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

December 19, 2012

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

Dear Scot Fitzgerald,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF121494

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 WSCF121494

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

Very truly yours,

Electronically signed by Joseph Hale

For Lab Manager, Dan T. Smith

WSCF Analytical Lab

(509) 373-4804

Attachments 4

CC: w/Attachments

File/LB

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages

Including cover page

WSCF SAF Number Cross Reference

Group # WSCF121494
Data Deliverable Date 12/26/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
S13-012	B2N1B6	121494001	WATER	11/20/12	11/20/12
S13-012	B2N1B2	121494002	WATER	11/20/12	11/20/12
S13-012	B2N186	121494003	WATER	11/20/12	11/20/12
S13-012	B2N0R2	121494004	WATER	11/20/12	11/20/12
S13-012	B2N1B4	121494005	WATER	11/20/12	11/20/12
S13-012	B2N1B0	121494006	WATER	11/20/12	11/20/12
S13-012	B2N184	121494007	WATER	11/20/12	11/20/12
S13-012	B2N0R0	121494008	WATER	11/20/12	11/20/12
S13-012	B2N0R4	121494009	WATER	11/20/12	11/20/12
S13-012	B2N0V4	121494010	WATER	11/20/12	11/20/12
S13-012	B2N0R6	121494011	WATER	11/20/12	11/20/12
S13-012	B2N0V6	121494012	WATER	11/20/12	11/20/12
S13-012	B2N190	121494013	WATER	11/20/12	11/20/12
S13-012	B2N194	121494014	WATER	11/20/12	11/20/12
S13-012	B2N188	121494015	WATER	11/20/12	11/20/12
S13-012	B2N192	121494016	WATER	11/20/12	11/20/12
X13-002	B2N2P8	121494017	WATER	11/20/12	11/20/12

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Attachment 2
Narrative
WSCF121494

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
WSCF121494

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):

- Zinc was detected in the Blank and evaluated.
- Sodium – 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):

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:

- All applicable QC controls are within the established limits.

Isotopic Uranium analysis:

- Uranium-234 – The Blank is less than two times the RDL. "B" Flag not required.
- Uranium-235 – Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results with greater than 20% counting uncertainty. No flags issued.
- 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 100 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Scot Fitzgerald

Contract # MOA-FH-CHPRC-2008
Group # WSCF121494
Report Date December 19, 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.

Batch QC List

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
211283	211318	5	BLANK	86102	BLANK		ICP-6010 - All possible metals
211283	211318	7	LCS	86104	LCS		ICP-6010 - All possible metals
211283	211318	8	SAMPLE	121494001	B2N1B6		ICP-6010 - All possible metals
211283	211318	9	MS	86105	B2N1B6(121494001MS)	121494001	ICP-6010 - All possible metals
211283	211318	10	MSD	86106	B2N1B6(121494001MSD)	121494001	ICP-6010 - All possible metals
211283	211318	11	SAMPLE	121494002	B2N1B2		ICP-6010 - All possible metals
211283	211318	12	SAMPLE	121494003	B2N186		ICP-6010 - All possible metals
211283	211318	13	SAMPLE	121494004	B2N0R2		ICP-6010 - All possible metals
211283	211318	14	SAMPLE	121494005	B2N1B4		ICP-6010 - All possible metals
211283	211318	15	SAMPLE	121494006	B2N1B0		ICP-6010 - All possible metals
211283	211318	16	SAMPLE	121494007	B2N184		ICP-6010 - All possible metals
211283	211318	17	SAMPLE	121494008	B2N0R0		ICP-6010 - All possible metals
211283	211318	18	SAMPLE	121494009	B2N0R4		ICP-6010 - All possible metals
211283	211318	19	SAMPLE	121494010	B2N0V4		ICP-6010 - All possible metals
211283	211318	22	SAMPLE	121494011	B2N0R6		ICP-6010 - All possible metals
211283	211318	23	SAMPLE	121494012	B2N0V6		ICP-6010 - All possible metals
211283	211318	24	SAMPLE	121494013	B2N190		ICP-6010 - All possible metals
211283	211318	25	SAMPLE	121494014	B2N194		ICP-6010 - All possible metals
211283	211318	26	SAMPLE	121494015	B2N188		ICP-6010 - All possible metals
211283	211318	27	SAMPLE	121494016	B2N192		ICP-6010 - All possible metals
211620	211629	4	BLANK	86453	BLANK		ICP-2008 MS All possible metal
211620	211629	5	LCS	86454	LCS		ICP-2008 MS All possible metal
211620	211629	7	MS	86455	B2MY20(121493003MS)	121493003	ICP-2008 MS All possible metal

Batch QC List

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
211620	211629	8	MSD	86456	B2MY20(121493003MSD	121493003	ICP-2008 MS All possible metal
211620	211629	15	SAMPLE	121494005	B2N1B4		ICP-2008 MS All possible metal
211620	211629	16	SAMPLE	121494006	B2N1B0		ICP-2008 MS All possible metal
211620	211629	17	SAMPLE	121494007	B2N184		ICP-2008 MS All possible metal
211620	211629	20	SAMPLE	121494008	B2N0R0		ICP-2008 MS All possible metal
211620	211629	21	SAMPLE	121494009	B2N0R4		ICP-2008 MS All possible metal
211620	211629	22	SAMPLE	121494010	B2N0V4		ICP-2008 MS All possible metal
211620	211629	23	SAMPLE	121494015	B2N188		ICP-2008 MS All possible metal
211620	211629	24	SAMPLE	121494016	B2N192		ICP-2008 MS All possible metal

Batch QC List

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210758	210759	1	BLANK	85506	BLANK		SW-846 8260B Volatiles
210758	210759	2	LCS	85507	LCS		SW-846 8260B Volatiles
210758	210759	3	MS	85508	B2N1B4(121494005MS)	121494005	SW-846 8260B Volatiles
210758	210759	4	MSD	85509	B2N1B4(121494005MSD)	121494005	SW-846 8260B Volatiles
210758	210759	5	SAMPLE	121494016	B2N192		SW-846 8260B Volatiles
210758	210759	6	SAMPLE	121494017	B2N2P8		SW-846 8260B Volatiles
210758	210759	7	SAMPLE	121494008	B2N0R0		SW-846 8260B Volatiles
210758	210759	8	SAMPLE	121494010	B2N0V4		SW-846 8260B Volatiles
210758	210759	9	SAMPLE	121494009	B2N0R4		SW-846 8260B Volatiles
210758	210759	10	SAMPLE	121494007	B2N184		SW-846 8260B Volatiles
210758	210759	11	SAMPLE	121494015	B2N188		SW-846 8260B Volatiles
210758	210759	12	SAMPLE	121494006	B2N1B0		SW-846 8260B Volatiles
210758	210759	13	SAMPLE	121494005	B2N1B4		SW-846 8260B Volatiles

