

DECEMBER 12, 2012

WSCF Laboratory

PO Box 650 S3-30
Richland, WA 99352



December 12, 2012

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

Dear Scot Fitzgerald,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF121475

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 WSCF121475

- * 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 written over a horizontal line.

Electronically signed by Joseph Hale

For Lab Manager, Dan T. Smith

WSCF Analytical Lab

(509) 373-4804

Attachments 4

CC: w/Attachments

File/LB

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF121475

Data Deliverable Date 12/17/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
S13-012	B2N0T7	121475001	WATER	11/16/12	11/16/12
S13-012	B2N0N9	121475002	WATER	11/16/12	11/16/12
S13-012	B2N0N5	121475003	WATER	11/16/12	11/16/12
S13-012	B2N0P3	121475004	WATER	11/16/12	11/16/12
S13-012	B2N0T3	121475005	WATER	11/16/12	11/16/12
S13-012	B2N0T4	121475006	WATER	11/16/12	11/16/12
S13-012	B2N0N6	121475007	WATER	11/16/12	11/16/12
S13-012	B2N0P4	121475008	WATER	11/16/12	11/16/12
S13-012	B2N0T8	121475009	WATER	11/16/12	11/16/12
S13-012	B2N0P0	121475010	WATER	11/16/12	11/16/12
S13-012	B2N0T2	121475011	WATER	11/16/12	11/16/12
S13-012	B2N0N4	121475012	WATER	11/16/12	11/16/12
S13-012	B2N0P2	121475013	WATER	11/16/12	11/16/12
S13-012	B2N0T6	121475014	WATER	11/16/12	11/16/12
S13-012	B2N0N8	121475015	WATER	11/16/12	11/16/12
X13-002	B2N2P6	121475016	WATER	11/16/12	11/16/12

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
WSCF121475

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):

- Batch QC 210421
 - Chloride and Sulfate – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
 - All other applicable QC controls are within the established limits.

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

- Sodium was detected in the Blank and evaluated.
- Calcium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
- All other applicable QC controls are within the established limits.

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

- All applicable QC controls are within the established limits.

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

- All applicable QC controls are within the established limits.

Organic Comments

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

- All applicable QC controls are within the established limits.

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):

Attachment 2
Narrative
WSCF121475

Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.

Gross Alpha / Gross Beta:

- Gross Alpha – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.
- All other applicable QC controls are within the established limits.

Isotopic Uranium analysis:

- Uranium-234, Uranium-235 and Uranium-238 – The Blank is less than two times the RDL. “B” Flag not required.
- Uranium-235 – The duplicate is outside of default RPD limits. RPD limit does not apply to results with greater than 20% counting uncertainty.
- All other applicable QC controls are within the established limits.

Tritium:

- 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 87 pages
Including cover page

DECEMBER 12, 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 # WSCF121475
Report Date December 12, 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 # WSCF121475

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210420	210420	2	BLANK	85234	BLANK		Anions by Ion Chromatography (Water)
210420	210420	3	LCS	85235	LCS		Anions by Ion Chromatography (Water)
210420	210420	4	DUP	85236	B2MML9(121469002DUP)	121469002	Anions by Ion Chromatography (Water)
210420	210420	5	MS	85237	B2MML9(121469002MS)	121469002	Anions by Ion Chromatography (Water)
210420	210420	6	MSD	85238	B2MML9(121469002MSD)	121469002	Anions by Ion Chromatography (Water)
210420	210420	17	SAMPLE	121475001	B2N0T7		Anions by Ion Chromatography (Water)
210420	210420	18	SAMPLE	121475002	B2N0N9		Anions by Ion Chromatography (Water)
210421	210421	2	BLANK	85241	BLANK		Anions by Ion Chromatography (Water)
210421	210421	3	LCS	85242	LCS		Anions by Ion Chromatography (Water)
210421	210421	4	DUP	85243	B2N0P3(121475004DUP)	121475004	Anions by Ion Chromatography (Water)
210421	210421	5	MS	85244	B2N0P3(121475004MS)	121475004	Anions by Ion Chromatography (Water)
210421	210421	6	MSD	85245	B2N0P3(121475004MSD)	121475004	Anions by Ion Chromatography (Water)
210421	210421	8	SAMPLE	121475004	B2N0P3		Anions by Ion Chromatography (Water)
210421	210421	9	SAMPLE	121475005	B2N0T3		Anions by Ion Chromatography (Water)
210421	210421	10	SAMPLE	121475003	B2N0N5		Anions by Ion Chromatography (Water)
211117	211128	5	BLANK	85822	BLANK		ICP-6010 - All possible metals
211117	211128	7	LCS	85824	LCS		ICP-6010 - All possible metals
211117	211128	9	MS	85825	B2MYY0(121468009MS)	121468009	ICP-6010 - All possible metals
211117	211128	10	MSD	85826	B2MYY0(121468009MSD)	121468009	ICP-6010 - All possible metals
211117	211128	22	SAMPLE	121475006	B2N0T4		ICP-6010 - All possible metals
211117	211128	23	SAMPLE	121475007	B2N0N6		ICP-6010 - All possible metals
211117	211128	24	SAMPLE	121475008	B2N0P4		ICP-6010 - All possible metals
211117	211128	25	SAMPLE	121475009	B2N0T8		ICP-6010 - All possible metals

Batch QC List

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
211117	211128	26	SAMPLE	121475010	B2N0P0		ICP-6010 - All possible metals
211117	211128	27	SAMPLE	121475011	B2N0T2		ICP-6010 - All possible metals
211117	211128	28	SAMPLE	121475012	B2N0N4		ICP-6010 - All possible metals
211117	211128	29	SAMPLE	121475013	B2N0P2		ICP-6010 - All possible metals
211117	211128	30	SAMPLE	121475014	B2N0T6		ICP-6010 - All possible metals
211117	211128	31	SAMPLE	121475015	B2N0N8		ICP-6010 - All possible metals
211287	211320	4	BLANK	86118	BLANK		ICP-2008 MS All possible metal
211287	211320	5	LCS	86119	LCS		ICP-2008 MS All possible metal
211287	211320	7	MS	86120	B2MML8(121469010MS)	121469010	ICP-2008 MS All possible metal
211287	211320	8	MSD	86121	B2MML8(121469010MSD)	121469010	ICP-2008 MS All possible metal
211287	211320	9	SAMPLE	121475011	B2N0T2		ICP-2008 MS All possible metal
211287	211320	10	SAMPLE	121475012	B2N0N4		ICP-2008 MS All possible metal
211287	211320	11	SAMPLE	121475013	B2N0P2		ICP-2008 MS All possible metal
211287	211320	12	SAMPLE	121475014	B2N0T6		ICP-2008 MS All possible metal
211287	211320	13	SAMPLE	121475015	B2N0N8		ICP-2008 MS All possible metal

Batch QC List

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210732	210733	1	BLANK	85410	BLANK		SW-846 8260B Volatiles
210732	210733	2	LCS	85411	LCS		SW-846 8260B Volatiles
210732	210733	3	MS	85412	B2N0T6(121475014MS)	121475014	SW-846 8260B Volatiles
210732	210733	4	MSD	85413	B2N0T6(121475014MSD)	121475014	SW-846 8260B Volatiles
210732	210733	5	SAMPLE	121475013	B2N0P2		SW-846 8260B Volatiles
210732	210733	6	SAMPLE	121475016	B2N2P6		SW-846 8260B Volatiles
210732	210733	7	SAMPLE	121475011	B2N0T2		SW-846 8260B Volatiles
210732	210733	8	SAMPLE	121475012	B2N0N4		SW-846 8260B Volatiles
210732	210733	10	SAMPLE	121475015	B2N0N8		SW-846 8260B Volatiles
210732	210733	17	SAMPLE	121475014	B2N0T6		SW-846 8260B Volatiles

Batch QC List

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121475

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210416	210828	1	BLANK	85221	BLANK		Uranium (AEA)
210416	210828	2	LCS	85222	LCS		Uranium (AEA)
210416	210828	4	DUP	85223	B2N0L9(121467015DUP)	121467015	Uranium (AEA)
210416	210828	5	SAMPLE	121475011	B2N0T2		Uranium (AEA)
210416	210828	6	SAMPLE	121475012	B2N0N4		Uranium (AEA)
210416	210828	7	SAMPLE	121475013	B2N0P2		Uranium (AEA)
210416	210828	8	SAMPLE	121475014	B2N0T6		Uranium (AEA)
210416	210828	9	SAMPLE	121475015	B2N0N8		Uranium (AEA)
210616	210748	1	BLANK	85287	BLANK		Tritium by LSC
210616	210748	2	LCS	85288	LCS		Tritium by LSC
210616	210748	4	DUP	85289	B2MYX4(121468012DUP)	121468012	Tritium by LSC
210616	210748	5	MS	85290	B2MYX4(121468012MS)	121468012	Tritium by LSC
210616	210748	9	SAMPLE	121475011	B2N0T2		Tritium by LSC
210616	210748	10	SAMPLE	121475012	B2N0N4		Tritium by LSC
210616	210748	11	SAMPLE	121475013	B2N0P2		Tritium by LSC
210616	210748	12	SAMPLE	121475014	B2N0T6		Tritium by LSC
210616	210748	13	SAMPLE	121475015	B2N0N8		Tritium by LSC
210631	211032	1	BLANK	85315	BLANK		GAB Discrete analysis Alpha only
210631	211032	2	LCS	85316	LCS		GAB Discrete analysis Alpha only
210631	211032	4	DUP	85317	B2MML8(121469010DUP)	121469010	GAB Discrete analysis Alpha only
210631	211032	5	SAMPLE	121475011	B2N0T2		GAB Discrete analysis Alpha only
210631	211032	6	SAMPLE	121475012	B2N0N4		GAB Discrete analysis Alpha only
210631	211032	7	SAMPLE	121475013	B2N0P2		GAB Discrete analysis Alpha only

