By **LD. Wall CHPRC** Date/Time **JUN 26 2012 1440** Received By **TA FRAZIER** Date/Time **JUN 26 2012 1440**

Relinquished By **LD. Wall CHPRC** Date/Time **JUN 26 2012 1440** Received By **TA FRAZIER** Date/Time **JUN 26 2012 1440**

Relinquished By **LD. Wall CHPRC** Date/Time **JUN 26 2012 1440** Received By **TA FRAZIER** Date/Time **JUN 26 2012 1440**

Relinquished By **LD. Wall CHPRC** Date/Time **JUN 26 2012 1440** Received By **TA FRAZIER** Date/Time **JUN 26 2012 1440**

**FINAL SAMPLE DISPOSITION** Disposal Method (e.g., Return to customer, per lab procedure, used in process)

PRINTED ON 6/12/2012

A-6004-842 (REV 2)

Sample Receipt

Chain of Custody

<b>CH2MHill Plateau Remediation Company</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>		C.O.C. # <b>S12-007-203</b>			
				Page 1 of 1			
Collector <b>L.D. Wall CH2MPC</b>	Contact/Requester Karen Walters-Husted	Telephone No. 376-4650					
SAF No. S12-007	Sampling Origin Hanford Site	Purchase Order/Charge Code 300071ES20					
Project Title SURV, JULY 2012	Logbook No. HNF-N-50642/89	Ice Chest No. N/A					
Shipped To (Lab) <b>Waste Sampling &amp; Characterization</b>	Method of Shipment GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A					
Protocol CERCLA	Priority: 45 Days	Offsite Property No. N/A					
<p><b>POSSIBLE SAMPLE HAZARDS/REMARKS</b>                  ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 340.5 (1990/1993)</p>							
<p><b>SPECIAL INSTRUCTIONS</b> Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>                  Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.</p>							
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2LDW0	N	6-26-12	1052	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	6 Months	HNO3 to pH <2
B2LDW0	N			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2LDW0	N			1x500-mL G/P	ALPHABETA_GPC: Alpha disicreto + Beta (2)	6 Months	HNO3 to pH <2
B2LDW0	N			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

  

Relinquished By <b>L.D. Wall CH2MPC</b>	Date/Time JUN 26 2012 1440	Received By <b>TA Frazier</b>	Date/Time JUN 26 2012 1440
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
<p><b>FINAL SAMPLE DISPOSITION</b>                  Disposal Method (e.g., Return to customer, per lab procedure, used in process)</p>		<p>Disposed By                  Date/Time</p>	

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Sample Receipt

Chain of Custody

<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>		C.O.C. # <b>S12-007-205</b>					
		Page 1 of 1					
<b>Collector</b> LD. Wall CHPRC S12-007	<b>Contact/Requester</b> Karen Waters-Husted	<b>Telephone No.</b> 376-4650					
<b>SAF No.</b> S12-007	<b>Sampling Origin</b> Hanford Site	<b>Purchase Order/Charge Code</b> 300071ES20					
<b>Project Title</b> SURV, JULY 2012	<b>Logbook No.</b> HNF-N-506 42 / 87	<b>Ice Chest No.</b> N/A					
<b>Shipped To (Lab)</b> Waste Sampling & Characterization	<b>Method of Shipment</b> GOVERNMENT VEHICLE	<b>Bill of Lading/Air Bill No.</b> N/A					
<b>Protocol</b> CERCLA	<b>Priority:</b> 45 Days	<b>Offsite Property No.</b> N/A					
<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1992/1993)							
<b>SPECIAL INSTRUCTIONS</b> Hold Time    Total Activity Exemption: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.							
<b>Sample No.</b>	<b>Filter</b>	<b>Date</b>	<b>Time</b>	<b>No./Type/Container</b>	<b>Sample Analysis</b>	<b>Holding Time</b>	<b>Preservative</b>
B2LDW4 9	N	6-26-12	1138	1x500-mL GP	200.8 METALS_ICPMS; Arsenic (1)	6 Months	HNO3 to pH <2
B2LDW4 1	N			1x500-mL GP	6010_METALS_ICP; List-3 (18)	6 Months	HNO3 to pH <2
B2LDW4 2	N			1x500-mL GP	ALPHABETA_GPC; Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2LDW4 3	N			1x250-mL G	TRITIUM_EIE_LSC; Tritium (1)	6 Months	None

  

<b>Relinquished By</b> LD. Wall CHPRC	<b>Date/Time</b> JUN 26 2012 1440	<b>Received By</b> TA FNAZIER	<b>Date/Time</b> JUN 26 2012 1440
<b>Relinquished By</b>	<b>Date/Time</b>	<b>Received By</b>	<b>Date/Time</b>
<b>Relinquished By</b>	<b>Date/Time</b>	<b>Received By</b>	<b>Date/Time</b>
<b>Relinquished By</b>	<b>Date/Time</b>	<b>Received By</b>	<b>Date/Time</b>
<b>FINAL SAMPLE DISPOSITION</b>		<b>Disposal Method (e.g., Return to customer, per lab procedure, used in process)</b>	
		A 6004-842 (REV 2)	

Sample Receipt

Chain of Custody

<b>CH2M Hill Plateau Remediation Company</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>		C.O.C.# <b>S12-007-209</b>	
Collector <b>L.D. Wall</b> <b>CHPRC</b>		Contact/Requester Karen Waters-Husted		Telephone No. 376-4650	
SAF No. S12-007		Sampling Origin Hanford Site		Purchase Order/Charge Code 300071ES20	
Project Title SURV, JULY 2012		Logbook No. HNF-N-506 47 / 9C		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 CFRCA		Priority: 45 Days		Offsite Property No. N/A	
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 5403.5 (1990/1993)					
SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.					