Batch QC List

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121494

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210722	211115	1	BLANK	85392	BLANK		Tritium by LSC
210722	211115	2	LCS	85393	LCS		Tritium by LSC
210722	211115	4	DUP	85394	B2MLB2(121490027DUP)	121490027	Tritium by LSC
210722	211115	5	MS	85395	B2MLB2(121490027MS)	121490027	Tritium by LSC
210722	211115	11	SAMPLE	121494005	B2N1B4		Tritium by LSC
210722	211115	12	SAMPLE	121494006	B2N1B0		Tritium by LSC
210722	211115	13	SAMPLE	121494007	B2N184		Tritium by LSC
210722	211115	14	SAMPLE	121494008	B2N0R0		Tritium by LSC
210722	211115	15	SAMPLE	121494009	B2N0R4		Tritium by LSC
210722	211115	16	SAMPLE	121494010	B2N0V4		Tritium by LSC
210726	210945	1	BLANK	85404	BLANK		Uranium (AEA)
210726	210945	2	LCS	85405	LCS		Uranium (AEA)
210726	210945	3	SAMPLE	121494007	B2N184		Uranium (AEA)
210726	210945	4	DUP	85406	B2N184(121494007DUP)	121494007	Uranium (AEA)
210726	210945	5	SAMPLE	121494008	B2N0R0		Uranium (AEA)
210726	210945	6	SAMPLE	121494009	B2N0R4		Uranium (AEA)
210726	210945	7	SAMPLE	121494010	B2N0V4		Uranium (AEA)
211132	211623	1	BLANK	85874	BLANK		GAB Discrete analysis Alpha only
211132	211623	2	LCS	85875	LCS		GAB Discrete analysis Alpha only
211132	211623	3	SAMPLE	121494005	B2N1B4		GAB Discrete analysis Alpha only
211132	211623	4	DUP	85876	B2N1B4(121494005DUP)	121494005	GAB Discrete analysis Alpha only
211132	211623	5	SAMPLE	121494006	B2N1B0		GAB Discrete analysis Alpha only
211132	211623	6	SAMPLE	121494007	B2N184		GAB Discrete analysis Alpha only

Batch QC List

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121494

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
211132	211623	7	SAMPLE	121494008	B2N0R0		GAB Discrete analysis Alpha only
211132	211623	8	SAMPLE	121494009	B2N0R4		GAB Discrete analysis Alpha only
211132	211623	9	SAMPLE	121494010	B2N0V4		GAB Discrete analysis Alpha only
211132	211623	10	SAMPLE	121494015	B2N188		GAB Discrete analysis Alpha only
211132	211623	11	SAMPLE	121494016	B2N192		GAB Discrete analysis Alpha only
211132	211624	1	BLANK	85874	BLANK		GAB Discrete analysis Beta only
211132	211624	2	LCS	85875	LCS		GAB Discrete analysis Beta only
211132	211624	3	SAMPLE	121494005	B2N1B4		GAB Discrete analysis Beta only
211132	211624	4	DUP	85876	B2N1B4(121494005DUP)	121494005	GAB Discrete analysis Beta only
211132	211624	5	SAMPLE	121494006	B2N1B0		GAB Discrete analysis Beta only
211132	211624	6	SAMPLE	121494007	B2N184		GAB Discrete analysis Beta only
211132	211624	7	SAMPLE	121494008	B2N0R0		GAB Discrete analysis Beta only
211132	211624	8	SAMPLE	121494009	B2N0R4		GAB Discrete analysis Beta only
211132	211624	9	SAMPLE	121494010	B2N0V4		GAB Discrete analysis Beta only
211132	211624	10	SAMPLE	121494015	B2N188		GAB Discrete analysis Beta only
211132	211624	11	SAMPLE	121494016	B2N192		GAB Discrete analysis Beta only

Batch QC List

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121494

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
211217	211217	1	LCS	85897	LCS		Total Alkalinity as mg/L CaCO3 (Water)
211217	211217	3	DUP	85898	B2N0D4(121488018DUP)	121488018	Total Alkalinity as mg/L CaCO3 (Water)
211217	211217	7	SAMPLE	121494005	B2N1B4		Total Alkalinity as mg/L CaCO3 (Water)
211217	211217	8	SAMPLE	121494006	B2N1B0		Total Alkalinity as mg/L CaCO3 (Water)
211217	211217	9	SAMPLE	121494007	B2N184		Total Alkalinity as mg/L CaCO3 (Water)
211217	211217	10	SAMPLE	121494008	B2N0R0		Total Alkalinity as mg/L CaCO3 (Water)
211217	211217	11	SAMPLE	121494009	B2N0R4		Total Alkalinity as mg/L CaCO3 (Water)
211217	211217	12	SAMPLE	121494010	B2N0V4		Total Alkalinity as mg/L CaCO3 (Water)
211217	211217	13	LCS	85899	LCS		Total Alkalinity as mg/L CaCO3 (Water)
211217	211217	14	SAMPLE	121494015	B2N188		Total Alkalinity as mg/L CaCO3 (Water)
211217	211217	15	SAMPLE	121494016	B2N192		Total Alkalinity as mg/L CaCO3 (Water)
211217	211217	19	LCS	85900	LCS		Total Alkalinity as mg/L CaCO3 (Water)

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

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

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

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 # WSCF121494

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

LA-523-455 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 # WSCF121494

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	UISO_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 # WSCF121494

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 # WSCF121494

Sample # 121494001
SAF# S13-012
Sample ID B2N1B6

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411		315		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		10100		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411		67.5		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		7420		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		42100		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		234		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	8.20		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		24800		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		154		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494001
SAF# S13-012
Sample ID B2N1B6

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12

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 # WSCF121494

Sample # 121494002
SAF# S13-012
Sample ID B2N1B2

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		10500		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	B	4.10		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		5850		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		16300		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		44.5		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	B	15.1		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	7.70		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	6.50		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		52100		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		204		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494002
SAF# S13-012
Sample ID B2N1B2

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12

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 # WSCF121494

Sample # 121494003
SAF# S13-012
Sample ID B2N186

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		11200		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	B	6.50		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6210		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		16900		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		46.7		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	B	5.30		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	7.00		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	8.30		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		55100		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		219		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494003
SAF# S13-012
Sample ID B2N186

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12

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 # WSCF121494

Sample # 121494004
SAF# S13-012
Sample ID B2N0R2

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		10700		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6240		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		19300		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		42.8		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	8.10		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	6.20		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		46800		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		196		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494004
SAF# S13-012
Sample ID B2N0R2

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12

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 # WSCF121494

Sample # 121494005
SAF# S13-012
Sample ID B2N1B4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411		318		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		10300		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411		70.3		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		7600		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		42700		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		236		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	5.70		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		25700		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		159		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494005
SAF# S13-012
Sample ID B2N1B4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12
ICPMS Prep (W)										**12/13/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/17/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494006
SAF# S13-012
Sample ID B2N1B0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		11000		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	B	4.10		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6090		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		17000		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		46.6		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	B	16.5		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	6.30		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		54600		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		216		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494006
SAF# S13-012
Sample ID B2N1B0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12
ICPMS Prep (W)										**12/13/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	99.6		ug/L	2	0.10	0.50	12/17/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494007
SAF# S13-012
Sample ID B2N184

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		10900		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	B	4.00		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	B	4.10		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6060		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		16600		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		45.6		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	B	5.00		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	5.60		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	7.50		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		53900		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		217		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494007
SAF# S13-012
Sample ID B2N184

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12
ICPMS Prep (W)										**12/13/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	22.4		ug/L	2	0.10	0.50	12/17/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494008
SAF# S13-012
Sample ID B2N0R0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		10700		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6150		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		19000		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		42.5		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	10.5		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		47500		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		205		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494008
SAF# S13-012
Sample ID B2N0R0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12
ICPMS Prep (W)										**12/13/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	6.50		ug/L	2	0.10	0.50	12/17/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494009
SAF# S13-012
Sample ID B2N0R4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		10800		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6150		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		22400		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		45.3		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	7.90		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	7.00		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		48200		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		206		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494009
SAF# S13-012
Sample ID B2N0R4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12
ICPMS Prep (W)										**12/13/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	17.1		ug/L	2	0.10	0.50	12/17/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494010
SAF# S13-012
Sample ID B2N0V4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		11800		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6100		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		24000		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		52.4		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	6.40		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		49700		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		218		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494010
SAF# S13-012
Sample ID B2N0V4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12
ICPMS Prep (W)										**12/13/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	20.0		ug/L	2	0.10	0.50	12/17/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494011
SAF# S13-012
Sample ID B2N0R6