Batch QC List

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121475

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210631	211032	8	SAMPLE	121475014	B2N0T6		GAB Discrete analysis Alpha only
210631	211032	9	SAMPLE	121475015	B2N0N8		GAB Discrete analysis Alpha only
210631	211033	1	BLANK	85315	BLANK		GAB Discrete analysis Beta only
210631	211033	2	LCS	85316	LCS		GAB Discrete analysis Beta only
210631	211033	4	DUP	85317	B2MML8(121469010DUP	121469010	GAB Discrete analysis Beta only
210631	211033	5	SAMPLE	121475011	B2N0T2		GAB Discrete analysis Beta only
210631	211033	6	SAMPLE	121475012	B2N0N4		GAB Discrete analysis Beta only
210631	211033	7	SAMPLE	121475013	B2N0P2		GAB Discrete analysis Beta only
210631	211033	8	SAMPLE	121475014	B2N0T6		GAB Discrete analysis Beta only
210631	211033	9	SAMPLE	121475015	B2N0N8		GAB Discrete analysis Beta only

Batch QC List

Attention Scot Fitzgerald
 Department Wet Chemistry

Group # WSCF121475

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210753	210753	1	LCS	85478	LCS		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	4	DUP	85479	B2MMV7(121464018DUP 121464018		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	13	LCS	85480	LCS		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	15	SAMPLE	121475011	B2N0T2		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	16	SAMPLE	121475012	B2N0N4		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	17	SAMPLE	121475013	B2N0P2		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	18	SAMPLE	121475014	B2N0T6		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	19	LCS	85481	LCS		Total Alkalinity as mg/L CaCO3 (Water)
210754	210754	1	LCS	85482	LCS		Total Alkalinity as mg/L CaCO3 (Water)
210754	210754	2	SAMPLE	121475015	B2N0N8		Total Alkalinity as mg/L CaCO3 (Water)
210754	210754	3	DUP	85483	B2N0N8(121475015DUP) 121475015		Total Alkalinity as mg/L CaCO3 (Water)
210754	210754	13	LCS	85484	LCS		Total Alkalinity as mg/L CaCO3 (Water)
210754	210754	19	LCS	85485	LCS		Total Alkalinity as mg/L CaCO3 (Water)

Method Reference

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

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

LA-505-411	Elemental Analysis by ICP Atomic Emission Spectroscopy (ICP AES)		
	EPA SW-846	6010C	Inductively Coupled Plasma-Atomic Emmission Spectrometry
	HEIS	6010_METALS_ICP	Inductively Coupled Plasma-Atomic Emmission Spectrometry
LA-505-412	Determination of Trace Elements in Waters & Wastes by ICP Mass Spectrometry		
	EPA-600/R-94-111	200.8	Determination of Trace Elements in Waters and Waste by Inductively Coupled Plasma
	HEIS	200.8_METALS_ICPMS	Determination of Trace Elements in Waters and Waste by Inductively Coupled Plasma, Mass Spec.
LA-533-410	Anion Analysis by Ion Chromatography		
	EPA-600/R-94-111	300.0	Determination of Inorganic Anions by Ion Chromatography
	HEIS	300.0_ANIONS_IC	Determination of Inorganic Anions by Ion Chromatography

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

Method Reference

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

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.

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

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

Method Reference

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121475

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

LA-508-471	Determination Of Uranium, Plutonium, And Americium		
	HEIS	UIISO_IE_PRECIP_AEA	Uranium Iso, Alpha Spec
LA-508-421	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
LA-508-415	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

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

Method Reference

Attention Scot Fitzgerald
 Department Wet Chemistry

Group # WSCF121475

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475001
 SAF# S13-012
 Sample ID B2N0T7

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
11/16/12										
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.409		ug/mL	2	0.046	0.14	11/16/12
Chloride	16887-00-6	LA-533-410	D	17.1		ug/mL	2	0.12	0.81	11/16/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	11/16/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	11/16/12
Nitrate-N	NO3-N	LA-533-410	D	22.5		ug/mL	2	0.038	0.20	11/16/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	11/16/12
Sulfate	14808-79-8	LA-533-410	D	66.9		ug/mL	2	0.22	2.1	11/16/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475002
 SAF# S13-012
 Sample ID B2N0N9

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/16/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.394		ug/mL	2	0.046	0.14	11/16/12
Chloride	16887-00-6	LA-533-410	D	13.5		ug/mL	2	0.12	0.81	11/16/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	11/16/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	11/16/12
Nitrate-N	NO3-N	LA-533-410	D	5.06		ug/mL	2	0.038	0.20	11/16/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	11/16/12
Sulfate	14808-79-8	LA-533-410	D	38.3		ug/mL	2	0.22	2.1	11/16/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475003
 SAF# S13-012
 Sample ID B2N0N5

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
11/16/12										
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.299		ug/mL	2	0.046	0.14	11/16/12
Chloride	16887-00-6	LA-533-410	D	19.1		ug/mL	2	0.12	0.81	11/16/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	11/16/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	11/16/12
Nitrate-N	NO3-N	LA-533-410	D	5.89		ug/mL	2	0.038	0.20	11/16/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	11/16/12
Sulfate	14808-79-8	LA-533-410	D	56.6		ug/mL	2	0.22	2.1	11/16/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475004
 SAF# S13-012
 Sample ID B2N0P3

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
11/16/12										
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.282		ug/mL	2	0.046	0.14	11/16/12
Chloride	16887-00-6	LA-533-410	D	18.9		ug/mL	2	0.12	0.81	11/16/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	11/16/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	11/16/12
Nitrate-N	NO3-N	LA-533-410	D	5.91		ug/mL	2	0.038	0.20	11/16/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	11/16/12
Sulfate	14808-79-8	LA-533-410	D	58.4		ug/mL	2	0.22	2.1	11/16/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475005
 SAF# S13-012
 Sample ID B2N0T3

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/16/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.303		ug/mL	2	0.046	0.14	11/16/12
Chloride	16887-00-6	LA-533-410	D	20.4		ug/mL	2	0.12	0.81	11/16/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	11/16/12
Nitrate-N	NO3-N	LA-533-410	D	6.18		ug/mL	2	0.038	0.20	11/16/12
Sulfate	14808-79-8	LA-533-410	D	55.0		ug/mL	2	0.22	2.1	11/16/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475006
 SAF# S13-012
 Sample ID B2N0T4

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										12/03/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/05/12
Magnesium	7439-95-4	LA-505-411		13600		ug/L	1	4.0	20	12/05/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Potassium	7440-09-7	LA-505-411		6730		ug/L	1	76	380	12/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Sodium	7440-23-5	LA-505-411		28100		ug/L	1	10	50	12/05/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/05/12
Barium	7440-39-3	LA-505-411		59.3		ug/L	1	4.0	20	12/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Chromium	7440-47-3	LA-505-411	B	6.40		ug/L	1	5.0	25	12/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Vanadium	7440-62-2	LA-505-411	B	9.90		ug/L	1	5.0	25	12/05/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/05/12
Calcium	7440-70-2	LA-505-411		57200		ug/L	1	49	240	12/05/12
Strontium	7440-24-6	LA-505-411		235		ug/L	1	9.0	45	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475006
 SAF# S13-012
 Sample ID B2N0T4

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

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	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475007
 SAF# S13-012
 Sample ID B2N0N6

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										12/03/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/05/12
Magnesium	7439-95-4	LA-505-411		14300		ug/L	1	4.0	20	12/05/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Potassium	7440-09-7	LA-505-411		6920		ug/L	1	76	380	12/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Sodium	7440-23-5	LA-505-411		28100		ug/L	1	10	50	12/05/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/05/12
Barium	7440-39-3	LA-505-411		65.7		ug/L	1	4.0	20	12/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Chromium	7440-47-3	LA-505-411	B	7.90		ug/L	1	5.0	25	12/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Vanadium	7440-62-2	LA-505-411	B	7.80		ug/L	1	5.0	25	12/05/12
Zinc	7440-66-6	LA-505-411	B	18.3		ug/L	1	5.0	25	12/05/12
Calcium	7440-70-2	LA-505-411		56000		ug/L	1	49	240	12/05/12
Strontium	7440-24-6	LA-505-411		246		ug/L	1	9.0	45	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475007
 SAF# S13-012
 Sample ID B2N0N6

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

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	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475008
 SAF# S13-012
 Sample ID B2N0P4

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										12/03/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/05/12
Magnesium	7439-95-4	LA-505-411		14400		ug/L	1	4.0	20	12/05/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Potassium	7440-09-7	LA-505-411		7620		ug/L	1	76	380	12/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Sodium	7440-23-5	LA-505-411		26400		ug/L	1	10	50	12/05/12
Antimony	7440-36-0	LA-505-411	B	36.4		ug/L	1	36	180	12/05/12
Barium	7440-39-3	LA-505-411		57.5		ug/L	1	4.0	20	12/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Chromium	7440-47-3	LA-505-411	B	5.90		ug/L	1	5.0	25	12/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Vanadium	7440-62-2	LA-505-411	B	9.00		ug/L	1	5.0	25	12/05/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/05/12
Calcium	7440-70-2	LA-505-411		52000		ug/L	1	49	240	12/05/12
Strontium	7440-24-6	LA-505-411		235		ug/L	1	9.0	45	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475008
 SAF# S13-012
 Sample ID B2N0P4

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

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	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475009
 SAF# S13-012
 Sample ID B2N0T8

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										12/03/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	38.7		ug/L	1	19	95	12/05/12
Magnesium	7439-95-4	LA-505-411		7980		ug/L	1	4.0	20	12/05/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Potassium	7440-09-7	LA-505-411		6880		ug/L	1	76	380	12/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Sodium	7440-23-5	LA-505-411		90500		ug/L	1	10	50	12/05/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/05/12
Barium	7440-39-3	LA-505-411		57.3		ug/L	1	4.0	20	12/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Chromium	7440-47-3	LA-505-411	B	10.3		ug/L	1	5.0	25	12/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Vanadium	7440-62-2	LA-505-411	B	12.0		ug/L	1	5.0	25	12/05/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/05/12
Calcium	7440-70-2	LA-505-411		48300		ug/L	1	49	240	12/05/12
Strontium	7440-24-6	LA-505-411		185		ug/L	1	9.0	45	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475009
 SAF# S13-012
 Sample ID B2N0T8

