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

December 11, 2012

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

Dear Scot Fitzgerald,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF121467

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 WSCF121467

* 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 # WSCF121467
Data Deliverable Date 12/17/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
S13-012	B2N0M0	121467001	WATER	11/15/12	11/15/12
S13-012	B2N0D9	121467002	WATER	11/15/12	11/15/12
S13-012	B2N0M4	121467003	WATER	11/15/12	11/15/12
S13-012	B2N0C3	121467004	WATER	11/15/12	11/15/12
S13-011	B2MMM3	121467005	WATER	11/15/12	11/15/12
S13-012	B2N0F0	121467006	WATER	11/15/12	11/15/12
S13-012	B2N0M5	121467007	WATER	11/15/12	11/15/12
S13-012	B2N0C4	121467008	WATER	11/15/12	11/15/12
S13-011	B2MMM4	121467009	WATER	11/15/12	11/15/12
S13-012	B2N0M1	121467010	WATER	11/15/12	11/15/12
S13-012	B2N0D8	121467011	WATER	11/15/12	11/15/12
S13-012	B2N0M3	121467012	WATER	11/15/12	11/15/12
S13-012	B2N0C2	121467013	WATER	11/15/12	11/15/12
S13-011	B2MMM2	121467014	WATER	11/15/12	11/15/12
S13-012	B2N0L9	121467015	WATER	11/15/12	11/15/12
X13-002	B2N2P5	121467016	WATER	11/15/12	11/15/12

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Attachment 2
Narrative
WSCF121467

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
WSCF121467

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

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

- All other applicable QC controls are within the established limits.

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

- All 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.

Attachment 2
Narrative
WSCF121467

Isotopic Uranium analysis:

- Uranium-234, Uranium-235 and Uranium-238 – The Blank is less than two times the RDL. "B" Flag not required.
- Uranium-235 – 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 84 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 # WSCF121467
Report Date December 11, 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 # WSCF121467

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210367	210367	2	BLANK	85176	BLANK		Anions by Ion Chromatography (Water)
210367	210367	3	LCS	85177	LCS		Anions by Ion Chromatography (Water)
210367	210367	4	DUP	85178	B2MYX0(121464009DUP	121464009	Anions by Ion Chromatography (Water)
210367	210367	5	MS	85179	B2MYX0(121464009MS)	121464009	Anions by Ion Chromatography (Water)
210367	210367	6	MSD	85180	B2MYX0(121464009MSD	121464009	Anions by Ion Chromatography (Water)
210367	210367	11	SAMPLE	121467001	B2N0M0		Anions by Ion Chromatography (Water)
210367	210367	12	SAMPLE	121467002	B2N0D9		Anions by Ion Chromatography (Water)
210367	210367	13	SAMPLE	121467003	B2N0M4		Anions by Ion Chromatography (Water)
210367	210367	14	SAMPLE	121467004	B2N0C3		Anions by Ion Chromatography (Water)
210367	210367	15	SAMPLE	121467005	B2MMM3		Anions by Ion Chromatography (Water)
211116	211129	5	BLANK	85817	BLANK		ICP-6010 - All possible metals
211116	211129	7	LCS	85819	LCS		ICP-6010 - All possible metals
211116	211129	9	MS	85820	B2MMR7(121464012MS)	121464012	ICP-6010 - All possible metals
211116	211129	10	MSD	85821	B2MMR7(121464012MS	121464012	ICP-6010 - All possible metals
211116	211129	18	SAMPLE	121467006	B2N0F0		ICP-6010 - All possible metals
211116	211129	19	SAMPLE	121467007	B2N0M5		ICP-6010 - All possible metals
211116	211129	22	SAMPLE	121467008	B2N0C4		ICP-6010 - All possible metals
211116	211129	23	SAMPLE	121467009	B2MMM4		ICP-6010 - All possible metals
211116	211129	24	SAMPLE	121467010	B2N0M1		ICP-6010 - All possible metals
211116	211129	25	SAMPLE	121467011	B2N0D8		ICP-6010 - All possible metals
211116	211129	26	SAMPLE	121467012	B2N0M3		ICP-6010 - All possible metals
211116	211129	27	SAMPLE	121467013	B2N0C2		ICP-6010 - All possible metals
211116	211129	28	SAMPLE	121467014	B2MMM2		ICP-6010 - All possible metals

Batch QC List

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
211116	211129	29	SAMPLE	121467015	B2N0L9		ICP-6010 - All possible metals
211267	211274	4	BLANK	86053	BLANK		ICP-2008 MS All possible metal
211267	211274	5	LCS	86054	LCS		ICP-2008 MS All possible metal
211267	211274	7	MS	86055	B2MP07(121456006MS)	121456006	ICP-2008 MS All possible metal
211267	211274	8	MSD	86056	B2MP07(121456006MSD	121456006	ICP-2008 MS All possible metal
211267	211274	13	SAMPLE	121467011	B2N0D8		ICP-2008 MS All possible metal
211267	211274	14	SAMPLE	121467012	B2N0M3		ICP-2008 MS All possible metal
211267	211274	15	SAMPLE	121467013	B2N0C2		ICP-2008 MS All possible metal
211267	211274	16	SAMPLE	121467014	B2MMM2		ICP-2008 MS All possible metal
211267	211274	17	SAMPLE	121467015	B2N0L9		ICP-2008 MS All possible metal

Batch QC List

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121467

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210649	210650	1	BLANK	85357	BLANK		SW-846 8260B Volatiles
210649	210650	2	LCS	85358	LCS		SW-846 8260B Volatiles
210649	210650	3	MS	85359	B2MMR7(121464012MS)	121464012	SW-846 8260B Volatiles
210649	210650	4	MSD	85360	B2MMR7(121464012MS	121464012	SW-846 8260B Volatiles
210649	210650	6	SAMPLE	121467014	B2MMM2		SW-846 8260B Volatiles
210649	210650	7	SAMPLE	121467016	B2N2P5		SW-846 8260B Volatiles
210649	210650	9	SAMPLE	121467013	B2N0C2		SW-846 8260B Volatiles
210649	210650	10	SAMPLE	121467011	B2N0D8		SW-846 8260B Volatiles
210649	210650	11	SAMPLE	121467012	B2N0M3		SW-846 8260B Volatiles
210649	210650	12	SAMPLE	121467015	B2N0L9		SW-846 8260B Volatiles

Batch QC List

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121467

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210359	210743	1	BLANK	85145	BLANK		Tritium by LSC
210359	210743	2	LCS	85146	LCS		Tritium by LSC
210359	210743	4	DUP	85147	B2MMN7(121461004DUP	121461004	Tritium by LSC
210359	210743	5	MS	85148	B2MMN7(121461004MS)	121461004	Tritium by LSC
210359	210743	18	SAMPLE	121467015	B2N0L9		Tritium by LSC
210363	211024	1	BLANK	85159	BLANK		GAB Discrete analysis Alpha only
210363	211024	2	LCS	85160	LCS		GAB Discrete analysis Alpha only
210363	211024	4	DUP	85161	B2MMR7(121464012DUP	121464012	GAB Discrete analysis Alpha only
210363	211024	8	SAMPLE	121467011	B2N0D8		GAB Discrete analysis Alpha only
210363	211024	9	SAMPLE	121467012	B2N0M3		GAB Discrete analysis Alpha only
210363	211025	1	BLANK	85159	BLANK		GAB Discrete analysis Beta only
210363	211025	2	LCS	85160	LCS		GAB Discrete analysis Beta only
210363	211025	4	DUP	85161	B2MMR7(121464012DUP	121464012	GAB Discrete analysis Beta only
210363	211025	8	SAMPLE	121467011	B2N0D8		GAB Discrete analysis Beta only
210363	211025	9	SAMPLE	121467012	B2N0M3		GAB Discrete analysis Beta only
210364	211028	1	BLANK	85162	BLANK		GAB Discrete analysis Alpha only
210364	211028	2	LCS	85163	LCS		GAB Discrete analysis Alpha only
210364	211028	3	SAMPLE	121467013	B2N0C2		GAB Discrete analysis Alpha only
210364	211028	4	DUP	85164	B2N0C2(121467013DUP)	121467013	GAB Discrete analysis Alpha only
210364	211028	5	SAMPLE	121467014	B2MMM2		GAB Discrete analysis Alpha only
210364	211028	6	SAMPLE	121467015	B2N0L9		GAB Discrete analysis Alpha only
210364	211029	1	BLANK	85162	BLANK		GAB Discrete analysis Beta only
210364	211029	2	LCS	85163	LCS		GAB Discrete analysis Beta only