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		10900		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6270		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		22600		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		45.8		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	8.50		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	8.50		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		48600		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		204		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494011
SAF# S13-012
Sample ID B2N0R6

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12

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 # WSCF121494

Sample # 121494012
SAF# S13-012
Sample ID B2N0V6

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		12100		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6300		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		24800		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		54.2		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	7.10		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	5.30		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		50500		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		224		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494012
SAF# S13-012
Sample ID B2N0V6

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12

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 # WSCF121494

Sample # 121494013
SAF# S13-012
Sample ID B2N190

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		11400		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	B	5.10		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6510		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		19500		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		53.7		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	7.00		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	6.50		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		58400		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		238		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494013
SAF# S13-012
Sample ID B2N190

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12

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 # WSCF121494

Sample # 121494014
SAF# S13-012
Sample ID B2N194

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		11400		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6110		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		16500		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		46.8		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	B	17.0		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	8.30		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		56000		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		224		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494014
SAF# S13-012
Sample ID B2N194

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12

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 # WSCF121494

Sample # 121494015
SAF# S13-012
Sample ID B2N188

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		11400		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	B	4.60		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	B	4.50		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6510		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		19600		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		53.4		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	7.50		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	BC	7.60		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		58400		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		238		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494015
SAF# S13-012
Sample ID B2N188

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12
ICPMS Prep (W)										**12/13/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	12.0		ug/L	2	0.10	0.50	12/17/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494016
SAF# S13-012
Sample ID B2N192

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/10/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411		221		ug/L	1	19	95	12/12/12
Magnesium	7439-95-4	LA-505-411		11300		ug/L	1	4.0	20	12/12/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Potassium	7440-09-7	LA-505-411		6070		ug/L	1	76	380	12/12/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Sodium	7440-23-5	LA-505-411		16500		ug/L	1	10	50	12/12/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/12/12
Barium	7440-39-3	LA-505-411		46.6		ug/L	1	4.0	20	12/12/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Chromium	7440-47-3	LA-505-411	B	16.2		ug/L	1	5.0	25	12/12/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/12/12
Vanadium	7440-62-2	LA-505-411	B	10.2		ug/L	1	5.0	25	12/12/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/12/12
Calcium	7440-70-2	LA-505-411		55300		ug/L	1	49	240	12/12/12
Strontium	7440-24-6	LA-505-411		218		ug/L	1	9.0	45	12/12/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Sample # 121494016
SAF# S13-012
Sample ID B2N192

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	12/12/12
ICPMS Prep (W)										**12/13/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	28.2		ug/L	2	0.10	0.50	12/17/12

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

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

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

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

Sample # 121494005
SAF# S13-012
Sample ID B2N1B4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494005
SAF# S13-012
Sample ID B2N1B4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	11/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/27/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494006
SAF# S13-012
Sample ID B2N1B0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494006
SAF# S13-012
Sample ID B2N1B0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	11/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/27/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494007
SAF# S13-012
Sample ID B2N184

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494007
SAF# S13-012
Sample ID B2N184

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	11/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/27/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494008
SAF# S13-012
Sample ID B2N0R0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494008
SAF# S13-012
Sample ID B2N0R0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	11/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/27/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494009
SAF# S13-012
Sample ID B2N0R4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Trichloroethene	79-01-6	LA-523-455	J	1.7		ug/L	1	1	5	11/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494009
SAF# S13-012
Sample ID B2N0R4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	11/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/27/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494010
SAF# S13-012
Sample ID B2N0V4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494010
SAF# S13-012
Sample ID B2N0V4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	11/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/27/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494015
SAF# S13-012
Sample ID B2N188

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494015
SAF# S13-012
Sample ID B2N188

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	11/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/27/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494016
SAF# S13-012
Sample ID B2N192

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

MDL = Minimum Detection Limit
RQ = Result Qualifier
TP Err = Total Propagated Error
DF = Dilution Factor
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B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary dilution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < PQL (or EQL) >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

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

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

Sample # 121494016
SAF# S13-012
Sample ID B2N192

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	11/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/27/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

Sample # 121494017
SAF# X13-002
Sample ID B2N2P8

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/27/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Methylene chloride	75-09-2	LA-523-455	J	2.5		ug/L	1	1	5	11/27/12

MDL = Minimum Detection Limit
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DF = Dilution Factor
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J - Analyte < PQL (or EQL) >= MDL.
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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 # WSCF121494

Sample # 121494017
SAF# X13-002
Sample ID B2N2P8

Matrix WATER
Sampled 11/20/12
Received 11/20/12

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	11/27/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/27/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/27/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/27/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/27/12

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 # WSCF121494

Sample # 121494005
SAF# S13-012
Sample ID B2N1B4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GAB Prep for Discrete Analysis (W)										**12/12/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415	U	0.54	1.8	pCi/L	1	3.3		12/17/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		7.5	2.8	pCi/L	1	3.9		12/17/12
Tritium by LSC EICHROM WA/LIQ PREP										**11/26/12**
Tritium by LSC										
Tritium	10028-17-8	LA-508-421	U	-29	110	pCi/L	1	330		11/30/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121494

Sample # 121494006
SAF# S13-012
Sample ID B2N1B0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GAB Prep for Discrete Analysis (W)										**12/12/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		30	5.4	pCi/L	1	3.4		12/17/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		28	4.6	pCi/L	1	3.9		12/17/12
Tritium by LSC EICHROM WA/LIQ PREP										**11/26/12**
Tritium by LSC										
Tritium	10028-17-8	LA-508-421	U	130	230	pCi/L	1	330		11/30/12

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 # WSCF121494

Sample # 121494007
SAF# S13-012
Sample ID B2N184

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) W										**11/29/12**
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		7.7	2	pCi/L	1	0.024		11/30/12
Uranium-235	15117-96-1	LA-508-471		0.60	.22	pCi/L	1	0.072		11/30/12
Uranium-238	U-238	LA-508-471		7.3	1.9	pCi/L	1	0.024		11/30/12
GAB Prep for Discrete Analysis (W)										**12/12/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		4.2	2.8	pCi/L	1	4.2		12/17/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		12	3.7	pCi/L	1	5.0		12/17/12
Tritium by LSC EICHROM WA/LIQ PREP										**11/26/12**
Tritium by LSC										
Tritium	10028-17-8	LA-508-421	U	-120	160	pCi/L	1	330		11/30/12

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 # WSCF121494

Sample # 121494008
SAF# S13-012
Sample ID B2N0R0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) W										**11/29/12**
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		2.3	.66	pCi/L	1	0.10		11/30/12
Uranium-235	15117-96-1	LA-508-471		0.16	.096	pCi/L	1	0.075		11/30/12
Uranium-238	U-238	LA-508-471		2.1	.61	pCi/L	1	0.025		11/30/12
GAB Prep for Discrete Analysis (W)										**12/12/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415	U	0.69	1.9	pCi/L	1	3.3		12/17/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		11	3	pCi/L	1	3.9		12/17/12
Tritium by LSC EICHROM WA/LIQ PREP										**11/26/12**
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		720	270	pCi/L	1	330		11/30/12