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

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	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475010
 SAF# S13-012
 Sample ID B2N0P0

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										12/03/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/05/12
Magnesium	7439-95-4	LA-505-411		12700		ug/L	1	4.0	20	12/05/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Potassium	7440-09-7	LA-505-411		4120		ug/L	1	76	380	12/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Sodium	7440-23-5	LA-505-411		26100		ug/L	1	10	50	12/05/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/05/12
Barium	7440-39-3	LA-505-411		28.1		ug/L	1	4.0	20	12/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Chromium	7440-47-3	LA-505-411	B	5.00		ug/L	1	5.0	25	12/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/05/12
Zinc	7440-66-6	LA-505-411	B	19.3		ug/L	1	5.0	25	12/05/12
Calcium	7440-70-2	LA-505-411		56100		ug/L	1	49	240	12/05/12
Strontium	7440-24-6	LA-505-411		260		ug/L	1	9.0	45	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475010
 SAF# S13-012
 Sample ID B2N0P0

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

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	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475011
 SAF# S13-012
 Sample ID B2N0T2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										12/03/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/05/12
Magnesium	7439-95-4	LA-505-411		13700		ug/L	1	4.0	20	12/05/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Nickel	7440-02-0	LA-505-411	B	5.60		ug/L	1	4.0	20	12/05/12
Potassium	7440-09-7	LA-505-411		6540		ug/L	1	76	380	12/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Sodium	7440-23-5	LA-505-411		27400		ug/L	1	10	50	12/05/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/05/12
Barium	7440-39-3	LA-505-411		60.2		ug/L	1	4.0	20	12/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Chromium	7440-47-3	LA-505-411	B	6.30		ug/L	1	5.0	25	12/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Vanadium	7440-62-2	LA-505-411	B	12.4		ug/L	1	5.0	25	12/05/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/05/12
Calcium	7440-70-2	LA-505-411		59800		ug/L	1	49	240	12/05/12
Strontium	7440-24-6	LA-505-411		242		ug/L	1	9.0	45	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475011
 SAF# S13-012
 Sample ID B2N0T2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

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	12/05/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	24.7		ug/L	2	0.10	0.50	12/10/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475012
 SAF# S13-012
 Sample ID B2N0N4

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										12/03/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	91.4		ug/L	1	19	95	12/05/12
Magnesium	7439-95-4	LA-505-411		13600		ug/L	1	4.0	20	12/05/12
Manganese	7439-96-5	LA-505-411	B	11.5		ug/L	1	4.0	20	12/05/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Potassium	7440-09-7	LA-505-411		6570		ug/L	1	76	380	12/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Sodium	7440-23-5	LA-505-411		26300		ug/L	1	10	50	12/05/12
Antimony	7440-36-0	LA-505-411	B	56.6		ug/L	1	36	180	12/05/12
Barium	7440-39-3	LA-505-411		64.4		ug/L	1	4.0	20	12/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Chromium	7440-47-3	LA-505-411	B	7.30		ug/L	1	5.0	25	12/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Vanadium	7440-62-2	LA-505-411	B	9.50		ug/L	1	5.0	25	12/05/12
Zinc	7440-66-6	LA-505-411		32.5		ug/L	1	5.0	25	12/05/12
Calcium	7440-70-2	LA-505-411		55000		ug/L	1	49	240	12/05/12
Strontium	7440-24-6	LA-505-411		244		ug/L	1	9.0	45	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475012
 SAF# S13-012
 Sample ID B2N0N4

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

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	12/05/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	34.6		ug/L	2	0.10	0.50	12/10/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475013
 SAF# S13-012
 Sample ID B2N0P2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										12/03/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/05/12
Magnesium	7439-95-4	LA-505-411		14900		ug/L	1	4.0	20	12/05/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Potassium	7440-09-7	LA-505-411		8060		ug/L	1	76	380	12/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Sodium	7440-23-5	LA-505-411		28500		ug/L	1	10	50	12/05/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/05/12
Barium	7440-39-3	LA-505-411		60.4		ug/L	1	4.0	20	12/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Chromium	7440-47-3	LA-505-411	B	7.20		ug/L	1	5.0	25	12/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Vanadium	7440-62-2	LA-505-411	B	13.6		ug/L	1	5.0	25	12/05/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/05/12
Calcium	7440-70-2	LA-505-411		55400		ug/L	1	49	240	12/05/12
Strontium	7440-24-6	LA-505-411		245		ug/L	1	9.0	45	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475013
 SAF# S13-012
 Sample ID B2N0P2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

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	12/05/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	9.01		ug/L	2	0.10	0.50	12/10/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475014
 SAF# S13-012
 Sample ID B2N0T6

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										12/03/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	30.1		ug/L	1	19	95	12/05/12
Magnesium	7439-95-4	LA-505-411		7820		ug/L	1	4.0	20	12/05/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Potassium	7440-09-7	LA-505-411		6600		ug/L	1	76	380	12/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Sodium	7440-23-5	LA-505-411		84400		ug/L	1	10	50	12/05/12
Antimony	7440-36-0	LA-505-411	B	65.7		ug/L	1	36	180	12/05/12
Barium	7440-39-3	LA-505-411		58.6		ug/L	1	4.0	20	12/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Chromium	7440-47-3	LA-505-411	B	9.70		ug/L	1	5.0	25	12/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Vanadium	7440-62-2	LA-505-411	B	9.80		ug/L	1	5.0	25	12/05/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/05/12
Calcium	7440-70-2	LA-505-411		50200		ug/L	1	49	240	12/05/12
Strontium	7440-24-6	LA-505-411		187		ug/L	1	9.0	45	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475014
 SAF# S13-012
 Sample ID B2N0T6

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

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	12/05/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	280		ug/L	2	0.10	0.50	12/10/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475015
 SAF# S13-012
 Sample ID B2N0N8

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										12/03/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	57.0		ug/L	1	19	95	12/05/12
Magnesium	7439-95-4	LA-505-411		13000		ug/L	1	4.0	20	12/05/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Potassium	7440-09-7	LA-505-411		4180		ug/L	1	76	380	12/05/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Sodium	7440-23-5	LA-505-411		26300		ug/L	1	10	50	12/05/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/05/12
Barium	7440-39-3	LA-505-411		30.9		ug/L	1	4.0	20	12/05/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Chromium	7440-47-3	LA-505-411	B	8.30		ug/L	1	5.0	25	12/05/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/05/12
Vanadium	7440-62-2	LA-505-411	B	6.20		ug/L	1	5.0	25	12/05/12
Zinc	7440-66-6	LA-505-411	B	22.2		ug/L	1	5.0	25	12/05/12
Calcium	7440-70-2	LA-505-411		61100		ug/L	1	49	240	12/05/12
Strontium	7440-24-6	LA-505-411		286		ug/L	1	9.0	45	12/05/12

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

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

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

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Sample # 121475015
 SAF# S13-012
 Sample ID B2N0N8

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

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	12/05/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	321		ug/L	2	0.10	0.50	12/10/12

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

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

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

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475011
 SAF# S13-012
 Sample ID B2N0T2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										11/26/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12

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

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

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

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475011
 SAF# S13-012
 Sample ID B2N0T2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/26/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/26/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/26/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12

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

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

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

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475012
 SAF# S13-012
 Sample ID B2N0N4

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										11/26/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12

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

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

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

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475012
 SAF# S13-012
 Sample ID B2N0N4

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/26/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/26/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/26/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12

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

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

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

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475013
 SAF# S13-012
 Sample ID B2N0P2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										11/26/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12

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

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

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

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475013
 SAF# S13-012
 Sample ID B2N0P2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/26/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/26/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/26/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12

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

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

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

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475014
 SAF# S13-012
 Sample ID B2N0T6

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										11/26/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Trichloroethene	79-01-6	LA-523-455	J	1.1		ug/L	1	1	5	11/28/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/28/12

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

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

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

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475014
 SAF# S13-012
 Sample ID B2N0T6

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/28/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/28/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/28/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/28/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/28/12

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

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

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

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475015
 SAF# S13-012
 Sample ID B2N0N8

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										11/26/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12

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

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

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

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475015
 SAF# S13-012
 Sample ID B2N0N8

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/26/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/26/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/26/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12

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

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

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

WSCF Analytical Results Report

DECEMBER 12, 2012

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475016
 SAF# X13-002
 Sample ID B2N2P6

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										11/26/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methylene chloride	75-09-2	LA-523-455		9.8		ug/L	1	1	5	11/26/12

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

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

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

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Sample # 121475016
 SAF# X13-002
 Sample ID B2N2P6

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/26/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/26/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/26/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/26/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/26/12

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

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

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

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121475

Sample # 121475011
 SAF# S13-012
 Sample ID B2N0T2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) W										11/28/12
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		7.8	2.1	pCi/L	1	0.094		11/28/12
Uranium-235	15117-96-1	LA-508-471		0.43	.17	pCi/L	1	0.070		11/28/12
Uranium-238	U-238	LA-508-471		7.3	1.9	pCi/L	1	0.024		11/28/12
GAB Prep for Discrete Analysis (W)										11/30/12
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		9.0	2.7	pCi/L	1	2.2		12/10/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		19	3.9	pCi/L	1	4.5		12/10/12
Tritium by LSC EICHROM WA/LIQ PREP										11/20/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		6900	1400	pCi/L	1	300		11/26/12

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)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121475