Batch QC List

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121467

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210364	211029	3	SAMPLE	121467013	B2N0C2		GAB Discrete analysis Beta only
210364	211029	4	DUP	85164	B2N0C2(121467013DUP)	121467013	GAB Discrete analysis Beta only
210364	211029	5	SAMPLE	121467014	B2MMM2		GAB Discrete analysis Beta only
210364	211029	6	SAMPLE	121467015	B2N0L9		GAB Discrete analysis Beta only
210416	210828	1	BLANK	85221	BLANK		Uranium (AEA)
210416	210828	2	LCS	85222	LCS		Uranium (AEA)
210416	210828	3	SAMPLE	121467015	B2N0L9		Uranium (AEA)
210416	210828	4	DUP	85223	B2N0L9(121467015DUP)	121467015	Uranium (AEA)

Batch QC List

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121467

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
210753	210753	1	LCS	85478	LCS		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	4	DUP	85479	B2MMV7(121464018DUP	121464018	Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	5	SAMPLE	121467011	B2N0D8		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	6	SAMPLE	121467012	B2N0M3		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	7	SAMPLE	121467013	B2N0C2		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	8	SAMPLE	121467014	B2MMM2		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	9	SAMPLE	121467015	B2N0L9		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	13	LCS	85480	LCS		Total Alkalinity as mg/L CaCO3 (Water)
210753	210753	19	LCS	85481	LCS		Total Alkalinity as mg/L CaCO3 (Water)

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

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

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

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

Method Reference

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121467

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 # WSCF121467

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 # WSCF121467

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 # WSCF121467

Sample # 121467001
SAF# S13-012
Sample ID B2N0M0

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/15/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.336		ug/mL	2	0.046	0.14	11/15/12
Chloride	16887-00-6	LA-533-410	D	20.8		ug/mL	2	0.12	0.81	11/15/12
Nitrite-N	NO2-N	LA-533-410	BD	0.143		ug/mL	2	0.038	0.20	11/15/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	11/15/12
Nitrate-N	NO3-N	LA-533-410	D	5.68		ug/mL	2	0.038	0.20	11/15/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	11/15/12
Sulfate	14808-79-8	LA-533-410	D	48.4		ug/mL	2	0.22	2.1	11/15/12

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

B - Analyte < the 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 # WSCF121467

Sample # 121467002
SAF# S13-012
Sample ID B2N0D9

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/15/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.304		ug/mL	2	0.046	0.14	11/15/12
Chloride	16887-00-6	LA-533-410	D	19.7		ug/mL	2	0.12	0.81	11/15/12
Nitrite-N	NO2-N	LA-533-410	BD	0.149		ug/mL	2	0.038	0.20	11/15/12
Nitrate-N	NO3-N	LA-533-410	D	5.85		ug/mL	2	0.038	0.20	11/15/12
Sulfate	14808-79-8	LA-533-410	D	54.7		ug/mL	2	0.22	2.1	11/15/12

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

B - Analyte < the 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 # WSCF121467

Sample # 121467003
SAF# S13-012
Sample ID B2N0M4

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/15/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.654		ug/mL	2	0.046	0.14	11/15/12
Chloride	16887-00-6	LA-533-410	D	5.36		ug/mL	2	0.12	0.81	11/15/12
Nitrite-N	NO2-N	LA-533-410	BD	0.137		ug/mL	2	0.038	0.20	11/15/12
Nitrate-N	NO3-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	11/15/12
Sulfate	14808-79-8	LA-533-410	BD	0.272		ug/mL	2	0.22	2.1	11/15/12

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

B - Analyte < the 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 # WSCF121467

Sample # 121467004
SAF# S13-012
Sample ID B2N0C3

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/16/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.221		ug/mL	2	0.046	0.14	11/16/12
Chloride	16887-00-6	LA-533-410	D	17.9		ug/mL	2	0.12	0.81	11/16/12
Nitrite-N	NO2-N	LA-533-410	BD	0.154		ug/mL	2	0.038	0.20	11/16/12
Nitrate-N	NO3-N	LA-533-410	D	6.01		ug/mL	2	0.038	0.20	11/16/12
Sulfate	14808-79-8	LA-533-410	D	52.7		ug/mL	2	0.22	2.1	11/16/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

Sample # 121467005
SAF# S13-011
Sample ID B2MMM3

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/16/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.309		ug/mL	2	0.046	0.14	11/16/12
Chloride	16887-00-6	LA-533-410	D	21.0		ug/mL	2	0.12	0.81	11/16/12
Nitrite-N	NO2-N	LA-533-410	BD	0.162		ug/mL	2	0.038	0.20	11/16/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	11/16/12
Nitrate-N	NO3-N	LA-533-410	D	6.04		ug/mL	2	0.038	0.20	11/16/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	11/16/12
Sulfate	14808-79-8	LA-533-410	D	47.0		ug/mL	2	0.22	2.1	11/16/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

Sample # 121467006
SAF# S13-012
Sample ID B2N0F0

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/03/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/04/12
Magnesium	7439-95-4	LA-505-411		12600		ug/L	1	4.0	20	12/04/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Potassium	7440-09-7	LA-505-411		6110		ug/L	1	76	380	12/04/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Sodium	7440-23-5	LA-505-411		24000		ug/L	1	10	50	12/04/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/04/12
Barium	7440-39-3	LA-505-411		53.3		ug/L	1	4.0	20	12/04/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Calcium	7440-70-2	LA-505-411		53000		ug/L	1	49	240	12/04/12
Strontium	7440-24-6	LA-505-411		230		ug/L	1	9.0	45	12/04/12

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 # WSCF121467

Sample # 121467006
SAF# S13-012
Sample ID B2N0F0

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	12/04/12

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 # WSCF121467

Sample # 121467007
SAF# S13-012
Sample ID B2N0M5

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/03/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411		136		ug/L	1	19	95	12/04/12
Magnesium	7439-95-4	LA-505-411		5820		ug/L	1	4.0	20	12/04/12
Manganese	7439-96-5	LA-505-411		39.8		ug/L	1	4.0	20	12/04/12
Nickel	7440-02-0	LA-505-411	B	18.1		ug/L	1	4.0	20	12/04/12
Potassium	7440-09-7	LA-505-411		5620		ug/L	1	76	380	12/04/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Sodium	7440-23-5	LA-505-411		41600		ug/L	1	10	50	12/04/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/04/12
Barium	7440-39-3	LA-505-411		41.4		ug/L	1	4.0	20	12/04/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Calcium	7440-70-2	LA-505-411		18200		ug/L	1	49	240	12/04/12
Strontium	7440-24-6	LA-505-411		98.8		ug/L	1	9.0	45	12/04/12

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 # WSCF121467

Sample # 121467007
SAF# S13-012
Sample ID B2N0M5

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	12/04/12

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 # WSCF121467

Sample # 121467008
SAF# S13-012
Sample ID B2N0C4

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/03/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	20.8		ug/L	1	19	95	12/04/12
Magnesium	7439-95-4	LA-505-411		12300		ug/L	1	4.0	20	12/04/12
Manganese	7439-96-5	LA-505-411	B	4.10		ug/L	1	4.0	20	12/04/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Potassium	7440-09-7	LA-505-411		5060		ug/L	1	76	380	12/04/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Sodium	7440-23-5	LA-505-411		20100		ug/L	1	10	50	12/04/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/04/12
Barium	7440-39-3	LA-505-411		78.1		ug/L	1	4.0	20	12/04/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Zinc	7440-66-6	LA-505-411	B	9.00		ug/L	1	5.0	25	12/04/12
Calcium	7440-70-2	LA-505-411		51100		ug/L	1	49	240	12/04/12
Strontium	7440-24-6	LA-505-411		227		ug/L	1	9.0	45	12/04/12