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 # WSCF121494

Sample # 121494009
SAF# S13-012
Sample ID B2N0R4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) W										**11/29/12**
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		5.0	1.4	pCi/L	1	0.15		11/30/12
Uranium-235	15117-96-1	LA-508-471		0.31	.14	pCi/L	1	0.028		11/30/12
Uranium-238	U-238	LA-508-471		4.9	1.3	pCi/L	1	0.070		11/30/12
GAB Prep for Discrete Analysis (W)										**12/12/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		5.2	3	pCi/L	1	4.1		12/17/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		16	4.1	pCi/L	1	5.0		12/17/12
Tritium by LSC EICHROM WA/LIQ PREP										**11/26/12**
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		1300	360	pCi/L	1	330		11/30/12

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 # WSCF121494

Sample # 121494010
SAF# S13-012
Sample ID B2N0V4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) W										**11/29/12**
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		6.2	1.7	pCi/L	1	0.085		11/30/12
Uranium-235	15117-96-1	LA-508-471		0.42	.18	pCi/L	1	0.12		11/30/12
Uranium-238	U-238	LA-508-471		5.8	1.5	pCi/L	1	0.085		11/30/12
GAB Prep for Discrete Analysis (W)										**12/12/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415	U	3.0	3.5	pCi/L	1	5.6		12/17/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		16	5.2	pCi/L	1	7.1		12/17/12
Tritium by LSC EICHROM WA/LIQ PREP										**11/26/12**
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		2400	570	pCi/L	1	330		11/30/12

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 # WSCF121494

Sample # 121494015
SAF# S13-012
Sample ID B2N188

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GAB Prep for Discrete Analysis (W)										**12/12/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		6.0	4	pCi/L	1	5.7		12/17/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		11	4.8	pCi/L	1	7.1		12/17/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121494

Sample # 121494016
SAF# S13-012
Sample ID B2N192

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GAB Prep for Discrete Analysis (W)										**12/12/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		24	4.7	pCi/L	1	3.4		12/17/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		28	4.5	pCi/L	1	3.9		12/17/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121494

Sample # 121494005
SAF# S13-012
Sample ID B2N1B4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/30/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		180		mg/L	1	1	10	11/30/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121494

Sample # 121494006
SAF# S13-012
Sample ID B2N1B0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/30/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		110		mg/L	1	1	10	11/30/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121494

Sample # 121494007
SAF# S13-012
Sample ID B2N184

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/30/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		120		mg/L	1	1	10	11/30/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121494

Sample # 121494008
SAF# S13-012
Sample ID B2N0R0

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/30/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		110		mg/L	1	1	10	11/30/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121494

Sample # 121494009
SAF# S13-012
Sample ID B2N0R4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/30/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		110		mg/L	1	1	10	11/30/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121494

Sample # 121494010
SAF# S13-012
Sample ID B2N0V4

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/30/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		120		mg/L	1	1	10	11/30/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121494

Sample # 121494015
SAF# S13-012
Sample ID B2N188

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/30/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		130		mg/L	1	1	10	11/30/12

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.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121494

Sample # 121494016
SAF# S13-012
Sample ID B2N192

Matrix WATER
Sampled 11/20/12
Received 11/20/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/30/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		110		mg/L	1	1	10	11/30/12

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 Organic, Volatiles

Group # WSCF121494

Analytical Batch 210759 (QC Batch: 210758) **Test** SW-846 8260B Volatiles
Associated Samples 121494005, 121494006, 121494007, 121494008, 121494009, 121494010, 121494015, 121494016, 121494017

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85506**							
1,1-Dichloroethene	75-35-4		<1	ug/L					U	11/27/12
Trichloroethene	79-01-6		<1	ug/L					U	11/27/12
Benzene	71-43-2		<1	ug/L					U	11/27/12
Toluene	108-88-3		<1	ug/L					U	11/27/12
Chlorobenzene	108-90-7		<1	ug/L					U	11/27/12
1,1-Dichloroethane	75-34-3		<1	ug/L					U	11/27/12
Ethylbenzene	100-41-4		<1	ug/L					U	11/27/12
1,2-Dichloroethane	107-06-2		<1	ug/L					U	11/27/12
Methyl isobutyl ketone	108-10-1		<1	ug/L					U	11/27/12
Tetrachloroethene	127-18-4		<1	ug/L					U	11/27/12
Total Xylenes	1330-20-7		<1	ug/L					U	11/27/12
Carbon tetrachloride	56-23-5		<1	ug/L					U	11/27/12
Acetone	67-64-1		<1	ug/L					U	11/27/12
Chloroform	67-66-3		<1	ug/L					U	11/27/12
1,1,1-Trichloroethane	71-55-6		<1	ug/L					U	11/27/12
Vinyl chloride	75-01-4		<1	ug/L					U	11/27/12
Methylene chloride	75-09-2		<1	ug/L					U	11/27/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Carbon disulfide	75-15-0		<1	ug/L					U	11/27/12
Methyl ethyl ketone	78-93-3		<1	ug/L					U	11/27/12
1,1,2-Trichloroethane	79-00-5		<1	ug/L					U	11/27/12
1-Butanol	71-36-3		<100	ug/L					U	11/27/12
Tetrahydrofuran	109-99-9		<2	ug/L					U	11/27/12
trans-1,2-Dichloroethene	156-60-5		<1	ug/L					U	11/27/12
cis-1,2-Dichloroethene	156-59-2		<1	ug/L					U	11/27/12
Propionitrile	107-12-0		<2	ug/L					U	11/27/12
1,4-Dichlorobenzene	106-46-7		<1	ug/L					U	11/27/12
LCS			**QC Sample #85507**							
1,1-Dichloroethene	75-35-4		20	ug/L	79.6	75 - 125				11/27/12
Trichloroethene	79-01-6		25	ug/L	99	75 - 125				11/27/12
Benzene	71-43-2		26	ug/L	102	75 - 125				11/27/12
Toluene	108-88-3		26	ug/L	102.9	75 - 125				11/27/12
Chlorobenzene	108-90-7		25	ug/L	100.8	75 - 125				11/27/12
1,1-Dichloroethane	75-34-3		23	ug/L	92.8	75 - 125				11/27/12
Ethylbenzene	100-41-4		27	ug/L	108.6	75 - 125				11/27/12
1,2-Dichloroethane	107-06-2		24	ug/L	96.5	75 - 125				11/27/12
1,1,1-Trichloroethane	71-55-6		26	ug/L	102.1	75 - 125				11/27/12
Carbon disulfide	75-15-0		21	ug/L	82.2	75 - 125				11/27/12
1,1,2-Trichloroethane	79-00-5		25	ug/L	98.4	75 - 125				11/27/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
trans-1,2-Dichloroethene	156-60-5		23	ug/L	90.9	75 - 125				11/27/12
cis-1,2-Dichloroethene	156-59-2		24	ug/L	94.2	75 - 125				11/27/12
MS			**QC Sample #85508**							
			Original 121494005							
1,1-Dichloroethene	75-35-4	<1	20	ug/L	79	75 - 125				11/27/12
Trichloroethene	79-01-6	<1	25	ug/L	98.6	75 - 125				11/27/12
Benzene	71-43-2	<1	26	ug/L	102.7	75 - 125				11/27/12
Toluene	108-88-3	<1	26	ug/L	103.8	75 - 125				11/27/12
Chlorobenzene	108-90-7	<1	25	ug/L	101.1	75 - 125				11/27/12
1,1-Dichloroethane	75-34-3	<1	23	ug/L	92.6	75 - 125				11/27/12
Ethylbenzene	100-41-4	<1	27	ug/L	108.6	75 - 125				11/27/12
1,2-Dichloroethane	107-06-2	<1	24	ug/L	94.5	75 - 125				11/27/12
1,1,1-Trichloroethane	71-55-6	<1	26	ug/L	102.1	75 - 125				11/27/12
Carbon disulfide	75-15-0	<1	19	ug/L	77.3	75 - 125				11/27/12
1,1,2-Trichloroethane	79-00-5	<1	24	ug/L	96.7	75 - 125				11/27/12
trans-1,2-Dichloroethene	156-60-5	<1	23	ug/L	91.7	75 - 125				11/27/12
cis-1,2-Dichloroethene	156-59-2	<1	24	ug/L	95.6	75 - 125				11/27/12
MSD			**QC Sample #85509**							
			Original 121494005					**Paired**	**85508**	
1,1-Dichloroethene	75-35-4	<1	20	ug/L	79.5	75 - 125	0.60	20		11/27/12
Trichloroethene	79-01-6	<1	25	ug/L	98.2	75 - 125	0.30	20		11/27/12
Benzene	71-43-2	<1	26	ug/L	102.4	75 - 125	0.30	20		11/27/12
Toluene	108-88-3	<1	26	ug/L	102.3	75 - 125	1.40	20		11/27/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chlorobenzene	108-90-7	<1	25	ug/L	99.8	75 - 125	1.40	20		11/27/12
1,1-Dichloroethane	75-34-3	<1	23	ug/L	93.4	75 - 125	0.80	20		11/27/12
Ethylbenzene	100-41-4	<1	27	ug/L	108.5	75 - 125	0.10	20		11/27/12
1,2-Dichloroethane	107-06-2	<1	24	ug/L	96.7	75 - 125	2.30	20		11/27/12
1,1,1-Trichloroethane	71-55-6	<1	25	ug/L	101.4	75 - 125	0.70	20		11/27/12
Carbon disulfide	75-15-0	<1	19	ug/L	77.4	75 - 125	0.20	20		11/27/12
1,1,2-Trichloroethane	79-00-5	<1	25	ug/L	98.1	75 - 125	1.40	20		11/27/12
trans-1,2-Dichloroethene	156-60-5	<1	24	ug/L	94.3	75 - 125	2.80	20		11/27/12
cis-1,2-Dichloroethene	156-59-2	<1	24	ug/L	97	75 - 125	1.40	20		11/27/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121494