Sample # 121475012
 SAF# S13-012
 Sample ID B2N0N4

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) W										11/28/12
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		10	2.7	pCi/L	1	0.14		11/28/12
Uranium-235	15117-96-1	LA-508-471		0.61	.22	pCi/L	1	0.073		11/28/12
Uranium-238	U-238	LA-508-471		9.4	2.5	pCi/L	1	0.067		11/28/12
GAB Prep for Discrete Analysis (W)										11/30/12
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		15	3.5	pCi/L	1	2.1		12/10/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		23	4.3	pCi/L	1	4.4		12/10/12
Tritium by LSC EICHROM WA/LIQ PREP										11/20/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		5800	1200	pCi/L	1	300		11/26/12

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)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121475

Sample # 121475013
 SAF# S13-012
 Sample ID B2N0P2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) W										11/28/12
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		3.2	.89	pCi/L	1	0.084		11/28/12
Uranium-235	15117-96-1	LA-508-471		0.25	.13	pCi/L	1	0.12		11/28/12
Uranium-238	U-238	LA-508-471		2.8	.8	pCi/L	1	0.084		11/28/12
GAB Prep for Discrete Analysis (W)										11/30/12
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		4.2	2.7	pCi/L	1	3.5		12/10/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		17	5.8	pCi/L	1	8.1		12/10/12
Tritium by LSC EICHROM WA/LIQ PREP										11/20/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		5700	1200	pCi/L	1	300		11/26/12

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)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121475

Sample # 121475014
 SAF# S13-012
 Sample ID B2N0T6

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) W										11/28/12
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		95	25	pCi/L	1	0.22		11/28/12
Uranium-235	15117-96-1	LA-508-471		6.0	1.8	pCi/L	1	0.068		11/28/12
Uranium-238	U-238	LA-508-471		98	26	pCi/L	1	0.063		11/28/12
GAB Prep for Discrete Analysis (W)										11/30/12
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		120	15	pCi/L	1	2.8		12/10/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		78	10	pCi/L	1	5.8		12/10/12
Tritium by LSC EICHROM WA/LIQ PREP										11/20/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		4600	980	pCi/L	1	300		11/26/12

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)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121475

Sample # 121475015
 SAF# S13-012
 Sample ID B2N0N8

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) W										11/28/12
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		100	27	pCi/L	1	0.20		11/28/12
Uranium-235	15117-96-1	LA-508-471		8.9	2.5	pCi/L	1	0.22		11/28/12
Uranium-238	U-238	LA-508-471		100	27	pCi/L	1	0.16		11/28/12
GAB Prep for Discrete Analysis (W)										11/30/12
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		120	15	pCi/L	1	2.1		12/10/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		86	10	pCi/L	1	4.4		12/10/12
Tritium by LSC EICHROM WA/LIQ PREP										11/20/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		4500	960	pCi/L	1	300		11/26/12

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)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
 Department Wet Chemistry

Group # WSCF121475

Sample # 121475011
 SAF# S13-012
 Sample ID B2N0T2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
11/19/12										
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		120		mg/L	1	1	10	11/19/12

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

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

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

Attention Scot Fitzgerald
 Department Wet Chemistry

Group # WSCF121475

Sample # 121475012
 SAF# S13-012
 Sample ID B2N0N4

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/19/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		120		mg/L	1	1	10	11/19/12

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

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

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

Attention Scot Fitzgerald
 Department Wet Chemistry

Group # WSCF121475

Sample # 121475013
 SAF# S13-012
 Sample ID B2N0P2

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
11/19/12										
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		120		mg/L	1	1	10	11/19/12

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

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

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

Attention Scot Fitzgerald
 Department Wet Chemistry

Group # WSCF121475

Sample # 121475014
 SAF# S13-012
 Sample ID B2N0T6

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
11/19/12										
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		140		mg/L	1	1	10	11/19/12

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

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

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

Attention Scot Fitzgerald
 Department Wet Chemistry

Group # WSCF121475

Sample # 121475015
 SAF# S13-012
 Sample ID B2N0N8

Matrix WATER
 Sampled 11/16/12
 Received 11/16/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/20/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		150		mg/L	1	1	10	11/20/12

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

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

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121475

Analytical Batch 210420 (QC Batch: 210420) **Test** Anions by Ion Chromatography (Water)
Associated Samples 121475001, 121475002

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #85234								
Fluoride	16984-48-8	<0.023		ug/mL					U	11/16/12
Chloride	16887-00-6	<0.058		ug/mL					U	11/16/12
Nitrite-N	NO2-N	<0.019		ug/mL					U	11/16/12
Bromide	24959-67-9	<0.11		ug/mL					U	11/16/12
Nitrate-N	NO3-N	<0.019		ug/mL					U	11/16/12
Phosphate-P	PO4-P	<0.042		ug/mL					U	11/16/12
Sulfate	14808-79-8	<0.11		ug/mL					U	11/16/12
LCS		QC Sample #85235								
Fluoride	16984-48-8	0.968		ug/mL	97.8	90 - 110				11/16/12
Chloride	16887-00-6	1.88		ug/mL	94.7	90 - 110				11/16/12
Nitrite-N	NO2-N	1.01		ug/mL	103.5	90 - 110				11/16/12
Bromide	24959-67-9	4.03		ug/mL	102.7	90 - 110				11/16/12
Nitrate-N	NO3-N	0.911		ug/mL	102.9	90 - 110				11/16/12
Phosphate-P	PO4-P	1.94		ug/mL	101.6	90 - 110				11/16/12
Sulfate	14808-79-8	4.02		ug/mL	102.5	90 - 110				11/16/12
DUP		QC Sample #85236								
		Original 121469002								

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Fluoride	16984-48-8		0.159	ug/mL			1.30	20	D	11/16/12
Chloride	16887-00-6		5.09	ug/mL			8.00	20	D	11/16/12
Nitrite-N	NO2-N		<0.038	ug/mL			0.00	20	UD	11/16/12
Bromide	24959-67-9		<0.22	ug/mL			0.00	20	UD	11/16/12
Nitrate-N	NO3-N		0.438	ug/mL			2.30	20	D	11/16/12
Phosphate-P	PO4-P		<0.084	ug/mL			0.00	20	UD	11/16/12
Sulfate	14808-79-8		29.6	ug/mL			0.50	20	D	11/16/12
MS		QC Sample #85237								
		Original 121469002								
Fluoride	16984-48-8		0.958	ug/mL	95.8	80 - 120			D	11/16/12
Chloride	16887-00-6		1.81	ug/mL	90.3	80 - 120			D	11/16/12
Nitrite-N	NO2-N		0.955	ug/mL	96.6	80 - 120			D	11/16/12
Bromide	24959-67-9		4.04	ug/mL	102	80 - 120			D	11/16/12
Nitrate-N	NO3-N		0.910	ug/mL	101.7	80 - 120			D	11/16/12
Phosphate-P	PO4-P		1.96	ug/mL	101.7	80 - 120			D	11/16/12
Sulfate	14808-79-8		3.92	ug/mL	99.1	80 - 120			D	11/16/12
MSD		QC Sample #85238								
		Original 121469002								
		Paired 85237								
Fluoride	16984-48-8		0.924	ug/mL	92.4	80 - 120	3.10	20	D	11/16/12
Chloride	16887-00-6		1.74	ug/mL	87	80 - 120	1.00	20	D	11/16/12
Nitrite-N	NO2-N		0.947	ug/mL	95.8	80 - 120	0.80	20	D	11/16/12
Bromide	24959-67-9		4.03	ug/mL	101.7	80 - 120	0.30	20	D	11/16/12
Nitrate-N	NO3-N		0.880	ug/mL	98.4	80 - 120	2.20	20	D	11/16/12
Phosphate-P	PO4-P		1.94	ug/mL	100.7	80 - 120	1.00	20	D	11/16/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Sulfate	14808-79-8		3.49	ug/mL	88.1	80 - 120	1.30	20	D	11/16/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121475

Analytical Batch 210421 (QC Batch: 210421) **Test** Anions by Ion Chromatography (Water)
Associated Samples 121475003, 121475004, 121475005

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #85241								
Fluoride	16984-48-8	<0.023		ug/mL					U	11/16/12
Chloride	16887-00-6	<0.058		ug/mL					U	11/16/12
Nitrite-N	NO2-N	<0.019		ug/mL					U	11/16/12
Bromide	24959-67-9	<0.11		ug/mL					U	11/16/12
Nitrate-N	NO3-N	<0.019		ug/mL					U	11/16/12
Phosphate-P	PO4-P	<0.042		ug/mL					U	11/16/12
Sulfate	14808-79-8	<0.11		ug/mL					U	11/16/12
LCS		QC Sample #85242								
Fluoride	16984-48-8	0.975		ug/mL	98.5	90 - 110				11/16/12
Chloride	16887-00-6	1.91		ug/mL	96.3	90 - 110				11/16/12
Nitrite-N	NO2-N	1.06		ug/mL	107.8	90 - 110				11/16/12
Bromide	24959-67-9	4.12		ug/mL	105.2	90 - 110				11/16/12
Nitrate-N	NO3-N	0.920		ug/mL	104	90 - 110				11/16/12
Phosphate-P	PO4-P	1.96		ug/mL	102.5	90 - 110				11/16/12
Sulfate	14808-79-8	4.05		ug/mL	103.2	90 - 110				11/16/12
DUP		QC Sample #85243								
		Original 121475004								