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2LDX2 10	N	6-26-12	1359	1x500-mL G/P	200 8_METALS_ICPMS: Arsenic (1)	6 Months	HNO3 to pH <2
B2LDX2	N			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2LDX2	N			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2LDX2	N			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By <b>L.D. Wall</b> CHPRC	Date/Time JUN 26 2012 1440	Received By TA Frazier	Date/Time JUN 26 2012 1440	Matrix *
Relinquished By	Date/Time	Received By	Date/Time	S = Soil DS = Drum Solids SE = Sediment DL = Drum Liquids SO = Solid T = Tissue SL = Sludge WI = Wine W = Water L = Liquid O = Oil V = Vegetation A = Air X = Other
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)			Date/Time

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Sample Receipt

Chain of Custody

**CH2M Hill Plateau Remediation Company**

**CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST**

C.O.C.# **W12-007-112**  
Page 1 of 1

Collector **LD Wall**  
SAF No. **W12-007**

Contact/Requester **Karen Waters-Husted**  
Telephone No. **376-4650**

Sampling Origin **Hanford Site**  
Purchase Order/Charge Code **300071ES20**

Project Title **RCRA, JULY 2012**  
Logbook No. **HNF-N-506 47 / 89**  
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: **45 Days**  
Offsite Property No. **N/A**

**POSSIBLE SAMPLE HAZARDS/REMARKS**  
 \*\* Contain Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not reliable per DOE Order 5400.5 (1990/1993).

**SPECIAL INSTRUCTIONS** **Hold Time** **Total Activity Exemption** Yes  No   
 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	No./Type Container	Date	Time	Sample Analysis	Holding Time	Preservative
B2L9M4	N	1x1-L aGs*	6-26-12	0827	9020_TOX; TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9M4	N	1x250-mL aG			9060_TOX; TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9M5	N	1x1-L aGs*			9020_TOX; TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9M5	N	1x250-mL aG			9060_TOX; TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9P5	N	1x1-L aGs*			9020_TOX; TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9P5	N	1x250-mL aG			9060_TOX; TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9M3	N	1x1-L aGs*			9020_TOX; TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9M3	N	1x250-mL aG			9060_TOX; TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C

Relinquished By **LD Wall** Date/Time **JUN 26 2012 1440** Received By **TA Frazier** Date/Time **JUN 26 2012 1440**

Relinquished By **LD Wall** Date/Time **JUN 26 2012 1440** Received By **TA Frazier** Date/Time **JUN 26 2012 1440**

Relinquished By **LD Wall** Date/Time **JUN 26 2012 1440** Received By **TA Frazier** Date/Time **JUN 26 2012 1440**

Relinquished By **LD Wall** Date/Time **JUN 26 2012 1440** Received By **TA Frazier** Date/Time **JUN 26 2012 1440**

**FINAL SAMPLE DISPOSITION** Disposed By **TA Frazier** Date/Time **JUN 26 2012 1440**

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

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Sample Receipt

Chain of Custody

CH2MIHI Plateau Remediation Company  
 C.O.C.# W12-007-114  
 Page 1 of 1

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Collector: LD. Wall  
 SAF No.: W12-007  
 Project Title: RCRA, JULY 2012  
 Shipped To (Lab): Waste Sampling & Characterization  
 Protocol: RCRA  
 Contact/Requester: Karen Waters-Husted  
 Telephone No.: 376-4650  
 Sampling Origin: Hanford Site  
 Purchase Order/Charge Code: 300071ES20  
 Logbook No.: HNF-N-506 47 / 89  
 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: Total/Activity Exemption: Yes  No   
 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.

Sample No.	Filter	Date	Time	No/Type Container	Sample-Analysis	Holding Time	Preservative
B2L9M9 (5)	N	6-26-12	0919	1x1-L aGs*	9020_TOX_TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9M9 ↓	N			1x250-ml aG	9060_TOX_TOX (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9P9 (10)	N			1x1-L aGs*	9020_TOX_TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9P9 ↓	N			1x250-ml aG	9060_TOX_TOX (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9N0 (7)	N			1x1-L aGs*	9020_TOX_TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9N0 ↓	N			1x250-ml aG	9060_TOX_TOX (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9N1 (8)	N			1x1-L aGs*	9020_TOX_TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9N1 ↓	N			1x250-ml aG	9060_TOX_TOX (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C

Relinquished By: LD. Wall  
 Date/Time: JUN 26 2012 1440  
 Received By: TA FRAZIER  
 Date/Time: JUN 26 2012 1440  
 Relinquished By: [Signature]  
 Date/Time: [Blank]  
 Received By: [Blank]  
 Date/Time: [Blank]  
 Relinquished By: [Blank]  
 Date/Time: [Blank]  
 Received By: [Blank]  
 Date/Time: [Blank]

Matrix \*  
 S = Soil DS = Drum Solids  
 SE = Sediment DL = Drum Liquids  
 SO = Solid T = Tissue  
 SL = Sludge W1 = Wipe  
 W = Water L = Liquid  
 O = Oil V = Vegetation  
 A = Air X = Other

Disposal Method (e.g., Return to customer, per lab procedure, used in process)  
 Disposed By: [Blank]  
 Date/Time: [Blank]

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