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 # WSCF121467

Sample # 121467008
SAF# S13-012
Sample ID B2N0C4

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	12/04/12

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 # WSCF121467

Sample # 121467009
SAF# S13-011
Sample ID B2MMM4

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/03/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/04/12
Magnesium	7439-95-4	LA-505-411		11100		ug/L	1	4.0	20	12/04/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Potassium	7440-09-7	LA-505-411		6150		ug/L	1	76	380	12/04/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Sodium	7440-23-5	LA-505-411		21900		ug/L	1	10	50	12/04/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/04/12
Barium	7440-39-3	LA-505-411		50.2		ug/L	1	4.0	20	12/04/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Calcium	7440-70-2	LA-505-411		52400		ug/L	1	49	240	12/04/12
Strontium	7440-24-6	LA-505-411		210		ug/L	1	9.0	45	12/04/12

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 # WSCF121467

Sample # 121467009
SAF# S13-011
Sample ID B2MMM4

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	12/04/12

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 # WSCF121467

Sample # 121467010
SAF# S13-012
Sample ID B2N0M1

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/03/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/04/12
Magnesium	7439-95-4	LA-505-411		11300		ug/L	1	4.0	20	12/04/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Potassium	7440-09-7	LA-505-411		6300		ug/L	1	76	380	12/04/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Sodium	7440-23-5	LA-505-411		25200		ug/L	1	10	50	12/04/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/04/12
Barium	7440-39-3	LA-505-411		50.2		ug/L	1	4.0	20	12/04/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Vanadium	7440-62-2	LA-505-411	B	5.10		ug/L	1	5.0	25	12/04/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Calcium	7440-70-2	LA-505-411		49000		ug/L	1	49	240	12/04/12
Strontium	7440-24-6	LA-505-411		207		ug/L	1	9.0	45	12/04/12

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 # WSCF121467

Sample # 121467010
SAF# S13-012
Sample ID B2N0M1

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	12/04/12

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 # WSCF121467

Sample # 121467011
SAF# S13-012
Sample ID B2N0D8

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/03/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/04/12
Magnesium	7439-95-4	LA-505-411		12700		ug/L	1	4.0	20	12/04/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Potassium	7440-09-7	LA-505-411		6300		ug/L	1	76	380	12/04/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Sodium	7440-23-5	LA-505-411		24500		ug/L	1	10	50	12/04/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/04/12
Barium	7440-39-3	LA-505-411		54.6		ug/L	1	4.0	20	12/04/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Chromium	7440-47-3	LA-505-411	B	5.50		ug/L	1	5.0	25	12/04/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Vanadium	7440-62-2	LA-505-411	B	5.40		ug/L	1	5.0	25	12/04/12
Zinc	7440-66-6	LA-505-411	B	5.20		ug/L	1	5.0	25	12/04/12
Calcium	7440-70-2	LA-505-411		52200		ug/L	1	49	240	12/04/12
Strontium	7440-24-6	LA-505-411		228		ug/L	1	9.0	45	12/04/12

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 # WSCF121467

Sample # 121467011
SAF# S13-012
Sample ID B2N0D8

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	12/04/12
ICPMS Prep (W)										**12/06/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	24.4		ug/L	2	0.10	0.50	12/06/12

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 # WSCF121467

Sample # 121467012
SAF# S13-012
Sample ID B2N0M3

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/03/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411		163		ug/L	1	19	95	12/04/12
Magnesium	7439-95-4	LA-505-411		5680		ug/L	1	4.0	20	12/04/12
Manganese	7439-96-5	LA-505-411		38.8		ug/L	1	4.0	20	12/04/12
Nickel	7440-02-0	LA-505-411	B	17.1		ug/L	1	4.0	20	12/04/12
Potassium	7440-09-7	LA-505-411		5440		ug/L	1	76	380	12/04/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Sodium	7440-23-5	LA-505-411		40900		ug/L	1	10	50	12/04/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/04/12
Barium	7440-39-3	LA-505-411		40.7		ug/L	1	4.0	20	12/04/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Calcium	7440-70-2	LA-505-411		17600		ug/L	1	49	240	12/04/12
Strontium	7440-24-6	LA-505-411		96.1		ug/L	1	9.0	45	12/04/12

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 # WSCF121467

Sample # 121467012
SAF# S13-012
Sample ID B2N0M3

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	12/04/12
ICPMS Prep (W)										**12/06/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/06/12

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 # WSCF121467

Sample # 121467013
SAF# S13-012
Sample ID B2N0C2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/03/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411		806		ug/L	1	19	95	12/04/12
Magnesium	7439-95-4	LA-505-411		12100		ug/L	1	4.0	20	12/04/12
Manganese	7439-96-5	LA-505-411	B	8.70		ug/L	1	4.0	20	12/04/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Potassium	7440-09-7	LA-505-411		4950		ug/L	1	76	380	12/04/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Sodium	7440-23-5	LA-505-411		19600		ug/L	1	10	50	12/04/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/04/12
Barium	7440-39-3	LA-505-411		77.2		ug/L	1	4.0	20	12/04/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Chromium	7440-47-3	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Zinc	7440-66-6	LA-505-411	B	13.9		ug/L	1	5.0	25	12/04/12
Calcium	7440-70-2	LA-505-411		52000		ug/L	1	49	240	12/04/12
Strontium	7440-24-6	LA-505-411		230		ug/L	1	9.0	45	12/04/12

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 # WSCF121467

Sample # 121467013
SAF# S13-012
Sample ID B2N0C2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	12/04/12
ICPMS Prep (W)										**12/06/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	66.6		ug/L	2	0.10	0.50	12/06/12

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 # WSCF121467

Sample # 121467014
SAF# S13-011
Sample ID B2MMM2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/03/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	28.6		ug/L	1	19	95	12/04/12
Magnesium	7439-95-4	LA-505-411		11000		ug/L	1	4.0	20	12/04/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Potassium	7440-09-7	LA-505-411		6030		ug/L	1	76	380	12/04/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Sodium	7440-23-5	LA-505-411		21600		ug/L	1	10	50	12/04/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/04/12
Barium	7440-39-3	LA-505-411		50.1		ug/L	1	4.0	20	12/04/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Chromium	7440-47-3	LA-505-411	B	6.30		ug/L	1	5.0	25	12/04/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Vanadium	7440-62-2	LA-505-411	B	6.60		ug/L	1	5.0	25	12/04/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Calcium	7440-70-2	LA-505-411		52500		ug/L	1	49	240	12/04/12
Strontium	7440-24-6	LA-505-411		212		ug/L	1	9.0	45	12/04/12

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 # WSCF121467

Sample # 121467014
SAF# S13-011
Sample ID B2MMM2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	12/04/12
ICPMS Prep (W)										**12/06/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	46.6		ug/L	2	0.10	0.50	12/06/12

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 # WSCF121467

Sample # 121467015
SAF# S13-012
Sample ID B2N0L9

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**12/03/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/04/12
Magnesium	7439-95-4	LA-505-411		11200		ug/L	1	4.0	20	12/04/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Potassium	7440-09-7	LA-505-411		6170		ug/L	1	76	380	12/04/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Sodium	7440-23-5	LA-505-411		24800		ug/L	1	10	50	12/04/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	12/04/12
Barium	7440-39-3	LA-505-411		49.8		ug/L	1	4.0	20	12/04/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Chromium	7440-47-3	LA-505-411	B	5.50		ug/L	1	5.0	25	12/04/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/04/12
Vanadium	7440-62-2	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/04/12
Calcium	7440-70-2	LA-505-411		49700		ug/L	1	49	240	12/04/12
Strontium	7440-24-6	LA-505-411		209		ug/L	1	9.0	45	12/04/12

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 # WSCF121467

Sample # 121467015
SAF# S13-012
Sample ID B2N0L9

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	12/04/12
ICPMS Prep (W)										**12/06/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	48.3		ug/L	2	0.10	0.50	12/06/12

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 # WSCF121467

Sample # 121467011
SAF# S13-012
Sample ID B2N0D8

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/20/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12