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Fluoride	16984-48-8	0.282	0.285	ug/mL			1.30	20	D	11/16/12
Chloride	16887-00-6	18.9	18.7	ug/mL			0.80	20	D	11/16/12
Nitrite-N	NO2-N	<0.038	<0.038	ug/mL			0.00	20	UD	11/16/12
Bromide	24959-67-9	<0.22	<0.22	ug/mL			200.00	20	* UD	11/16/12
Nitrate-N	NO3-N	5.91	5.90	ug/mL			0.20	20	D	11/16/12
Phosphate-P	PO4-P	<0.084	<0.084	ug/mL			0.00	20	UD	11/16/12
Sulfate	14808-79-8	58.4	57.9	ug/mL			0.80	20	D	11/16/12
MS		QC Sample #85244								
		Original 121475004								
Fluoride	16984-48-8	0.282	0.984	ug/mL	98.4	80 - 120			D	11/16/12
Chloride	16887-00-6	18.9	1.14	ug/mL	57.1	80 - 120			DX	11/16/12
Nitrite-N	NO2-N	<0.038	0.855	ug/mL	86.5	80 - 120			D	11/16/12
Bromide	24959-67-9	<0.22	3.49	ug/mL	88.2	80 - 120			D	11/16/12
Nitrate-N	NO3-N	5.91	0.719	ug/mL	80.5	80 - 120			D	11/16/12
Phosphate-P	PO4-P	<0.084	1.92	ug/mL	99.6	80 - 120			D	11/16/12
Sulfate	14808-79-8	58.4	2.23	ug/mL	56.3	80 - 120			DX	11/16/12
MSD		QC Sample #85245								
		Original 121475004								
		Paired 85244								
Fluoride	16984-48-8	0.282	0.992	ug/mL	99.2	80 - 120	0.60	20	D	11/16/12
Chloride	16887-00-6	18.9	1.12	ug/mL	56	80 - 120	0.10	20	DX	11/16/12
Nitrite-N	NO2-N	<0.038	0.910	ug/mL	92.1	80 - 120	6.30	20	D	11/16/12
Bromide	24959-67-9	<0.22	3.96	ug/mL	100.1	80 - 120	12.70	20	D	11/16/12
Nitrate-N	NO3-N	5.91	0.753	ug/mL	84.2	80 - 120	0.50	20	D	11/16/12
Phosphate-P	PO4-P	<0.084	1.95	ug/mL	101.2	80 - 120	1.60	20	D	11/16/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Sulfate	14808-79-8	58.4	2.18	ug/mL	55	80 - 120	0.10	20	DX	11/16/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121475

Analytical Batch 210733 (QC Batch: 210732) **Test** SW-846 8260B Volatiles
Associated Samples 121475011, 121475012, 121475013, 121475014, 121475015, 121475016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #85410								
1,1-Dichloroethene	75-35-4	<1		ug/L					U	11/26/12
Trichloroethene	79-01-6	<1		ug/L					U	11/26/12
Benzene	71-43-2	<1		ug/L					U	11/26/12
Toluene	108-88-3	<1		ug/L					U	11/26/12
Chlorobenzene	108-90-7	<1		ug/L					U	11/26/12
1,1-Dichloroethane	75-34-3	<1		ug/L					U	11/26/12
Ethylbenzene	100-41-4	<1		ug/L					U	11/26/12
1,2-Dichloroethane	107-06-2	<1		ug/L					U	11/26/12
Methyl isobutyl ketone	108-10-1	<1		ug/L					U	11/26/12
Tetrachloroethene	127-18-4	<1		ug/L					U	11/26/12
Total Xylenes	1330-20-7	<1		ug/L					U	11/26/12
Carbon tetrachloride	56-23-5	<1		ug/L					U	11/26/12
Acetone	67-64-1	<1		ug/L					U	11/26/12
Chloroform	67-66-3	<1		ug/L					U	11/26/12
1,1,1-Trichloroethane	71-55-6	<1		ug/L					U	11/26/12
Vinyl chloride	75-01-4	<1		ug/L					U	11/26/12
Methylene chloride	75-09-2	<1		ug/L					U	11/26/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
trans-1,2-Dichloroethene	156-60-5		23	ug/L	93	75 - 125				11/26/12
cis-1,2-Dichloroethene	156-59-2		24	ug/L	95.8	75 - 125				11/26/12
MS			QC Sample #85412							
			Original 121475014							
1,1-Dichloroethene	75-35-4	<1	21	ug/L	82.2	75 - 125				11/26/12
Trichloroethene	79-01-6	1.1	25	ug/L	100.7	75 - 125				11/26/12
Benzene	71-43-2	<1	26	ug/L	103	75 - 125				11/26/12
Toluene	108-88-3	<1	26	ug/L	103.4	75 - 125				11/26/12
Chlorobenzene	108-90-7	<1	25	ug/L	101.9	75 - 125				11/26/12
1,1-Dichloroethane	75-34-3	<1	23	ug/L	93	75 - 125				11/26/12
Ethylbenzene	100-41-4	<1	27	ug/L	109.2	75 - 125				11/26/12
1,2-Dichloroethane	107-06-2	<1	25	ug/L	101.3	75 - 125				11/26/12
1,1,1-Trichloroethane	71-55-6	<1	25	ug/L	100.4	75 - 125				11/26/12
Carbon disulfide	75-15-0	<1	19	ug/L	76.9	75 - 125				11/26/12
1,1,2-Trichloroethane	79-00-5	<1	25	ug/L	99.2	75 - 125				11/26/12
trans-1,2-Dichloroethene	156-60-5	<1	24	ug/L	94.1	75 - 125				11/26/12
cis-1,2-Dichloroethene	156-59-2	<1	25	ug/L	98.7	75 - 125				11/26/12
MSD			QC Sample #85413							
			Original 121475014							
			Paired 85412							
1,1-Dichloroethene	75-35-4	<1	21	ug/L	84.8	75 - 125	3.10	20		11/26/12
Trichloroethene	79-01-6	1.1	26	ug/L	102.3	75 - 125	1.60	20		11/26/12
Benzene	71-43-2	<1	26	ug/L	103.6	75 - 125	0.50	20		11/26/12
Toluene	108-88-3	<1	26	ug/L	105.4	75 - 125	1.90	20		11/26/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chlorobenzene	108-90-7	<1	25	ug/L	101.8	75 - 125	0.20	20		11/26/12
1,1-Dichloroethane	75-34-3	<1	24	ug/L	95.4	75 - 125	2.50	20		11/26/12
Ethylbenzene	100-41-4	<1	27	ug/L	109.9	75 - 125	0.60	20		11/26/12
1,2-Dichloroethane	107-06-2	<1	26	ug/L	102.8	75 - 125	1.50	20		11/26/12
1,1,1-Trichloroethane	71-55-6	<1	25	ug/L	101	75 - 125	0.60	20		11/26/12
Carbon disulfide	75-15-0	<1	20	ug/L	80	75 - 125	3.90	20		11/26/12
1,1,2-Trichloroethane	79-00-5	<1	26	ug/L	103.1	75 - 125	3.90	20		11/26/12
trans-1,2-Dichloroethene	156-60-5	<1	24	ug/L	95.8	75 - 125	1.80	20		11/26/12
cis-1,2-Dichloroethene	156-59-2	<1	25	ug/L	100.9	75 - 125	2.20	20		11/26/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121475

Analytical Batch 210748 (QC Batch: 210616) **Test** Tritium by LSC
Associated Samples 121475011, 121475012, 121475013, 121475014, 121475015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
			QC Sample #85287							
Tritium	10028-17-8		19	pCi/L					U	11/26/12
LCS			QC Sample #85288							
Tritium	10028-17-8		3300	pCi/L	106.6	80 - 120				11/26/12
DUP			QC Sample #85289							
			Original 121468012							
Tritium	10028-17-8		1100	pCi/L			9.70	20		11/26/12
MS			QC Sample #85290							
			Original 121468012							
Tritium	10028-17-8		20000	pCi/L	96.6	75 - 125				11/26/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121475

Analytical Batch 210753 (QC Batch: 210753) **Test** Total Alkalinity as mg/L CaCO3 (Water)
Associated Samples 121475011, 121475012, 121475013, 121475014

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			QC Sample #85478							
Total Alkalinity as CaCO3	ALKALINITY	97		mg/L	97.1	80 - 120				11/19/12
DUP			QC Sample #85479							
			Original 121464018							
Total Alkalinity as CaCO3	ALKALINITY	84		mg/L			1.20	20		11/19/12
LCS			QC Sample #85480							
Total Alkalinity as CaCO3	ALKALINITY	98		mg/L	97.6	80 - 120				11/19/12
LCS			QC Sample #85481							
Total Alkalinity as CaCO3	ALKALINITY	97		mg/L	96.9	80 - 120				11/19/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121475

Analytical Batch 210754 (QC Batch: 210754) **Test** Total Alkalinity as mg/L CaCO3 (Water)
Associated Samples 121475015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			QC Sample #85482							
Total Alkalinity as CaCO3	ALKALINITY		97	mg/L	97.4	80 - 120				11/20/12
DUP			QC Sample #85483							
			Original 121475015							
Total Alkalinity as CaCO3	ALKALINITY	150	150	mg/L			0.00	20		11/20/12
LCS			QC Sample #85484							
Total Alkalinity as CaCO3	ALKALINITY		97	mg/L	97.2	80 - 120				11/20/12
LCS			QC Sample #85485							
Total Alkalinity as CaCO3	ALKALINITY		97	mg/L	96.8	80 - 120				11/20/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121475

Analytical Batch 210828 (QC Batch: 210416) **Test** Uranium (AEA)
Associated Samples 121475011, 121475012, 121475013, 121475014, 121475015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #85221								
Uranium-234	U-233/234		0.59	pCi/L					X	11/28/12
Uranium-235	15117-96-1		0.089	pCi/L					X	11/28/12
Uranium-238	U-238		0.65	pCi/L					X	11/28/12
LCS		QC Sample #85222								
Uranium-238	U-238		9.0	pCi/sample	105.8	80 - 120				11/28/12
DUP		QC Sample #85223								
		Original 121467015								
Uranium-234	U-233/234		14	pCi/L			0.70	20		11/28/12
Uranium-235	15117-96-1		0.77	pCi/L			25.90	20	* X	11/28/12
Uranium-238	U-238		13	pCi/L			3.10	20		11/28/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121475

Analytical Batch 211032 (QC Batch: 210631) **Test** GAB Discrete analysis Alpha only
Associated Samples 121475011, 121475012, 121475013, 121475014, 121475015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #85315								
Gross Alpha	12587-46-1		0.63	pCi/L					U	12/10/12
LCS		QC Sample #85316								
Gross Alpha	12587-46-1		70	pCi/L	99.6	80 - 120				12/10/12
DUP		QC Sample #85317								
		Original 121469010								
Gross Alpha	12587-46-1		4.2	pCi/L			107.20	20	* X	12/10/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121475