Analytical Batch 210945 (QC Batch: 210726) **Test** Uranium (AEA)
Associated Samples 121494007, 121494008, 121494009, 121494010

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #85404**								
Uranium-234	U-233/234		0.092	pCi/L						X	11/30/12
Uranium-235	15117-96-1		0.030	pCi/L						U	11/30/12
Uranium-238	U-238		0.018	pCi/L						U	11/30/12
LCS			**QC Sample #85405**								
Uranium-238	U-238		8.2	pCi/sample	96.5	80 - 120					11/30/12
DUP			**QC Sample #85406**								
			Original 121494007								
Uranium-234	U-233/234	7.7	7.6	pCi/L			2.10	20			11/30/12
Uranium-235	15117-96-1	0.60	0.40	pCi/L			40.60	20	*	X	11/30/12
Uranium-238	U-238	7.3	7.1	pCi/L			3.50	20			11/30/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121494

Analytical Batch 211115 (QC Batch: 210722) **Test** Tritium by LSC
Associated Samples 121494005, 121494006, 121494007, 121494008, 121494009, 121494010

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #85392**								
Tritium	10028-17-8		39	pCi/L						U	11/30/12
LCS			**QC Sample #85393**								
Tritium	10028-17-8		3200	pCi/L	101.9	80 - 120					11/30/12
DUP			**QC Sample #85394**								
			Original 121490027								
Tritium	10028-17-8		-45	pCi/L			369.40	20	*	U	11/30/12
MS			**QC Sample #85395**								
			Original 121490027								
Tritium	10028-17-8		20000	pCi/L	96.7	75 - 125					11/30/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121494