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 # WSCF121467

Sample # 121467011
SAF# S13-012
Sample ID B2N0D8

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	11/21/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/21/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12

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 # WSCF121467

Sample # 121467012
SAF# S13-012
Sample ID B2N0M3

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/20/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12

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 # WSCF121467

Sample # 121467012
SAF# S13-012
Sample ID B2N0M3

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	11/21/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/21/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12

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 # WSCF121467

Sample # 121467013
SAF# S13-012
Sample ID B2N0C2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/20/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12

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 # WSCF121467

Sample # 121467013
SAF# S13-012
Sample ID B2N0C2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	11/21/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/21/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12

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 # WSCF121467

Sample # 121467014
SAF# S13-011
Sample ID B2MMM2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/20/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12

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 # WSCF121467

Sample # 121467014
SAF# S13-011
Sample ID B2MMM2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	11/21/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/21/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12

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 # WSCF121467

Sample # 121467015
SAF# S13-012
Sample ID B2N0L9

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/20/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Trichloroethene	79-01-6	LA-523-455	J	1.7		ug/L	1	1	5	11/21/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12

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 # WSCF121467

Sample # 121467015
SAF# S13-012
Sample ID B2N0L9

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	11/21/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/21/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12

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 # WSCF121467

Sample # 121467016
SAF# X13-002
Sample ID B2N2P5

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**11/20/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Methylene chloride	75-09-2	LA-523-455		11		ug/L	1	1	5	11/21/12

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 # WSCF121467

Sample # 121467016
SAF# X13-002
Sample ID B2N2P5

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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	11/21/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	11/21/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	11/21/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	11/21/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	11/21/12

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

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

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

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121467

Sample # 121467011
SAF# S13-012
Sample ID B2N0D8

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GAB Prep for Discrete Analysis (W)										**11/30/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		14	3.4	pCi/L	1	2.5		12/05/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		20	3.9	pCi/L	1	4.3		12/05/12

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

B - Analyte 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 # WSCF121467

Sample # 121467012
SAF# S13-012
Sample ID B2N0M3

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GAB Prep for Discrete Analysis (W)										**11/30/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		7.0	2.2	pCi/L	1	2.0		12/05/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		5.9	2.5	pCi/L	1	3.6		12/05/12

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

B - Analyte 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 # WSCF121467

Sample # 121467013
SAF# S13-012
Sample ID B2N0C2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GAB Prep for Discrete Analysis (W)										**11/30/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		22	4.2	pCi/L	1	2.1		12/05/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		28	4.6	pCi/L	1	4.1		12/05/12

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

B - Analyte 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 # WSCF121467

Sample # 121467014
SAF# S13-011
Sample ID B2MMM2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
GAB Prep for Discrete Analysis (W)										**11/30/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		16	3.5	pCi/L	1	2.1		12/05/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		20	3.9	pCi/L	1	4.1		12/05/12

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

B - Analyte 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 # WSCF121467

Sample # 121467015
SAF# S13-012
Sample ID B2N0L9

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Am/Cm/Pu/U/Np Prep (AEA) W										**11/28/12**
Uranium (AEA)										
Uranium-234	U-233/234	LA-508-471		14	3.6	pCi/L	1	0.026		11/28/12
Uranium-235	15117-96-1	LA-508-471		0.99	.33	pCi/L	1	0.076		11/28/12
Uranium-238	U-238	LA-508-471		14	3.5	pCi/L	1	0.026		11/28/12
GAB Prep for Discrete Analysis (W)										**11/30/12**
GAB Discrete analysis Alpha only										
Gross Alpha	12587-46-1	LA-508-415		16	3.6	pCi/L	1	2.2		12/05/12
GAB Discrete analysis Beta only										
Gross Beta	12587-47-2	LA-508-415		21	4	pCi/L	1	4.1		12/05/12
Tritium by LSC EICHROM WA/LIQ PREP										**11/16/12**
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		2400	550	pCi/L	1	310		11/26/12

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

B - Analyte was detected in both the BLANK and SAMPLE
U - Analyzed for but not detected above limiting criteria.
N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121467

Sample # 121467011
SAF# S13-012
Sample ID B2N0D8

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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

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

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

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

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121467

Sample # 121467012
SAF# S13-012
Sample ID B2N0M3

Matrix WATER
Sampled 11/15/12
Received 11/15/12

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

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

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

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

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121467

Sample # 121467013
SAF# S13-012
Sample ID B2N0C2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/19/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		110		mg/L	1	1	10	11/19/12

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

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

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

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121467

Sample # 121467014
SAF# S13-011
Sample ID B2MMM2

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/19/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		110		mg/L	1	1	10	11/19/12

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

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

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

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121467

Sample # 121467015
SAF# S13-012
Sample ID B2N0L9

Matrix WATER
Sampled 11/15/12
Received 11/15/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										11/19/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		110		mg/L	1	1	10	11/19/12

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

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

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

Analytical Batch 210367 (QC Batch: 210367) **Test** Anions by Ion Chromatography (Water)
Associated Samples 121467001, 121467002, 121467003, 121467004, 121467005

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85176**							
Fluoride	16984-48-8		<0.023	ug/mL					U	11/15/12
Chloride	16887-00-6		<0.058	ug/mL					U	11/15/12
Nitrite-N	NO2-N		<0.019	ug/mL					U	11/15/12
Bromide	24959-67-9		<0.11	ug/mL					U	11/15/12
Nitrate-N	NO3-N		<0.019	ug/mL					U	11/15/12
Phosphate-P	PO4-P		<0.042	ug/mL					U	11/15/12
Sulfate	14808-79-8		<0.11	ug/mL					U	11/15/12
LCS			**QC Sample #85177**							
Fluoride	16984-48-8		0.936	ug/mL	94.5	90 - 110				11/15/12
Chloride	16887-00-6		1.85	ug/mL	93.5	90 - 110				11/15/12
Nitrite-N	NO2-N		1.03	ug/mL	105	90 - 110				11/15/12
Bromide	24959-67-9		4.04	ug/mL	103.1	90 - 110				11/15/12
Nitrate-N	NO3-N		0.901	ug/mL	101.8	90 - 110				11/15/12
Phosphate-P	PO4-P		1.92	ug/mL	100.3	90 - 110				11/15/12
Sulfate	14808-79-8		3.98	ug/mL	101.4	90 - 110				11/15/12
DUP			**QC Sample #85178**							
			Original 121464009							

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
Fluoride	16984-48-8		0.134	ug/mL			4.70	20		BD	11/15/12
Chloride	16887-00-6		3.64	ug/mL			0.90	20		D	11/15/12
Nitrite-N	NO2-N		<0.038	ug/mL			85.50	20	*	UXD	11/15/12
Bromide	24959-67-9		<0.22	ug/mL			0.00	20		UD	11/15/12
Nitrate-N	NO3-N		1.24	ug/mL			3.10	20		D	11/15/12
Phosphate-P	PO4-P		<0.084	ug/mL			0.00	20		UD	11/15/12
Sulfate	14808-79-8		22.6	ug/mL			1.70	20		D	11/15/12
MS			**QC Sample #85179**								
			Original 121464009								
Fluoride	16984-48-8		0.979	ug/mL	97.9	80 - 120				D	11/15/12
Chloride	16887-00-6		1.90	ug/mL	94.8	80 - 120				D	11/15/12
Nitrite-N	NO2-N		0.915	ug/mL	92.6	80 - 120				D	11/15/12
Bromide	24959-67-9		4.05	ug/mL	102.4	80 - 120				D	11/15/12
Nitrate-N	NO3-N		0.949	ug/mL	106.1	80 - 120				D	11/15/12
Phosphate-P	PO4-P		1.94	ug/mL	100.5	80 - 120				D	11/15/12
Sulfate	14808-79-8		4.36	ug/mL	110.1	80 - 120				D	11/15/12
MSD			**QC Sample #85180**								
			Original 121464009						**Paired**	**85179**	
Fluoride	16984-48-8		0.963	ug/mL	96.3	80 - 120	1.40	20		D	11/15/12
Chloride	16887-00-6		1.88	ug/mL	94.1	80 - 120	0.30	20		D	11/15/12
Nitrite-N	NO2-N		0.893	ug/mL	90.4	80 - 120	2.30	20		D	11/15/12
Bromide	24959-67-9		3.99	ug/mL	100.7	80 - 120	1.70	20		D	11/15/12
Nitrate-N	NO3-N		0.935	ug/mL	104.6	80 - 120	0.70	20		D	11/15/12
Phosphate-P	PO4-P		1.98	ug/mL	102.5	80 - 120	2.00	20		D	11/15/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Sulfate	14808-79-8		4.26	ug/mL	107.5	80 - 120	0.40	20	D	11/15/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121467