Analytical Batch 211033 (QC Batch: 210631) **Test** GAB Discrete analysis Beta only
Associated Samples 121475011, 121475012, 121475013, 121475014, 121475015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			QC Sample #85315							
Gross Beta	12587-47-2		-1.6	pCi/L					U	12/10/12
LCS			QC Sample #85316							
Gross Beta	12587-47-2		290	pCi/L	96.3	80 - 120				12/10/12
DUP			QC Sample #85317							
			Original 121469010							
Gross Beta	12587-47-2		42	pCi/L			0.70	20		12/10/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121475

Analytical Batch 211128 (QC Batch: 211117) **Test** ICP-6010 - All possible metals
Associated Samples 121475006, 121475007, 121475008, 121475009, 121475010, 121475011, 121475012, 121475013, 121475014, 121475015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #85822								
Iron	7439-89-6	<19		ug/L					U	12/05/12
Magnesium	7439-95-4	<4.0		ug/L					U	12/05/12
Manganese	7439-96-5	<4.0		ug/L					U	12/05/12
Nickel	7440-02-0	<4.0		ug/L					U	12/05/12
Potassium	7440-09-7	<76		ug/L					U	12/05/12
Silver	7440-22-4	<4.0		ug/L					U	12/05/12
Sodium	7440-23-5	10.0		ug/L					B	12/05/12
Antimony	7440-36-0	<36		ug/L					U	12/05/12
Barium	7440-39-3	<4.0		ug/L					U	12/05/12
Cadmium	7440-43-9	<4.0		ug/L					U	12/05/12
Chromium	7440-47-3	<5.0		ug/L					U	12/05/12
Cobalt	7440-48-4	<4.0		ug/L					U	12/05/12
Copper	7440-50-8	<4.0		ug/L					U	12/05/12
Vanadium	7440-62-2	<5.0		ug/L					U	12/05/12
Zinc	7440-66-6	<5.0		ug/L					U	12/05/12
Calcium	7440-70-2	<49		ug/L					U	12/05/12
Strontium	7440-24-6	<9.0		ug/L					U	12/05/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Beryllium LCS	7440-41-7		<4.0	ug/L					U	12/05/12
QC Sample #85824										
Iron	7439-89-6		1020	ug/L	102.4	80 - 120				12/05/12
Magnesium	7439-95-4		10800	ug/L	108.4	80 - 120				12/05/12
Manganese	7439-96-5		1040	ug/L	104.5	80 - 120				12/05/12
Nickel	7440-02-0		1000	ug/L	100.4	80 - 120				12/05/12
Potassium	7440-09-7		11900	ug/L	119.4	80 - 120				12/05/12
Silver	7440-22-4		1020	ug/L	101.5	80 - 120				12/05/12
Sodium	7440-23-5		11900	ug/L	119.4	80 - 120				12/05/12
Antimony	7440-36-0		1090	ug/L	108.8	80 - 120				12/05/12
Barium	7440-39-3		1090	ug/L	109.4	80 - 120				12/05/12
Cadmium	7440-43-9		1010	ug/L	100.9	80 - 120				12/05/12
Chromium	7440-47-3		1040	ug/L	104.4	80 - 120				12/05/12
Cobalt	7440-48-4		1010	ug/L	101	80 - 120				12/05/12
Copper	7440-50-8		1040	ug/L	104.4	80 - 120				12/05/12
Vanadium	7440-62-2		1020	ug/L	102	80 - 120				12/05/12
Zinc	7440-66-6		1060	ug/L	106.3	80 - 120				12/05/12
Calcium	7440-70-2		21200	ug/L	105.9	80 - 120				12/05/12
Strontium	7440-24-6		1010	ug/L	100.6	80 - 120				12/05/12
Beryllium MS	7440-41-7		1130	ug/L	113.4	80 - 120				12/05/12
QC Sample #85825										
Original 121468009										
Iron	7439-89-6		996	ug/L	99.6	75 - 125				12/05/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Magnesium	7439-95-4		10100	ug/L	101.2	75 - 125				12/05/12
Manganese	7439-96-5		1010	ug/L	100.9	75 - 125				12/05/12
Nickel	7440-02-0		968	ug/L	96.8	75 - 125				12/05/12
Potassium	7440-09-7		10900	ug/L	108.9	75 - 125				12/05/12
Silver	7440-22-4		995	ug/L	99.5	75 - 125				12/05/12
Sodium	7440-23-5		10400	ug/L	104	75 - 125				12/05/12
Antimony	7440-36-0		1070	ug/L	106.9	75 - 125				12/05/12
Barium	7440-39-3		1050	ug/L	104.9	75 - 125				12/05/12
Cadmium	7440-43-9		1010	ug/L	100.6	75 - 125				12/05/12
Chromium	7440-47-3		998	ug/L	99.8	75 - 125				12/05/12
Cobalt	7440-48-4		972	ug/L	97.2	75 - 125				12/05/12
Copper	7440-50-8		1030	ug/L	102.8	75 - 125				12/05/12
Vanadium	7440-62-2		991	ug/L	99.1	75 - 125				12/05/12
Zinc	7440-66-6		1040	ug/L	103.8	75 - 125				12/05/12
Calcium	7440-70-2		19200	ug/L	95.9	75 - 125			X	12/05/12
Strontium	7440-24-6		979	ug/L	97.9	75 - 125				12/05/12
Beryllium	7440-41-7		1100	ug/L	109.7	75 - 125				12/05/12
MSD			QC Sample #85826							
			Original	121468009				Paired	85825	
Iron	7439-89-6		1010	ug/L	100.8	75 - 125	1.20	20		12/05/12
Magnesium	7439-95-4		10400	ug/L	104.1	75 - 125	1.20	20		12/05/12
Manganese	7439-96-5		1030	ug/L	102.6	75 - 125	1.70	20		12/05/12
Nickel	7440-02-0		989	ug/L	98.9	75 - 125	2.20	20		12/05/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7		11100	ug/L	111.3	75 - 125	1.70	20		12/05/12
Silver	7440-22-4		1000	ug/L	100.5	75 - 125	1.00	20		12/05/12
Sodium	7440-23-5		10500	ug/L	104.8	75 - 125	0.30	20		12/05/12
Antimony	7440-36-0		1090	ug/L	108.6	75 - 125	1.60	20		12/05/12
Barium	7440-39-3		1070	ug/L	106.8	75 - 125	1.70	20		12/05/12
Cadmium	7440-43-9		1020	ug/L	102.4	75 - 125	1.80	20		12/05/12
Chromium	7440-47-3		1010	ug/L	101	75 - 125	1.20	20		12/05/12
Cobalt	7440-48-4		994	ug/L	99.4	75 - 125	2.30	20		12/05/12
Copper	7440-50-8		1040	ug/L	104	75 - 125	1.20	20		12/05/12
Vanadium	7440-62-2		1010	ug/L	100.8	75 - 125	1.70	20		12/05/12
Zinc	7440-66-6		1060	ug/L	105.8	75 - 125	1.90	20		12/05/12
Calcium	7440-70-2		20300	ug/L	101.4	75 - 125	1.10	20	X	12/05/12
Strontium	7440-24-6		990	ug/L	99	75 - 125	0.80	20		12/05/12
Beryllium	7440-41-7		1120	ug/L	111.6	75 - 125	1.70	20		12/05/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121475

Analytical Batch 211320 (QC Batch: 211287) **Test** ICP-2008 MS All possible metal
Associated Samples 121475011, 121475012, 121475013, 121475014, 121475015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
			QC Sample #86118							
Uranium	7440-61-1		<0.050	ug/L					U	12/10/12
LCS										
			QC Sample #86119							
Uranium	7440-61-1		41.0	ug/L	102.6	85 - 115				12/10/12
MS										
			QC Sample #86120							
			Original 121469010							
Uranium	7440-61-1		42.3	ug/L	105.7	70 - 130				12/10/12
MSD										
			QC Sample #86121							
			Original 121469010							
			Paired 86120							
Uranium	7440-61-1		42.2	ug/L	105.6	70 - 130	0.10	20		12/10/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121475

Analytical Batch 210733 (QC Batch: 210732) **Test** SW-846 8260B Volatiles
Associated Samples 121475011, 121475012, 121475013, 121475014, 121475015, 121475016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE		Sample #121475011								
1,2-Dichloroethane-d4	17060-07-0				93.3	75 - 125				11/26/12
Toluene-d8	2037-26-5				94.7	75 - 125				11/26/12
4-Bromofluorobenzene	460-00-4				96.5	75 - 125				11/26/12
SAMPLE		Sample #121475012								
1,2-Dichloroethane-d4	17060-07-0				94.8	75 - 125				11/26/12
Toluene-d8	2037-26-5				94	75 - 125				11/26/12
4-Bromofluorobenzene	460-00-4				97	75 - 125				11/26/12
SAMPLE		Sample #121475013								
1,2-Dichloroethane-d4	17060-07-0				94.4	75 - 125				11/26/12
Toluene-d8	2037-26-5				93.4	75 - 125				11/26/12
4-Bromofluorobenzene	460-00-4				97.3	75 - 125				11/26/12
SAMPLE		Sample #121475014								
1,2-Dichloroethane-d4	17060-07-0				103.6	75 - 125				11/28/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Toluene-d8	2037-26-5				92.4	75 - 125				11/28/12
4-Bromofluorobenzene	460-00-4				99.3	75 - 125				11/28/12
SAMPLE			Sample #121475015							
1,2-Dichloroethane-d4	17060-07-0				96.7	75 - 125				11/26/12
Toluene-d8	2037-26-5				93.6	75 - 125				11/26/12
4-Bromofluorobenzene	460-00-4				97.1	75 - 125				11/26/12
SAMPLE			Sample #121475016							
1,2-Dichloroethane-d4	17060-07-0				96.2	75 - 125				11/26/12
Toluene-d8	2037-26-5				94.8	75 - 125				11/26/12
4-Bromofluorobenzene	460-00-4				99	75 - 125				11/26/12
BLANK			QC Sample #85410							
1,2-Dichloroethane-d4	17060-07-0				94	75 - 125				11/26/12
Toluene-d8	2037-26-5				93.5	75 - 125				11/26/12
4-Bromofluorobenzene	460-00-4				95.8	75 - 125				11/26/12
LCS			QC Sample #85411							
4-Bromofluorobenzene	460-00-4				91.6	75 - 125				11/26/12
1,2-Dichloroethane-d4	17060-07-0				94.7	75 - 125				11/26/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Toluene-d8	2037-26-5				91.9	75 - 125				11/26/12
MS										
1,2-Dichloroethane-d4	17060-07-0				96.2	75 - 125				11/26/12
Toluene-d8	2037-26-5				93.2	75 - 125				11/26/12
4-Bromofluorobenzene	460-00-4				92.6	75 - 125				11/26/12
MSD										
1,2-Dichloroethane-d4	17060-07-0				96.6	75 - 125	n/a			11/26/12
Toluene-d8	2037-26-5				92.8	75 - 125	n/a			11/26/12
4-Bromofluorobenzene	460-00-4				93.4	75 - 125	n/a			11/26/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121475