Analytical Batch 211217 (QC Batch: 211217) **Test** Total Alkalinity as mg/L CaCO3 (Water)
Associated Samples 121494005, 121494006, 121494007, 121494008, 121494009, 121494010, 121494015, 121494016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #85897**							
Total Alkalinity as CaCO3	ALKALINITY		97	mg/L	97.5	80 - 120				11/30/12
DUP			**QC Sample #85898**							
			Original 121488018							
Total Alkalinity as CaCO3	ALKALINITY		120	mg/L			0.80	20		11/30/12
LCS			**QC Sample #85899**							
Total Alkalinity as CaCO3	ALKALINITY		97	mg/L	97.4	80 - 120				11/30/12
LCS			**QC Sample #85900**							
Total Alkalinity as CaCO3	ALKALINITY		97	mg/L	97.4	80 - 120				11/30/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Analytical Batch 211318 (QC Batch: 211283) **Test** ICP-6010 - All possible metals
Associated Samples 121494001, 121494002, 121494003, 121494004, 121494005, 121494006, 121494007, 121494008, 121494009, 121494010, 121494011, 121494012, 121494013, 121494014, 121494015, 121494016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #86102**							
Iron	7439-89-6		<19	ug/L					U	12/12/12
Magnesium	7439-95-4		<4.0	ug/L					U	12/12/12
Manganese	7439-96-5		<4.0	ug/L					U	12/12/12
Nickel	7440-02-0		<4.0	ug/L					U	12/12/12
Potassium	7440-09-7		<76	ug/L					U	12/12/12
Silver	7440-22-4		<4.0	ug/L					U	12/12/12
Sodium	7440-23-5		<10	ug/L					U	12/12/12
Antimony	7440-36-0		<36	ug/L					U	12/12/12
Barium	7440-39-3		<4.0	ug/L					U	12/12/12
Cadmium	7440-43-9		<4.0	ug/L					U	12/12/12
Chromium	7440-47-3		<5.0	ug/L					U	12/12/12
Cobalt	7440-48-4		<4.0	ug/L					U	12/12/12
Copper	7440-50-8		<4.0	ug/L					U	12/12/12
Vanadium	7440-62-2		<5.0	ug/L					U	12/12/12
Zinc	7440-66-6		5.90	ug/L					B	12/12/12
Calcium	7440-70-2		<49	ug/L					U	12/12/12
Strontium	7440-24-6		<9.0	ug/L					U	12/12/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Beryllium	7440-41-7		<4.0	ug/L					U	12/12/12
LCS			**QC Sample #86104**							
Iron	7439-89-6		1020	ug/L	102.2	80 - 120				12/12/12
Magnesium	7439-95-4		10600	ug/L	106	80 - 120				12/12/12
Manganese	7439-96-5		1040	ug/L	103.9	80 - 120				12/12/12
Nickel	7440-02-0		1020	ug/L	102.1	80 - 120				12/12/12
Potassium	7440-09-7		11100	ug/L	111	80 - 120				12/12/12
Silver	7440-22-4		1030	ug/L	103.1	80 - 120				12/12/12
Sodium	7440-23-5		10600	ug/L	106.5	80 - 120				12/12/12
Antimony	7440-36-0		1040	ug/L	104.4	80 - 120				12/12/12
Barium	7440-39-3		1060	ug/L	106	80 - 120				12/12/12
Cadmium	7440-43-9		1030	ug/L	102.8	80 - 120				12/12/12
Chromium	7440-47-3		1030	ug/L	103.1	80 - 120				12/12/12
Cobalt	7440-48-4		1010	ug/L	100.7	80 - 120				12/12/12
Copper	7440-50-8		1060	ug/L	105.9	80 - 120				12/12/12
Vanadium	7440-62-2		1020	ug/L	102.5	80 - 120				12/12/12
Zinc	7440-66-6		1060	ug/L	105.6	80 - 120				12/12/12
Calcium	7440-70-2		20700	ug/L	103.7	80 - 120				12/12/12
Strontium	7440-24-6		1010	ug/L	100.9	80 - 120				12/12/12
Beryllium	7440-41-7		1040	ug/L	104.3	80 - 120				12/12/12
MS			**QC Sample #86105**							
			Original 121494001							
Iron	7439-89-6	315	1060	ug/L	106.1	75 - 125				12/12/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Magnesium	7439-95-4	10100	10400	ug/L	104.3	75 - 125				12/12/12
Manganese	7439-96-5	67.5	1040	ug/L	104.2	75 - 125				12/12/12
Nickel	7440-02-0	<4.0	1020	ug/L	101.8	75 - 125				12/12/12
Potassium	7440-09-7	7420	11000	ug/L	109.6	75 - 125				12/12/12
Silver	7440-22-4	<4.0	1020	ug/L	102.3	75 - 125				12/12/12
Sodium	7440-23-5	42100	9670	ug/L	96.7	75 - 125			X	12/12/12
Antimony	7440-36-0	<36	1040	ug/L	104.2	75 - 125				12/12/12
Barium	7440-39-3	234	1040	ug/L	104.4	75 - 125				12/12/12
Cadmium	7440-43-9	<4.0	1030	ug/L	103.2	75 - 125				12/12/12
Chromium	7440-47-3	<5.0	1040	ug/L	103.5	75 - 125				12/12/12
Cobalt	7440-48-4	<4.0	1010	ug/L	100.6	75 - 125				12/12/12
Copper	7440-50-8	<4.0	1040	ug/L	104	75 - 125				12/12/12
Vanadium	7440-62-2	<5.0	1020	ug/L	102.5	75 - 125				12/12/12
Zinc	7440-66-6	8.20	1050	ug/L	105	75 - 125				12/12/12
Calcium	7440-70-2	24800	21600	ug/L	107.8	75 - 125				12/12/12
Strontium	7440-24-6	154	1020	ug/L	101.6	75 - 125				12/12/12
Beryllium	7440-41-7	<4.0	1050	ug/L	104.7	75 - 125				12/12/12
MSD			**QC Sample #86106**							
			Original 121494001					**Paired**	**86105**	
Iron	7439-89-6	315	1030	ug/L	102.9	75 - 125	2.40	20		12/12/12
Magnesium	7439-95-4	10100	10700	ug/L	106.8	75 - 125	1.20	20		12/12/12
Manganese	7439-96-5	67.5	1050	ug/L	104.6	75 - 125	0.30	20		12/12/12
Nickel	7440-02-0	<4.0	1020	ug/L	101.7	75 - 125	0.10	20		12/12/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7	7420	11100	ug/L	111.2	75 - 125	0.90	20		12/12/12
Silver	7440-22-4	<4.0	1020	ug/L	102.2	75 - 125	0.10	20		12/12/12
Sodium	7440-23-5	42100	10800	ug/L	108	75 - 125	2.20	20	X	12/12/12
Antimony	7440-36-0	<36	1040	ug/L	103.8	75 - 125	0.40	20		12/12/12
Barium	7440-39-3	234	1050	ug/L	105.3	75 - 125	0.70	20		12/12/12
Cadmium	7440-43-9	<4.0	1030	ug/L	102.9	75 - 125	0.30	20		12/12/12
Chromium	7440-47-3	<5.0	1040	ug/L	103.9	75 - 125	0.40	20		12/12/12
Cobalt	7440-48-4	<4.0	1000	ug/L	100.1	75 - 125	0.50	20		12/12/12
Copper	7440-50-8	<4.0	1050	ug/L	104.7	75 - 125	0.70	20		12/12/12
Vanadium	7440-62-2	<5.0	1020	ug/L	102.5	75 - 125	0.00	20		12/12/12
Zinc	7440-66-6	8.20	1050	ug/L	105.1	75 - 125	0.10	20		12/12/12
Calcium	7440-70-2	24800	21900	ug/L	109.5	75 - 125	0.70	20		12/12/12
Strontium	7440-24-6	154	1020	ug/L	102.2	75 - 125	0.50	20		12/12/12
Beryllium	7440-41-7	<4.0	1050	ug/L	104.7	75 - 125	0.00	20		12/12/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121494

Analytical Batch 211623 (QC Batch: 211132) **Test** GAB Discrete analysis Alpha only
Associated Samples 121494005, 121494006, 121494007, 121494008, 121494009, 121494010, 121494015, 121494016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #85874**								
Gross Alpha	12587-46-1		0.42	pCi/L						U	12/17/12
LCS			**QC Sample #85875**								
Gross Alpha	12587-46-1		61	pCi/L	87.1	80 - 120					12/17/12
DUP			**QC Sample #85876**								
			Original 121494005								
Gross Alpha	12587-46-1	0.54	-0.41	pCi/L			1483.70	20	*	U	12/17/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121494

Analytical Batch 211624 (QC Batch: 211132) **Test** GAB Discrete analysis Beta only
Associated Samples 121494005, 121494006, 121494007, 121494008, 121494009, 121494010, 121494015, 121494016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85874**							
Gross Beta	12587-47-2		-0.74	pCi/L					U	12/17/12
LCS			**QC Sample #85875**							
Gross Beta	12587-47-2		280	pCi/L	94.4	80 - 120				12/17/12
DUP			**QC Sample #85876**							
			Original 121494005							
Gross Beta	12587-47-2	7.5	8.9	pCi/L			17.00	20		12/17/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121494

Analytical Batch 211629 (QC Batch: 211620) **Test** ICP-2008 MS All possible metal
Associated Samples 121494005, 121494006, 121494007, 121494008, 121494009, 121494010, 121494015, 121494016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #86453**							
Uranium	7440-61-1		<0.050	ug/L					U	12/17/12
LCS			**QC Sample #86454**							
Uranium	7440-61-1		42.3	ug/L	105.8	85 - 115				12/17/12
MS			**QC Sample #86455**							
			Original 121493003							
Uranium	7440-61-1		43.2	ug/L	108.1	70 - 130				12/17/12
MSD			**QC Sample #86456**							
			Original 121493003					**Paired 86455**		
Uranium	7440-61-1		43.3	ug/L	108.4	70 - 130	0.20	20		12/17/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

Analytical Batch 210759 (QC Batch: 210758) **Test** SW-846 8260B Volatiles
Associated Samples 121494005, 121494006, 121494007, 121494008, 121494009, 121494010, 121494015, 121494016, 121494017