Analytical Batch 210650 (QC Batch: 210649) **Test** SW-846 8260B Volatiles
Associated Samples 121467011, 121467012, 121467013, 121467014, 121467015, 121467016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85357**							
1,1-Dichloroethene	75-35-4		<1	ug/L					U	11/20/12
Trichloroethene	79-01-6		<1	ug/L					U	11/20/12
Benzene	71-43-2		<1	ug/L					U	11/20/12
Toluene	108-88-3		<1	ug/L					U	11/20/12
Chlorobenzene	108-90-7		<1	ug/L					U	11/20/12
1,1-Dichloroethane	75-34-3		<1	ug/L					U	11/20/12
Ethylbenzene	100-41-4		<1	ug/L					U	11/20/12
1,2-Dichloroethane	107-06-2		<1	ug/L					U	11/20/12
Methyl isobutyl ketone	108-10-1		<1	ug/L					U	11/20/12
Tetrachloroethene	127-18-4		<1	ug/L					U	11/20/12
Total Xylenes	1330-20-7		<1	ug/L					U	11/20/12
Carbon tetrachloride	56-23-5		<1	ug/L					U	11/20/12
Acetone	67-64-1		<1	ug/L					U	11/20/12
Chloroform	67-66-3		<1	ug/L					U	11/20/12
1,1,1-Trichloroethane	71-55-6		<1	ug/L					U	11/20/12
Vinyl chloride	75-01-4		<1	ug/L					U	11/20/12
Methylene chloride	75-09-2		<1	ug/L					U	11/20/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121467

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Carbon disulfide	75-15-0		<1	ug/L					U	11/20/12
Methyl ethyl ketone	78-93-3		<1	ug/L					U	11/20/12
1,1,2-Trichloroethane	79-00-5		<1	ug/L					U	11/20/12
1-Butanol	71-36-3		<100	ug/L					U	11/20/12
Tetrahydrofuran	109-99-9		<2	ug/L					U	11/20/12
trans-1,2-Dichloroethene	156-60-5		<1	ug/L					U	11/20/12
cis-1,2-Dichloroethene	156-59-2		<1	ug/L					U	11/20/12
Propionitrile	107-12-0		<2	ug/L					U	11/20/12
1,4-Dichlorobenzene	106-46-7		<1	ug/L					U	11/20/12
LCS			**QC Sample #85358**							
1,1-Dichloroethene	75-35-4		19	ug/L	75.8	75 - 125				11/20/12
Trichloroethene	79-01-6		23	ug/L	92.1	75 - 125				11/20/12
Benzene	71-43-2		24	ug/L	95.3	75 - 125				11/20/12
Toluene	108-88-3		23	ug/L	92.1	75 - 125				11/20/12
Chlorobenzene	108-90-7		22	ug/L	89.8	75 - 125				11/20/12
1,1-Dichloroethane	75-34-3		22	ug/L	89.8	75 - 125				11/20/12
Ethylbenzene	100-41-4		24	ug/L	94.2	75 - 125				11/20/12
1,2-Dichloroethane	107-06-2		22	ug/L	89.9	75 - 125				11/20/12
1,1,1-Trichloroethane	71-55-6		22	ug/L	90	75 - 125				11/20/12
Carbon disulfide	75-15-0		20	ug/L	79	75 - 125				11/20/12
1,1,2-Trichloroethane	79-00-5		22	ug/L	89.9	75 - 125				11/20/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121467

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
trans-1,2-Dichloroethene	156-60-5		21	ug/L	83.8	75 - 125				11/20/12
cis-1,2-Dichloroethene	156-59-2		23	ug/L	93.9	75 - 125				11/20/12
MS			**QC Sample #85359**							
			Original 121464012							
1,1-Dichloroethene	75-35-4		20	ug/L	78.7	75 - 125				11/21/12
Trichloroethene	79-01-6		24	ug/L	95.2	75 - 125				11/21/12
Benzene	71-43-2		25	ug/L	99.8	75 - 125				11/21/12
Toluene	108-88-3		25	ug/L	98.7	75 - 125				11/21/12
Chlorobenzene	108-90-7		24	ug/L	96.9	75 - 125				11/21/12
1,1-Dichloroethane	75-34-3		23	ug/L	93.4	75 - 125				11/21/12
Ethylbenzene	100-41-4		25	ug/L	101.6	75 - 125				11/21/12
1,2-Dichloroethane	107-06-2		24	ug/L	96.7	75 - 125				11/21/12
1,1,1-Trichloroethane	71-55-6		23	ug/L	93.8	75 - 125				11/21/12
Carbon disulfide	75-15-0		21	ug/L	83.6	75 - 125				11/21/12
1,1,2-Trichloroethane	79-00-5		24	ug/L	94.1	75 - 125				11/21/12
trans-1,2-Dichloroethene	156-60-5		23	ug/L	91.1	75 - 125				11/21/12
cis-1,2-Dichloroethene	156-59-2		24	ug/L	97.4	75 - 125				11/21/12
MSD			**QC Sample #85360**							
			Original 121464012					**Paired**	**85359**	
1,1-Dichloroethene	75-35-4		20	ug/L	78.7	75 - 125	0.00	20		11/21/12
Trichloroethene	79-01-6		24	ug/L	94.7	75 - 125	0.50	20		11/21/12
Benzene	71-43-2		25	ug/L	99.3	75 - 125	0.60	20		11/21/12
Toluene	108-88-3		25	ug/L	99.4	75 - 125	0.60	20		11/21/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121467

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chlorobenzene	108-90-7		24	ug/L	96.5	75 - 125	0.40	20		11/21/12
1,1-Dichloroethane	75-34-3		23	ug/L	92.5	75 - 125	0.90	20		11/21/12
Ethylbenzene	100-41-4		26	ug/L	102.4	75 - 125	0.80	20		11/21/12
1,2-Dichloroethane	107-06-2		24	ug/L	94.3	75 - 125	2.50	20		11/21/12
1,1,1-Trichloroethane	71-55-6		24	ug/L	94.4	75 - 125	0.70	20		11/21/12
Carbon disulfide	75-15-0		21	ug/L	83.1	75 - 125	0.60	20		11/21/12
1,1,2-Trichloroethane	79-00-5		23	ug/L	92.4	75 - 125	1.80	20		11/21/12
trans-1,2-Dichloroethene	156-60-5		23	ug/L	91	75 - 125	0.10	20		11/21/12
cis-1,2-Dichloroethene	156-59-2		24	ug/L	97.6	75 - 125	0.20	20		11/21/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121467

Analytical Batch 210743 (QC Batch: 210359) **Test** Tritium by LSC
Associated Samples 121467015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85145**							
Tritium	10028-17-8		-110	pCi/L					U	11/26/12
LCS			**QC Sample #85146**							
Tritium	10028-17-8		3100	pCi/L	100.6	80 - 120				11/26/12
DUP			**QC Sample #85147**							
			Original 121461004							
Tritium	10028-17-8		3700	pCi/L			5.40	20		11/26/12
MS			**QC Sample #85148**							
			Original 121461004							
Tritium	10028-17-8		21000	pCi/L	100	75 - 125				11/26/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF121467

Analytical Batch 210753 (QC Batch: 210753) **Test** Total Alkalinity as mg/L CaCO3 (Water)
Associated Samples 121467011, 121467012, 121467013, 121467014, 121467015