Analytical Batch 210828 (QC Batch: 210416) Test Uranium (AEA)
 Associated Samples 121475011, 121475012, 121475013, 121475014, 121475015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE		Sample #121475011								
Uranium-232 Tracer	14158-29-3				92.4	25 - 105				11/28/12
SAMPLE		Sample #121475012								
Uranium-232 Tracer	14158-29-3				94.6	25 - 105				11/28/12
SAMPLE		Sample #121475013								
Uranium-232 Tracer	14158-29-3				91	25 - 105				11/28/12
SAMPLE		Sample #121475014								
Uranium-232 Tracer	14158-29-3				35.8	25 - 105				11/28/12
SAMPLE		Sample #121475015								
Uranium-232 Tracer	14158-29-3				40.6	25 - 105				11/28/12
BLANK		QC Sample #85221								
Uranium-232 Tracer	14158-29-3				90.5	25 - 105				11/28/12
LCS		QC Sample #85222								
Uranium-232 Tracer	14158-29-3				65.2	25 - 105				11/28/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121475

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
DUP			QC Sample #85223							
			Original 121467015							
Uranium-232 Tracer	14158-29-3				90	25 - 105	n/a			11/28/12

* - QC result out of range

n/a - Not Applicable

Attention: Scot Fitzgerald

Group #

WSCF121475

Quality Control Comments

Department Inorganic

85244 B2N0P3(121475004MS)

Analyte Chloride - Anions by Ion Chromatography (Water)

[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

Analyte Sulfate - Anions by Ion Chromatography (Water)

[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

85245 B2N0P3(121475004MSD)

Analyte Chloride - Anions by Ion Chromatography (Water)

[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

Analyte Sulfate - Anions by Ion Chromatography (Water)

[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

85825 B2MYY0(121468009MS)

Analyte Calcium - ICP-6010 - All possible metals

[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

85826 B2MYY0(121468009MSD)

Analyte Calcium - ICP-6010 - All possible metals

[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

Attention: Scot Fitzgerald

Group #

WSCF121475

Quality Control Comments

Department Radiochemistry

85221 BLANK for HBN 210416 [RADP/736

Analyte Uranium-234 - Uranium (AEA)

[1] The blank is less than 2X the RDL and is acceptable, per S&GRP SOW

Analyte Uranium-235 - Uranium (AEA)

[1] The blank is less than 2X the MDC and is acceptable.

Analyte Uranium-238 - Uranium (AEA)

[1] The blank is less than 2X the RDL and is acceptable, per S&GRP SOW

85223 B2N0L9(121467015DUP)

Analyte Uranium-235 - Uranium (AEA)

[1] The duplicate is outside of default RPD limits. RPD limit does not apply to results with greater than 20% counting uncertainty.

85317 B2MML8(121469010DUP)

Analyte Gross Alpha - GAB Discrete analysis Alpha only

[1] The duplicate is outside of default RPD limits. RPD limit does not apply to results less than 5X the Minimum Detectable Concentration.

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 14 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 #: 121475

Profile #: S13-012-499

Proj. Mgr.:

Phone:

The following samples were received from you on 11/16/2012 1:20:00 PM. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
		Tests scheduled		
121475001	B2N0T7	WATER	11/16/2012 11:19	11/16/2012 13:20
		IC-W		
121475002	B2N0N9	WATER	11/16/2012 12:16	11/16/2012 13:20
		IC-W		
121475003	B2N0N5	WATER	11/16/2012 10:29	11/16/2012 13:20
		IC-W		
121475004	B2N0P3	WATER	11/16/2012 08:32	11/16/2012 13:20
		IC-W		
121475005	B2N0T3	WATER	11/16/2012 09:36	11/16/2012 13:20
		IC-W		
121475006	B2N0T4	WATER	11/16/2012 09:36	11/16/2012 13:20
		6010-W		
121475007	B2N0N6	WATER	11/16/2012 10:29	11/16/2012 13:20
		6010-W		
121475008	B2N0P4	WATER	11/16/2012 08:32	11/16/2012 13:20
		6010-W		
121475009	B2N0T8	WATER	11/16/2012 11:19	11/16/2012 13:20
		6010-W		
121475010	B2N0P0	WATER	11/16/2012 12:16	11/16/2012 13:20
		6010-W		
121475011	B2N0T2	WATER	11/16/2012 09:36	11/16/2012 13:20

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

2008-W; 6010-W; 8260V-W; AEA-U-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W

121475012	B2N0N4	WATER	11/16/2012 10:29	11/16/2012 13:20
2008-W; 6010-W; 8260V-W; AEA-U-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W				
121475013	B2N0P2	WATER	11/16/2012 08:32	11/16/2012 13:20
2008-W; 6010-W; 8260V-W; AEA-U-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W				
121475014	B2N0T6	WATER	11/16/2012 11:19	11/16/2012 13:20
2008-W; 6010-W; 8260V-W; AEA-U-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W				
121475015	B2N0N8	WATER	11/16/2012 12:16	11/16/2012 13:20
2008-W; 6010-W; 8260V-W; AEA-U-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W				
121475016	B2N2P6	WATER	11/16/2012 08:32	11/16/2012 13:20
8260V-W				

Test Acronym Description

Test Acronym	Description
2008-W	ICP-MS (W)
6010-W	ICP-AES (W)
8260V-W	Volatiles by 8260B (W)
AEA-U-W	Uranium Isotopic (AEA) (W)
ALK-W	Total Alkalinity (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)

CH2MHill Plateau Remediation Company
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 C.O.C. # **S13-012-499**
 Page 1 of 1

Collector CHPRC	D.J. Woelke	Contact/Requester Karen Waters-Husted	Telephone No. 376-4650
SAF No. S13-012		Sampling Origin Hanford Site	Purchase Order/Charge Code 300071ES20
Project Title SURV, DECEMBER 2012		Logbook No. HNF-N-506 49177	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 SURV		Priority: 31 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 5400.5 (1990/1993)

121475

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

Sample No. E2N017	Filter N	Date 11-16-12	Time 1119	No./Type Container 1x500-mL P	Sample Analysis 300.0 ANIONS_IC: List-1 + Brom_PhoSp (7)	Holding Time 48 Hours	Preservative Cool-4C
----------------------	-------------	------------------	--------------	----------------------------------	---	--------------------------	-------------------------

Relinquished By D.J. Woelke CHPRC	Signature <i>[Signature]</i>	Date/Time NOV 16 2012 1320	Received By C. Johnson	Signature <i>[Signature]</i>	Date/Time NOV 16 2012 1320
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By	Date/Time

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

Dispersed By _____ Date/Time _____

PRINTED 0 10/24/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHILL Plateau Remediation Company
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 C.O.C.# **S13-012-485**
 Page 1 of 1

Collector	D.J. Woelke CH2M	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	S13-012	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ESS20
Project Title	SURV, DECEMBER 2012	Logbook No.	HNF-N-506 491 77	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	SURV	Priority:	31 Days	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDOUS REMARKS
 ***Certain Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL INSTRUCTIONS: Hold Time: Total Activity Exemption: Yes No
 FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
BZND09	2 N	11-16-12	1214	1x500-mL P	300.0 ANIONS, IC: List-1 + Brom Phosp (7)	48 Hours	Cool-4C

Relinquished By	D.J. Woelke CH2M	Print Sign	<i>[Signature]</i>	Date/Time	NOV 16 2012 1326	Received By	<i>[Signature]</i>	Date/Time	NOV 16 2012 1724
Relinquished By		Date/Time		Received By		Date/Time			
Relinquished By		Date/Time		Received By		Date/Time			
Relinquished By		Date/Time		Received By		Date/Time			

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

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

PRINTED O 10/24/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # S13-012-483	
Collector GL WOODS CARRIC	Contact/Requester Karen Waters-Husted	Hamford Site	Telephone No. 376-4650	Purchase Order/Charge Code 300071ES20			
SAF No. S13-012	Project Title SURV, DECEMBER 2012	Logbook No. HNF-N-506 791 77	Ice Chest No. N/A	Bill of Lading/Air Bill No. N/A			
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment SURV	Priority: 31 Days	GOVERNMENT VEHICLE	OFFSITE PROPERTY No. N/A	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 (1/99/1993)							
SPECIAL INSTRUCTIONS FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.							
Sample No. B2N0N5	Filter 3	Date NOV 16 2012	Time 1029	No./Type Container 1x500-mL P	Received By 300 0_ANIONS_IC: List-1 + Brom_Phosp (7)	Sample Analysis	Preservative Cool-4C
				Holding Time 48 Hours			