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121494005**							
1,2-Dichloroethane-d4	17060-07-0				96	75 - 125				11/27/12
Toluene-d8	2037-26-5				95.1	75 - 125				11/27/12
4-Bromofluorobenzene	460-00-4				97.4	75 - 125				11/27/12
SAMPLE			**Sample #121494006**							
1,2-Dichloroethane-d4	17060-07-0				96.9	75 - 125				11/27/12
Toluene-d8	2037-26-5				94.2	75 - 125				11/27/12
4-Bromofluorobenzene	460-00-4				99.6	75 - 125				11/27/12
SAMPLE			**Sample #121494007**							
1,2-Dichloroethane-d4	17060-07-0				98.4	75 - 125				11/27/12
Toluene-d8	2037-26-5				93.3	75 - 125				11/27/12
4-Bromofluorobenzene	460-00-4				98.6	75 - 125				11/27/12
SAMPLE			**Sample #121494008**							
1,2-Dichloroethane-d4	17060-07-0				99.2	75 - 125				11/27/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Toluene-d8	2037-26-5				93.8	75 - 125				11/27/12
4-Bromofluorobenzene	460-00-4				98.2	75 - 125				11/27/12
SAMPLE			**Sample #121494009**							
1,2-Dichloroethane-d4	17060-07-0				100.5	75 - 125				11/27/12
Toluene-d8	2037-26-5				93.2	75 - 125				11/27/12
4-Bromofluorobenzene	460-00-4				99.7	75 - 125				11/27/12
SAMPLE			**Sample #121494010**							
1,2-Dichloroethane-d4	17060-07-0				99.2	75 - 125				11/27/12
Toluene-d8	2037-26-5				93	75 - 125				11/27/12
4-Bromofluorobenzene	460-00-4				96.9	75 - 125				11/27/12
SAMPLE			**Sample #121494015**							
1,2-Dichloroethane-d4	17060-07-0				100.5	75 - 125				11/27/12
Toluene-d8	2037-26-5				95	75 - 125				11/27/12
4-Bromofluorobenzene	460-00-4				99.2	75 - 125				11/27/12
SAMPLE			**Sample #121494016**							
1,2-Dichloroethane-d4	17060-07-0				98	75 - 125				11/27/12
Toluene-d8	2037-26-5				93.8	75 - 125				11/27/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
4-Bromofluorobenzene	460-00-4				97.8	75 - 125				11/27/12
SAMPLE			**Sample #121494017**							
1,2-Dichloroethane-d4	17060-07-0				101.6	75 - 125				11/27/12
Toluene-d8	2037-26-5				93.4	75 - 125				11/27/12
4-Bromofluorobenzene	460-00-4				99.4	75 - 125				11/27/12
BLANK			**QC Sample #85506**							
1,2-Dichloroethane-d4	17060-07-0				91.5	75 - 125				11/27/12
Toluene-d8	2037-26-5				93.6	75 - 125				11/27/12
4-Bromofluorobenzene	460-00-4				95.9	75 - 125				11/27/12
LCS			**QC Sample #85507**							
1,2-Dichloroethane-d4	17060-07-0				98.5	75 - 125				11/27/12
Toluene-d8	2037-26-5				93	75 - 125				11/27/12
4-Bromofluorobenzene	460-00-4				93.3	75 - 125				11/27/12
MS			**QC Sample #85508**							
			Original 121494005							
1,2-Dichloroethane-d4	17060-07-0				97.1	75 - 125				11/27/12
Toluene-d8	2037-26-5				93.4	75 - 125				11/27/12
4-Bromofluorobenzene	460-00-4				93.8	75 - 125				11/27/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MSD			**QC Sample #85509**							
			Original 121494005					**Paired 85508**		
1,2-Dichloroethane-d4	17060-07-0				96.9	75 - 125	n/a			11/27/12
Toluene-d8	2037-26-5				93.2	75 - 125	n/a			11/27/12
4-Bromofluorobenzene	460-00-4				93.5	75 - 125	n/a			11/27/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121494

Analytical Batch 210945 (QC Batch: 210726) **Test** Uranium (AEA)
Associated Samples 121494007, 121494008, 121494009, 121494010

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121494007**							
Uranium-232 Tracer	14158-29-3				100.1	25 - 105				11/30/12
SAMPLE			**Sample #121494008**							
Uranium-232 Tracer	14158-29-3				86.6	25 - 105				11/30/12
SAMPLE			**Sample #121494009**							
Uranium-232 Tracer	14158-29-3				89.8	25 - 105				11/30/12
SAMPLE			**Sample #121494010**							
Uranium-232 Tracer	14158-29-3				89.9	25 - 105				11/30/12
BLANK			**QC Sample #85404**							
Uranium-232 Tracer	14158-29-3				89.4	25 - 105				11/30/12
LCS			**QC Sample #85405**							
Uranium-232 Tracer	14158-29-3				64.6	25 - 105				11/30/12
DUP			**QC Sample #85406**							
			Original 121494007							
Uranium-232 Tracer	14158-29-3				95.4	25 - 105	n/a			11/30/12

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

Tentatively Identified Peak Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121494

Peak Name		CAS #	RT	RQ	Result	Units
121494009	**B2N0R4**					
Unknown		UNKNOWN-01	16.166		50	ug/L
121494015	**B2N188**					
Unknown		UNKNOWN-01	16.163		54	ug/L

Analytical Comment Report

Attention: Scot Fitzgerald

Group # WSCF121494

Quality Control Comments

Department Inorganic

86105 B2N1B6(121494001MS)

Analyte Sodium - ICP-6010 - All possible metals

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

86106 B2N1B6(121494001MSD)

Analyte Sodium - ICP-6010 - All possible metals

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

Analytical Comment Report

Attention: Scot Fitzgerald

Group # WSCF121494

Quality Control Comments

Department Radiochemistry

85404 BLANK for HBN 210726 [RADP/737

Analyte Uranium-234 - Uranium (AEA)

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

85406 B2N184(121494007DUP)

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.

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 12 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 #: 121494
Profile #: S13-012-574
Proj. Mgr.:
Phone:

The following samples were received from you on 11/20/2012 3:05:00 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		
121494001	B2N1B6	WATER	11/20/2012 14:14	11/20/2012 15:05
		6010-W		
121494002	B2N1B2	WATER	11/20/2012 13:05	11/20/2012 15:05
		6010-W		
121494003	B2N186	WATER	11/20/2012 11:35	11/20/2012 15:05
		6010-W		
121494004	B2N0R2	WATER	11/20/2012 09:21	11/20/2012 15:05
		6010-W		
121494005	B2N1B4	WATER	11/20/2012 14:14	11/20/2012 15:05
		2008-W; 6010-W; 8260V-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
121494006	B2N1B0	WATER	11/20/2012 13:05	11/20/2012 15:05
		2008-W; 6010-W; 8260V-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
121494007	B2N184	WATER	11/20/2012 11:35	11/20/2012 15:05
		2008-W; 6010-W; 8260V-W; AEA-U-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
121494008	B2N0R0	WATER	11/20/2012 09:21	11/20/2012 15:05
		2008-W; 6010-W; 8260V-W; AEA-U-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
121494009	B2N0R4	WATER	11/20/2012 11:01	11/20/2012 15:05
		2008-W; 6010-W; 8260V-W; AEA-U-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
121494010	B2N0V4	WATER	11/20/2012 10:25	11/20/2012 15:05

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		
121494011	B2N0R6	WATER	11/20/2012 11:01	11/20/2012 15:05
		6010-W		
121494012	B2N0V6	WATER	11/20/2012 10:25	11/20/2012 15:05
		6010-W		
121494013	B2N190	WATER	11/20/2012 12:06	11/20/2012 15:05
		6010-W		
121494014	B2N194	WATER	11/20/2012 08:30	11/20/2012 15:05
		6010-W		
121494015	B2N188	WATER	11/20/2012 12:06	11/20/2012 15:05
		2008-W; 6010-W; 8260V-W; ALK-W; GAB-AO-W; GAB-BO-W		
121494016	B2N192	WATER	11/20/2012 08:30	11/20/2012 15:05
		2008-W; 6010-W; 8260V-W; ALK-W; GAB-AO-W; GAB-BO-W		
121494017	B2N2P8	WATER	11/20/2012 08:30	11/20/2012 15:05
		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 EICHROM Column (W)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S13-012-574

Page 1 of 1

Collector	FM Hall CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.** 376-4650	**Purchase Order/Charge Code** 300071ES20
SAF No.	S13-012	**Sampling Origin**	Hanford Site		
Project Title	SURV, DECEMBER 2012	**Logbook No.** HNF-N-506 51 / 54		**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**	**Offsite Property No.** N/A	

POSSIBLE SAMPLE HAZARDS/REMARKS

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

SPECIAL INSTRUCTIONS 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 401617.