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

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

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121467

Analytical Batch 210828 (QC Batch: 210416) **Test** Uranium (AEA)
Associated Samples 121467015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #85221**								
Uranium-234	U-233/234		0.59	pCi/L						X	11/28/12
Uranium-235	15117-96-1		0.089	pCi/L						X	11/28/12
Uranium-238	U-238		0.65	pCi/L						X	11/28/12
LCS			**QC Sample #85222**								
Uranium-238	U-238		9.0	pCi/sample	105.8	80 - 120					11/28/12
DUP			**QC Sample #85223**								
			Original 121467015								
Uranium-234	U-233/234	14	14	pCi/L			0.70	20			11/28/12
Uranium-235	15117-96-1	0.99	0.77	pCi/L			25.90	20	*	X	11/28/12
Uranium-238	U-238	14	13	pCi/L			3.10	20			11/28/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121467

Analytical Batch 211024 (QC Batch: 210363) **Test** GAB Discrete analysis Alpha only
Associated Samples 121467011, 121467012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85159**							
Gross Alpha	12587-46-1		0.36	pCi/L					U	12/05/12
LCS			**QC Sample #85160**							
Gross Alpha	12587-46-1		59	pCi/L	99.2	80 - 120				12/05/12
DUP			**QC Sample #85161**							
			Original 121464012							
Gross Alpha	12587-46-1		-0.24	pCi/L			-0.40	20	U	12/05/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121467

Analytical Batch 211025 (QC Batch: 210363) **Test** GAB Discrete analysis Beta only
Associated Samples 121467011, 121467012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85159**							
Gross Beta	12587-47-2		-2.4	pCi/L					U	12/05/12
LCS			**QC Sample #85160**							
Gross Beta	12587-47-2		250	pCi/L	100.3	80 - 120				12/05/12
DUP			**QC Sample #85161**							
			Original 121464012							
Gross Beta	12587-47-2		4.4	pCi/L			15.30	20		12/05/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121467

Analytical Batch 211028 (QC Batch: 210364)
Associated Samples 121467013, 121467014, 121467015

Test GAB Discrete analysis Alpha only

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85162**							
Gross Alpha	12587-46-1		-0.41	pCi/L					U	12/05/12
LCS			**QC Sample #85163**							
Gross Alpha	12587-46-1		68	pCi/L	96.6	80 - 120				12/05/12
DUP			**QC Sample #85164**							
			Original 121467013							
Gross Alpha	12587-46-1	22	21	pCi/L			2.80	20		12/05/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121467

Analytical Batch 211029 (QC Batch: 210364)
Associated Samples 121467013, 121467014, 121467015

Test GAB Discrete analysis Beta only

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85162**							
Gross Beta	12587-47-2		1.1	pCi/L					U	12/05/12
LCS			**QC Sample #85163**							
Gross Beta	12587-47-2		290	pCi/L	96.5	80 - 120				12/05/12
DUP			**QC Sample #85164**							
			Original 121467013							
Gross Beta	12587-47-2	28	23	pCi/L			17.30	20		12/05/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

Analytical Batch 211129 (QC Batch: 211116) **Test** ICP-6010 - All possible metals
Associated Samples 121467006, 121467007, 121467008, 121467009, 121467010, 121467011, 121467012, 121467013, 121467014, 121467015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #85817**							
Iron	7439-89-6		<19	ug/L					U	12/04/12
Magnesium	7439-95-4		<4.0	ug/L					U	12/04/12
Manganese	7439-96-5		<4.0	ug/L					U	12/04/12
Nickel	7440-02-0		<4.0	ug/L					U	12/04/12
Potassium	7440-09-7		<76	ug/L					U	12/04/12
Silver	7440-22-4		<4.0	ug/L					U	12/04/12
Sodium	7440-23-5		<10	ug/L					U	12/04/12
Antimony	7440-36-0		<36	ug/L					U	12/04/12
Barium	7440-39-3		<4.0	ug/L					U	12/04/12
Cadmium	7440-43-9		<4.0	ug/L					U	12/04/12
Chromium	7440-47-3		<5.0	ug/L					U	12/04/12
Cobalt	7440-48-4		<4.0	ug/L					U	12/04/12
Copper	7440-50-8		<4.0	ug/L					U	12/04/12
Vanadium	7440-62-2		<5.0	ug/L					U	12/04/12
Zinc	7440-66-6		<5.0	ug/L					U	12/04/12
Calcium	7440-70-2		<49	ug/L					U	12/04/12
Strontium	7440-24-6		<9.0	ug/L					U	12/04/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Beryllium	7440-41-7		<4.0	ug/L					U	12/04/12
LCS			**QC Sample #85819**							
Iron	7439-89-6		1030	ug/L	103	80 - 120				12/04/12
Magnesium	7439-95-4		10400	ug/L	104	80 - 120				12/04/12
Manganese	7439-96-5		1040	ug/L	104.3	80 - 120				12/04/12
Nickel	7440-02-0		1030	ug/L	103	80 - 120				12/04/12
Potassium	7440-09-7		10700	ug/L	107.4	80 - 120				12/04/12
Silver	7440-22-4		1030	ug/L	102.5	80 - 120				12/04/12
Sodium	7440-23-5		10400	ug/L	104.1	80 - 120				12/04/12
Antimony	7440-36-0		1050	ug/L	104.8	80 - 120				12/04/12
Barium	7440-39-3		1040	ug/L	103.7	80 - 120				12/04/12
Cadmium	7440-43-9		1030	ug/L	102.9	80 - 120				12/04/12
Chromium	7440-47-3		1040	ug/L	103.9	80 - 120				12/04/12
Cobalt	7440-48-4		1020	ug/L	101.8	80 - 120				12/04/12
Copper	7440-50-8		1040	ug/L	103.8	80 - 120				12/04/12
Vanadium	7440-62-2		1030	ug/L	102.7	80 - 120				12/04/12
Zinc	7440-66-6		1050	ug/L	105.4	80 - 120				12/04/12
Calcium	7440-70-2		21000	ug/L	105	80 - 120				12/04/12
Strontium	7440-24-6		1020	ug/L	101.9	80 - 120				12/04/12
Beryllium	7440-41-7		1040	ug/L	104	80 - 120				12/04/12
MS			**QC Sample #85820**							
			Original 121464012							
Iron	7439-89-6		1010	ug/L	101.3	75 - 125				12/04/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Magnesium	7439-95-4		10500	ug/L	105.3	75 - 125				12/04/12
Manganese	7439-96-5		1030	ug/L	102.7	75 - 125				12/04/12
Nickel	7440-02-0		995	ug/L	99.5	75 - 125				12/04/12
Potassium	7440-09-7		10900	ug/L	109.1	75 - 125				12/04/12
Silver	7440-22-4		1010	ug/L	101.4	75 - 125				12/04/12
Sodium	7440-23-5		10500	ug/L	104.8	75 - 125				12/04/12
Antimony	7440-36-0		1060	ug/L	105.5	75 - 125				12/04/12
Barium	7440-39-3		1040	ug/L	103.8	75 - 125				12/04/12
Cadmium	7440-43-9		1020	ug/L	102.1	75 - 125				12/04/12
Chromium	7440-47-3		1020	ug/L	102.1	75 - 125				12/04/12
Cobalt	7440-48-4		985	ug/L	98.5	75 - 125				12/04/12
Copper	7440-50-8		1040	ug/L	103.6	75 - 125				12/04/12
Vanadium	7440-62-2		1020	ug/L	101.5	75 - 125				12/04/12
Zinc	7440-66-6		1040	ug/L	104.4	75 - 125				12/04/12
Calcium	7440-70-2		21700	ug/L	108.4	75 - 125				12/04/12
Strontium	7440-24-6		1000	ug/L	100.4	75 - 125				12/04/12
Beryllium	7440-41-7		1040	ug/L	103.6	75 - 125				12/04/12
MSD			**QC Sample #85821**							
			Original 121464012						**Paired 85820**	
Iron	7439-89-6		1010	ug/L	101.2	75 - 125	0.10	20		12/04/12
Magnesium	7439-95-4		10400	ug/L	104	75 - 125	0.70	20		12/04/12
Manganese	7439-96-5		1020	ug/L	102.1	75 - 125	0.60	20		12/04/12
Nickel	7440-02-0		989	ug/L	98.9	75 - 125	0.60	20		12/04/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7		10800	ug/L	107.8	75 - 125	0.80	20		12/04/12
Silver	7440-22-4		1010	ug/L	100.6	75 - 125	0.70	20		12/04/12
Sodium	7440-23-5		10300	ug/L	102.8	75 - 125	1.10	20		12/04/12
Antimony	7440-36-0		1030	ug/L	103.2	75 - 125	2.20	20		12/04/12
Barium	7440-39-3		1030	ug/L	102.6	75 - 125	1.10	20		12/04/12
Cadmium	7440-43-9		1010	ug/L	101.2	75 - 125	0.90	20		12/04/12
Chromium	7440-47-3		1020	ug/L	102	75 - 125	0.10	20		12/04/12
Cobalt	7440-48-4		980	ug/L	98	75 - 125	0.50	20		12/04/12
Copper	7440-50-8		1020	ug/L	102.2	75 - 125	1.40	20		12/04/12
Vanadium	7440-62-2		1010	ug/L	101	75 - 125	0.50	20		12/04/12
Zinc	7440-66-6		1030	ug/L	103.1	75 - 125	1.30	20		12/04/12
Calcium	7440-70-2		21800	ug/L	109.1	75 - 125	0.20	20		12/04/12
Strontium	7440-24-6		996	ug/L	99.6	75 - 125	0.60	20		12/04/12
Beryllium	7440-41-7		1030	ug/L	103	75 - 125	0.60	20		12/04/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121467