Relinquished By CHARRIC	Print <i>Charric</i>	Sign <i>Charric</i>	Date/Time NOV 16 2012 1320	Received By <i>Johnson</i>	Print <i>Johnson</i>	Sign <i>Johnson</i>	Date/Time NOV 16 2012 1320	Matrix *
Relinquished By			Date/Time	Received By			Date/Time	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Relinquished By			Date/Time	Received By			Date/Time	DS = Drum Solids DL = Drums Liquids T = Tissue WI = Waste L = Liquid V = Vegetation X = Other
FINAL SAMPLE DISPOSITION				Disposal Method (e.g., Return to customer; per lab procedure; used in process)				Date/Time

PRINTED ON 11/24/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # S13-012-487	
Collector: D.J. Wootte CHPRC		Contact/Requester: Karen Waters-Husted		Telephone No.: 376-4650		Page 1 of 1	
SAF No.: S13-012		Sampling Origin: Hanford Site		Purchase Order/Charge Code: 300071ES20			
Project Title: SURV, DECEMBER 2012		Logbook No.: INF-N-506 49 197		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: SURV		Priority: 31 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 5400.5 (1990/1993)							
SPECIAL INSTRUCTIONS FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647							
Sample No.: B2NDF3		Filter: 4		Date: 11-16-12		Time: 0832	
No/Type Container: 14500-mL P		Received By: 300.0 ANIONS_IC: List-1 + Biom_Phosp (7)		Sample Analysis:		Holding Time: 48 Hours	
Preservative: Cool-4C		Matrix:		Total Activity Exemption: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			

Relinquished By: D.J. Wootte CHPRC	Print Sign 	Date/Time: NOV 16 2012 1330	Received By: C Johnson	Print Sign 	Date/Time: NOV 16 2012 1330
Relinquished By:	Date/Time:	Received By:	Date/Time:	Matrix:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:	Matrix:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:	Matrix:	Date/Time:
FINAL SAMPLE DISPOSITION: Disposal Method (e.g., Return to customer, per lab procedure, used in process)					
Disposed By:					

PRINTED ON 10/24/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 C.O.C. # **S13-012-497**
 Page 1 of 1

Collector CHRC	D.J. Woelke	Contact/Requester Karen Waters-Husted	Telephone No. 376-4650
SAF No. S13-012		Sampling Origin Hanford Site	Purchase Order/Charge Code 300071ES20
Project Title SURV, DECEMBER 2012		Logbook No. HNF-N-506 79 / 77	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 SURV		Priority: 31 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 DDE Order 5400 5 (1990/1993)

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes No
 FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACX for all analytical work at WSCF is 401647.

Sample No. B2N073	Filter S N	Date NOV 16 2012	Time 0936	No./Type Container 1x500-mL P	Sample Analysis 300.0_ANIONS_IC: List-1 (5)	Holding Time 48 Hours	Preservative Coof-4C
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Relinquished By D.J. Woelke	Print <i>[Signature]</i>	Sign NOV 16 2012	Date/Time 1326	Received By C. J. WATSON	Print <i>[Signature]</i>	Sign NOV 16 2012	Date/Time 1326
Relinquished By CHRC				Received By			
Relinquished By				Received By			
Relinquished By				Received By			
Relinquished By				Received By			
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By	Date/Time			

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

PRINTED: O 10/24/2012

A-5004-942 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 C.O.C. # **S13-012-496**
 Page 1 of 1

Collector	D.J. Woelke CHPRC	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	S13-012	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	SURV. DECEMBER 2012	Logbook No.	HNF-N-506-491-77	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	SURV	Priority:	31 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 5400.5 (1990/1993)

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

Total Activity Exemption: Yes No

Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis	Holding Time	Preservative
B2N0T2	N	NOV 16 2012	0936	1x500-mL GIP	2008_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N0T2	N			1x250-mL GIP	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool-4C
B2N0T2	N			1x500-mL GIP	6070_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0T2	N			3x40-mL ags*	8260_VOA_GCMS: List-2 (26)	14 Days	HCl or H2SO4 to pH <2/Cool-4C
B2N0T2	N			1x500-mL GIP	ALPHA/BETA: GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2N0T2	N			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2N0T2	N			1x1-L GIP	USO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B2N0T4 - 6	Y	11/12/12	0936	1x500-mL GIP	6070_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2

Relinquished By	D.J. Woelke CHPRC	Print	Signature	<i>[Signature]</i>	Date/Time	NOV 16 2012
Relinquished By	<i>[Signature]</i>	Print	Signature	<i>[Signature]</i>	Date/Time	11/26
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)

Chain of Custody

CH2M Hill Plateau Remediation Company
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 C.O.C. # **S13-012-482**
 Page 1 of 1

Collector: **CH2M Hill** Contact/Requester: **Karen Waters-Husted** Telephone No.: **376-4650**
 SAF No.: **S13-012** Sampling Origin: **Hanford Site** Purchase Order/Change Code: **300071ES20**
 Project Title: **SURV, DECEMBER 2012** Logbook No.: **HNF-N-506 49177** 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: **SURV** Priority: **31 Days** **PRIORITY** Office 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 5400.5 (1990/1993)
SPECIAL INSTRUCTIONS Hold Time: **Total Activity Exemption: Yes No**
 FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CAON for all analytical work at WSCF is 401647.

Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2N0N4 12	N	NOV 16 2012	10:29	1x500-mL G/P	200_8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <-2
B2N0N4	N			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool-4C
B2N0N4	N			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <-2
B2N0N4	N			3x40-mL aG+*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool-4C
B2N0N4	N			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <-2
B2N0N4	N			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2N0N4	N			1x1-L G/P	USO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <-2
B2N0N6 7	Y	NOV 16 2012	10:29	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <-2

Received By	Date/Time	Received By	Date/Time	Received By	Date/Time	Matrix *
CH2M Hill	NOV 16 2012 13:20	CH2M Hill	NOV 16 2012 13:20	CH2M Hill	NOV 16 2012 13:20	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
CH2M Hill	NOV 16 2012 13:20	CH2M Hill	NOV 16 2012 13:20	CH2M Hill	NOV 16 2012 13:20	DS = Dism Solids DL = Dism Liquids T = Tissue WI = Wipe L = Liquid V = Vapour X = Other

PRINTED: 0 10/24/2012 A-6004-842 (REV 2)

Chain of Custody

CH2M Hill Plateau Remediation Company
CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST
 C.O.C. # **S13-012-484**
 Page 1 of 1

Collector: **DL Wootte** / **DWPPC** Contact/Requester: Karen Waters-Husted Telephone No. 376-4650
 SAF No. S13-012 Sampling Origin: Hanford Site Purchase Order/Charge Code: 300071ES20
 Project Title: SURV, DECEMBER 2012 Logbook No. HNF-N-506 491 7-7 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: SURV Priority: 31 Days PRIORITY Onsite 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 5400.5 (1990/1993)
 SPECIAL INSTRUCTIONS: Hold Time: N/A Total Activity Exemption: Yes No
 FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	Date	Time	No./Type Container	Sample Analysis	Hold Time	Preservative
B2N0N8 15	N	11-16-12	12:14	1x500-mL GP	200_8_METALS_ICP-MS: Uranium (1)	6 Months	HNO3 to pH <2
B2N0N8	N			1x250-mL GP	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool-4C
B2N0N8	N			1x500-mL GP	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0N8	N			3x40-mL aG ^s	8280_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool-4C
B2N0N8	N			1x500-mL GP	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2N0N8	N			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2N0N8	N			1x1-L GP	UI50_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B2N0P0 10	Y	11-16-12	12:14	1x500-mL GP	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2

Reinquashed By	Print	Signature	Date/Time	Received By	Print	Signature	Date/Time	Matrix *
Reinquashed By	DL Wootte	<i>[Signature]</i>	NOV 16 2012 13:20	Received By	C. Adkinson	<i>[Signature]</i>	NOV 16 2012 13:20	S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air
Reinquashed By				Received By				DS = Drum Solids DL = Drum Liquids T = Tissue WI = Waste L = Liquid V = Vegetation X = Other
Reinquashed By				Received By				
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By				

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-002-046**
Page 1 of 1

Collector CHPRC	D.J. Woeltje	Contact/Requester WATERS-HUSTED, K	Telephone No. 376-4650
SAF No. X13-002	Project Title GW Sitewide Surv, FY13	Sampling Origin Hanford Site	Purchase Order/Charge Code 300071ES20
Shipped To (Lab) Waste Sampling & Characterization	Logbook No. HNF-N-506 49 / 77	Method of Shipment GOVERNMENT VEHICLE	Ice Chest No. N/A
Protocol SRV	Priority: 31 Days	Method of Shipment GOVERNMENT VEHICLE	Bill of Lading/Air Bill No. N/A
POSSIBLE SAMPLE HAZARDS/REMARKS		Offsite Property No. N/A	Total Activity Exemption: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

POSSIBLE SAMPLE HAZARDS/REMARKS
 **Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/171.4
 Dangerous Goods Regulations but are not releasable per DOE Order 488.1**

SPECIAL INSTRUCTIONS **Hold Time** **Preservative**

Site Wide Generator Knowledge Information Form applies.
 The CACN for all analytical work at WSCF is 401647.
 FY12 and FY13 samples cannot be in the same SDG.
 These samples can be tracked with A, L, S and W/3 SAFS

Sample No.	Filter	Date	Time	Net/Type Container	Activity Scan	Sample Analysis	Holding Time	Preservative
B2N2P6	N	11-16-12	0832	1x20-mL P	8260_VOA_GCMS: List:2 (25)		6 Months	None
B2N2P6	N	11-16-12	0832	3x40-mL BGS*	8260_VOA_GCMS: List:2 (25)		14 Days	HCl or H2SO4 to pH <2/COol-4C

Relinquished By D.J. Woeltje	Date/Time NOV 16 2012 1320	Received By <i>[Signature]</i>	Date/Time NOV 16 2012 1320
Relinquished By CHPRC	Date/Time NOV 16 2012 1320	Received By <i>[Signature]</i>	Date/Time NOV 16 2012 1320
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

FINAL SAMPLE DISPOSITION

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

Disposed By