Hold Time Total Activity Exemption: Yes ☑ No ☐

121494

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2N1B4 5	N	W	11/20/12	1414	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N1B4	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2N1B4	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N1B4	N	W			3x40-mL aGs*	8260_VOA_GCMS: List-2 (26)	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2N1B4	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2N1B4	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2N1B6 1	Y	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC		NOV 20 2012 1505		TA Frazier		NOV 20 2012 1505	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By			Date/Time

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		

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Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# S13-012-572

Page 1 of 1

Collector	FM Hall 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 51 / 54	**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**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

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

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

Hold Time Total Activity Exemption: Yes ☑ No ☐

Site-Wide Generator Knowledge

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2N1B0	N	W	11/20/12	1305	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N1B0	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2N1B0	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N1B0	N	W			3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2N1B0	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2N1B0	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2N1B2	Y	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2

Relinquished By FM Hall CHPRC	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
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, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquids, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other

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

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A-6004-842 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S13-012-564**

Page 1 of 1

Collector FM Hall 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 51/54		**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**		**Offsite Property No.** N/A		
POSSIBLE SAMPLE HAZARDS/REMARKS *** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400.5 (1990/1993)	**SPECIAL INSTRUCTIONS** FY12 and FY13 samples cannot be in the same SDG. Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647		**Hold Time** Total Activity Exemption: Yes ☑ No ☐		

PWS: 11/20/12

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2N186	3 Y	W	11/20/12	1135	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N184	7 N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N184	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2N184	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N184	N	W			3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2N184	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2N184	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2N184	N	W			1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
FM Hall CHPRC		NOV 20 2012 1505		TA Analytical Services		NOV 20 2012 1505	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	

Matrix *

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

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

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Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# S13-012-490 Page 1 of 1

Collector	FM Hall CHPRC	**Contact/Requester**	Karen Waters-Husted	**Telephone No.** 376-4650	
SAF No.	S13-012	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071FS20
Project Title	SURV, DECEMBER 2012	**Logbook No.**	HNF-N-506 51/53	**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**	**Offsite Property No.** N/A	

POSSIBLE SAMPLE HAZARDS/REMARKS

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

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

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

Sample No.	Filter *	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2N0R0 8	N W	11/20/12	0921	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N0R0	N W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2N0R0	N W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0R0	N W			3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2N0R0	N W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2N0R0	N W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2N0R0	N W			1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B2N0R2 4	Y W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2

Relinquished By	FM Hall	Print		Sign	
Relinquished By	CHPRC	Date/Time	NOV 20 2012 1505	Received By	Date/Time
Relinquished By		Date/Time		Received By	Date/Time
Relinquished By		Date/Time		Received By	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed by	Date/Time

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

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Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S13-012-492

Page 1 of 1

Collector	FM Hall 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 51/54	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**	Offsite Property No. N/A	

POSSIBLE SAMPLE HAZARDS/REMARKS

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

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

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

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2N0R6	Y	W	11/20/12	1101	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0R4	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N0R4	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2N0R4	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0R4	N	W			3x40 mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2N0R4	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2N0R4	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2N0R4	N	W			1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2

	Print	Sign	Date/Time
Relinquished By	FM Hall CHPRC	[signature]	NOV 20 2012 1505
Received By	TA Frazier	[signature]	NOV 20 2012 1505

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

FINAL SAMPLE DISPOSITION

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

Disposed By

Date/Time

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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S13-012-502

Page 1 of 1

Collector: FM Hall CHPRC	Contact/Requester: Karen Waters-Husted		Telephone No.: 376-4650	Purchase Order/Charge Code: 300071ES20	
SAF No.: S13-012	Sampling Origin: Hanford Site		Ice Chest No.: N/A		
Project Title: SURV, DECEMBER 2012	Logbook No.: HNF-N-506 51 53		Bill of Lading/Air Bill No.: N/A		
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: GOVERNMENT VEHICLE		Offsite Property No.: N/A		
Protocol: SURV	Priority: 31 Days	**PRIORITY**	Total Activity Exemption: Yes ☑ No ☐		

POSSIBLE SAMPLE HAZARDS/REMARKS

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

SPECIAL INSTRUCTIONS Hold Time

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
B2N0V4	N	W	11/20/12	1025	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N0V4	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2N0V4	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0V4	N	W			3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2Cool~4C
B2N0V4	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2N0V4	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2N0V4	N	W			1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2
B2N0V6	Y	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2

Relinquished By: FM Hall	Print:	Sign:	Date/Time: NOV 20 2012 1505	Received By:	Print:	Sign:	Date/Time: NOV 20 2012 1505
Relinquished By: CHPRC			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, SE = Sediment, SO = Solid, SL = Sludge, W = Water, O = Oil, A = Air, DS = Drum Solids, DL = Drum Liquids, T = Tissue, WI = Wipe, L = Liquid, V = Vegetation, X = Other

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

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A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# S13-012-566

Page 1 of 1

Collector	FM Hall 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 51 /54	**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**	**Offsite Property No.** N/A	

POSSIBLE SAMPLE HAZARDS/REMARKS

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

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

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

Sample No	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2N190 13	Y	W	11/20/12	1206	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N188 15	N	W	↓	↓	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N188	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool-4C
B2N188	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N188	N	W			3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool-4C
B2N188	N	W	↓	↓	1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2

Relinquished By	Print FM Hall	Sign	Date/Time NOV 20 2012 1505	Received By	Print	Sign	Date/Time NOV 20 2012 1505
Relinquished By	CHPRC		Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

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Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# **S13-012-568**

Page 1 of 1

Collector	FM Hall 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 51 /53	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**	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 **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
B2N194 14	Y	W	11/20/12	0830	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N192 16	N	W	↓	↓	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N192	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2N192	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N192	N	W			3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2N192 ↓	N	W	↓	↓	1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2

Relinquished By (Print / Sign)	Date/Time	Received By (Print / Sign)	Date/Time
FM Hall CHPRC [signature]	NOV 20 2012 1505	TA Frazin [signature]	NOV 20 2012 1505
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

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

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

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A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-002-048**

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Collector	FM Hall CHPRC	**Contact/Requester**	WATERS-HUSTED, K	**Telephone No.**	376-4650
SAF No.	X13-002	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	GW Sitewide Surv, FY13	**Logbook No.**	HNF-N-506 51/53	**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**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

"Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/IATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1."

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

Site Wide Generator Knowledge Information Form applies.
The CAGN for all analytical work at WSCF is 401647.
FY12 and FY13 samples cannot be in the same SDG.
These samples can be batched with A, I, S and W13 SAFS

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2N2P8	N	W	11/20/12	0830	1x20-mL P	Activity Scan	6 Months	None
B2N2P8	N	W	↓	↓	3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C

Relinquished By	FM Hall CHPRC	Print	Sign	NOV 20 2012 1505	Received By	TA Frazier	Print	Sign	NOV 20 2012 1505
Relinquished By		Date/Time			Received By		Date/Time		Date/Time
Relinquished By		Date/Time			Received By		Date/Time		Date/Time
Relinquished By		Date/Time			Received By		Date/Time		Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposed 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		

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