Analytical Batch 211274 (QC Batch: 211267) **Test** ICP-2008 MS All possible metal
Associated Samples 121467011, 121467012, 121467013, 121467014, 121467015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #86053**							
Uranium	7440-61-1		<0.050	ug/L					U	12/06/12
LCS			**QC Sample #86054**							
Uranium	7440-61-1		40.8	ug/L	102.1	85 - 115				12/06/12
MS			**QC Sample #86055**							
			Original 121456006							
Uranium	7440-61-1		46.1	ug/L	115.2	70 - 130				12/06/12
MSD			**QC Sample #86056**							
			Original 121456006					**Paired 86055**		
Uranium	7440-61-1		47.0	ug/L	117.4	70 - 130	1.80	20		12/06/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121467

Analytical Batch 210650 (QC Batch: 210649) **Test** SW-846 8260B Volatiles
Associated Samples 121467011, 121467012, 121467013, 121467014, 121467015, 121467016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121467011**							
1,2-Dichloroethane-d4	17060-07-0				94.5	75 - 125				11/21/12
Toluene-d8	2037-26-5				94.3	75 - 125				11/21/12
4-Bromofluorobenzene	460-00-4				99.2	75 - 125				11/21/12
SAMPLE			**Sample #121467012**							
1,2-Dichloroethane-d4	17060-07-0				99.4	75 - 125				11/21/12
Toluene-d8	2037-26-5				94.2	75 - 125				11/21/12
4-Bromofluorobenzene	460-00-4				99.1	75 - 125				11/21/12
SAMPLE			**Sample #121467013**							
1,2-Dichloroethane-d4	17060-07-0				99.4	75 - 125				11/21/12
Toluene-d8	2037-26-5				92.8	75 - 125				11/21/12
4-Bromofluorobenzene	460-00-4				99.6	75 - 125				11/21/12
SAMPLE			**Sample #121467014**							
1,2-Dichloroethane-d4	17060-07-0				99.2	75 - 125				11/21/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121467

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Toluene-d8	2037-26-5				93.8	75 - 125				11/21/12
4-Bromofluorobenzene	460-00-4				100.3	75 - 125				11/21/12
SAMPLE			**Sample #121467015**							
1,2-Dichloroethane-d4	17060-07-0				96.4	75 - 125				11/21/12
Toluene-d8	2037-26-5				94.3	75 - 125				11/21/12
4-Bromofluorobenzene	460-00-4				100.7	75 - 125				11/21/12
SAMPLE			**Sample #121467016**							
1,2-Dichloroethane-d4	17060-07-0				102.4	75 - 125				11/21/12
Toluene-d8	2037-26-5				92.8	75 - 125				11/21/12
4-Bromofluorobenzene	460-00-4				101.4	75 - 125				11/21/12
BLANK			**QC Sample #85357**							
1,2-Dichloroethane-d4	17060-07-0				92.9	75 - 125				11/20/12
Toluene-d8	2037-26-5				92	75 - 125				11/20/12
4-Bromofluorobenzene	460-00-4				96.6	75 - 125				11/20/12
LCS			**QC Sample #85358**							
1,2-Dichloroethane-d4	17060-07-0				95.7	75 - 125				11/20/12
Toluene-d8	2037-26-5				90.4	75 - 125				11/20/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121467

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
4-Bromofluorobenzene	460-00-4				95.8	75 - 125				11/20/12
MS			**QC Sample #85359**							
			Original 121464012							
1,2-Dichloroethane-d4	17060-07-0				94.8	75 - 125				11/21/12
Toluene-d8	2037-26-5				92.6	75 - 125				11/21/12
4-Bromofluorobenzene	460-00-4				96.1	75 - 125				11/21/12
MSD			**QC Sample #85360**							
			Original 121464012					**Paired**	**85359**	
1,2-Dichloroethane-d4	17060-07-0				92.7	75 - 125	n/a			11/21/12
Toluene-d8	2037-26-5				92.8	75 - 125	n/a			11/21/12
4-Bromofluorobenzene	460-00-4				94.9	75 - 125	n/a			11/21/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121467

Analytical Batch 210828 (QC Batch: 210416) **Test** Uranium (AEA)
Associated Samples 121467015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #121467015**							
Uranium-232 Tracer	14158-29-3				94	25 - 105				11/28/12
BLANK			**QC Sample #85221**							
Uranium-232 Tracer	14158-29-3				90.5	25 - 105				11/28/12
LCS			**QC Sample #85222**							
Uranium-232 Tracer	14158-29-3				65.2	25 - 105				11/28/12
DUP			**QC Sample #85223**							
			Original 121467015							
Uranium-232 Tracer	14158-29-3				90	25 - 105	n/a			11/28/12

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

Analytical Comment Report

Attention: Scot Fitzgerald

Group # WSCF121467

Quality Control Comments

Department Inorganic

85178 B2MYX0(121464009DUP)

Analyte Nitrite-N - Anions by Ion Chromatography (Water)

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

Analytical Comment Report

Attention: Scot Fitzgerald

Group # WSCF121467

Quality Control Comments

Department Radiochemistry

85221 BLANK for HBN 210416 [RADP/736

Analyte Uranium-234 - Uranium (AEA)

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

Analyte Uranium-235 - Uranium (AEA)

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

Analyte Uranium-238 - Uranium (AEA)

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

85223 B2N0L9(121467015DUP)

Analyte Uranium-235 - Uranium (AEA)

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

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 14 pages
Including cover page

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

ACKNOWLEDGEMENT OF SAMPLES RECEIVED

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

ATTN: Scot Fitzgerald

Customer Code: CHPRC
PO #: 401647
Work Order #: 121467
Profile #: S13-012-475
Proj. Mgr.:
Phone:

The following samples were received from you on 11/15/2012 2:40:00 PM. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
		Tests scheduled		
121467001	B2N0M0	WATER	11/15/2012 13:35	11/15/2012 14:40
		IC-W		
121467002	B2N0D9	WATER	11/15/2012 11:16	11/15/2012 14:40
		IC-W		
121467003	B2N0M4	WATER	11/15/2012 12:49	11/15/2012 14:40
		IC-W		
121467004	B2N0C3	WATER	11/15/2012 09:56	11/15/2012 14:40
		IC-W		
121467005	B2MMM3	WATER	11/15/2012 08:45	11/15/2012 14:40
		IC-W		
121467006	B2N0F0	WATER	11/15/2012 11:16	11/15/2012 14:40
		6010-W		
121467007	B2N0M5	WATER	11/15/2012 12:49	11/15/2012 14:40
		6010-W		
121467008	B2N0C4	WATER	11/15/2012 09:56	11/15/2012 14:40
		6010-W		
121467009	B2MMM4	WATER	11/15/2012 08:45	11/15/2012 14:40
		6010-W		
121467010	B2N0M1	WATER	11/15/2012 13:35	11/15/2012 14:40
		6010-W		
121467011	B2N0D8	WATER	11/15/2012 11:16	11/15/2012 14:40

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

		2008-W; 6010-W; 8260V-W; ALK-W; GAB-AO-W; GAB-BO-W		
121467012	B2N0M3	WATER	11/15/2012 12:49	11/15/2012 14:40
		2008-W; 6010-W; 8260V-W; ALK-W; GAB-AO-W; GAB-BO-W		
121467013	B2N0C2	WATER	11/15/2012 09:56	11/15/2012 14:40
		2008-W; 6010-W; 8260V-W; ALK-W; GAB-AO-W; GAB-BO-W		
121467014	B2MMM2	WATER	11/15/2012 08:45	11/15/2012 14:40
		2008-W; 6010-W; 8260V-W; ALK-W; GAB-AO-W; GAB-BO-W		
121467015	B2N0L9	WATER	11/15/2012 13:35	11/15/2012 14:40
		2008-W; 6010-W; 8260V-W; AEA-U-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
121467016	B2N2P5	WATER	11/15/2012 08:45	11/15/2012 14:40
		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)
IC-W	Anions by IC (W)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S13-012-475**

Page 1 of 1

Collector JANELLE ZUNKER		**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 Rel 40		**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		**SPECIAL INSTRUCTIONS**		**Hold Time** Total Activity Exemption: Yes ☑ No ☐	
*** 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)		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.			
121467					
Sample No.	Filter	Date	Time	No/Type Container	Sample Analysis
B2N0M0 1	N W	11-15-12	1335	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)

Holding Time	Preservative
48 Hours	Cool-4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
JANELLE ZUNKER	Janelle Zunker	NOV 15 2012	1440	TA Envr		NOV 15 2012	1440
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			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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A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S13-012-449**

Page 1 of 1

Collector JANELLE ZUNKER	**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 36 / 40	**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
B2N0D9	N	W	11-15-12	1116	1x500-mL P	300.0_ANIONS_IC: List-1 (6)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
JANELLE ZUNKER		NOV 15 2012	1440				
Relinquished By		Date/Time		Received By			Date/Time
Relinquished By		Date/Time		Received By			Date/Time
Relinquished By		Date/Time		Received By			Date/Time

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. # S13-012-477

Page 1 of 1

Collector: JANELLE ZUNKER	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650	Purchase Order/Charge Code: 300071ES20		
SAF No.: S13-012	Sampling Origin: Hanford Site	Logbook No.: HNF-N-506 36 / 40	Ice Chest No.: N/A		
Project Title: SURV, DECEMBER 2012	Method of Shipment: GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.: N/A			
Shipped To (Lab): Waste Sampling & Characterization	Priority: 31 Days	Offsite Property No.: N/A			
Protocol: SURV	**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
B2N0M4 3	N	W	11-15-12	1249	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	48 Hours	Cool-4C

Relinquished By	Print:	Sign	Date/Time	Received By	Print	Sign	Date/Time
JANELLE ZUNKER		NOV 15 2012	1440	TA Express			NOV 15 2012 1440
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	

FINAL SAMPLE DISPOSITION

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

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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A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S13-012-441**

Page 1 of 1

Collector JANELLE ZUNKER	**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 26/40	**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 101647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2N0C3 4	N	W	11-15-12	0956	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	48 Hours	Cool-4C

Relinquished By	Print	Sign	Date/Time	**Received By**	Print	Sign	Date/Time	**Matrix ***
JANELLE ZUNKER		NOV 15 2012	1440	TA FAAZ, ES		NOV 15 2012	1440	S = Soil DS = Drum Solids
Relinquished By		Date/Time		**Received By**		Date/Time		SE = Sediment DL = Drum Liquids
								SO = Solid T = Tissue
Relinquished By		Date/Time		**Received By**		Date/Time		SL = Sludge WI = Wipe
								W = Water L = Liquid
								O = Oil V = Vegetation
Relinquished By		Date/Time		**Received By**		Date/Time		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. # **S13-011-259**

Page 1 of 1

Collector: JANELLE ZUNKER		Contact/Requester: Karen Waters-Husted		Telephone No.: 376-4650	
SAF No.: S13-011		Sampling Origin: Hanford Site		Purchase Order/Charge Code: 300071ES20	
Project Title: SURV, NOVEMBER 2012		Logbook No.: HNF-N-506 36/40		Ice Chest No.: N/A	
Shipped To (Lab): Waste Sampling & Characterization		Method of Shipment: GOVERNMENT VEHICLE		Bill of Lading/Air Bill No.: N/A	
Protocol: CERCLA		Priority: 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

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.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MMM3	N	W	11-15-12	0845	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
JANELLE ZUNKER		NOV 15 2012	1440	TA Frazier		NOV 15 2012	1440
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	

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)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# **S13-012-448**

Page 1 of 1

Collector JANELLE ZUNKER		**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 36 / 40		**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		**SPECIAL INSTRUCTIONS**		**Hold Time**	Total Activity Exemption: Yes ☑ No ☐
**** 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)		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
B2N0D8 11	N	W	11-15-12	1116	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N0D8	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2N0D8	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0D8	N	W			3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2N0D8	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2N0F0 6	Y	W	11-15-12	1116	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
JANELLE ZUNKER	Janelle Zunker	NOV 15 2012	1440	TR Frazier		NOV 15 2012	1440
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	

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

PRINTED ON 10/24/2012

A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # S13-012-476

Page 1 of 1

Collector JANELLE ZUNKER		**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 36/40		**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 ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2N0M5 7	Y	W	11-15-12	1249	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0M3 12	N	W	11-15-12		1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N0M3	N	W	11-15-12		1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2N0M3	N	W	11-15-12		1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0M3	N	W	11-15-12		3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2N0M3 √	N	W	11-15-12	1249	1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By
JANELLE ZUNKER		NOV 15 2012	1440	TA Frazier
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By
Relinquished By	Date/Time	Received By	Date/Time	Relinquished By
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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A-6004-842 (REV 2)

Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# S13-012-440

Page 1 of 1

Collector JANELLE ZUNKER	**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 36 / 40	**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
B2N0C2	13	N	W	11-15-12	0956	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N0C2	1	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2N0C2	1	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0C2		N	W			3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2N0C2	Y	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2N0C4	8	Y	W	11-15-12	0956	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2

	Print	Sign	Date/Time
Relinquished By	JANELLE ZUNKER		NOV 15 2012 1440
Received By			
Relinquished By			Date/Time
Received By			Date/Time
Relinquished By			Date/Time
Received By			Date/Time
Relinquished By			Date/Time
Received By			Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)	Disposed By	Date/Time

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A-6004-842 (REV 2)

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		

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S13-011-258**

Page 1 of 1

Collector JANELLE ZUNKER	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650			
SAF No. S13-011	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300071ES20			
Project Title SURV, NOVEMBER 2012	**Logbook No.** HNF-N-506 36 / 40	**Ice Chest No.** N/A			
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.** N/A			
Protocol CERCLA	**Priority:** 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 ☐		

Sample No.	Filter *		Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2MMM2 14	N	W	11-15-12	0845	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2MMM2	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2MMM2	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2MMM2	N	W			3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2MMM2	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2MMM4 9	Y	W	11-15-12	0845	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
JANELLE ZUNKER	Janelle Zunker	NOV 15 2012 1440		TA Gonzalez	Vanessa Gonzalez	NOV 15 2012 1440	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			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.# S13-012-474

Page 1 of 1

Collector	JANELLE ZUNKER	**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 36 / 40	**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 ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2N0M1 10	Y	W	11-15-12	1335	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0L9 15	N	W			1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2N0L9	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool-4C
B2N0L9	N	W			1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2N0L9	N	W			3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool-4C
B2N0L9	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2N0L9	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2N0L9	N	W	11-15-12	1335	1x1-L G/P	UISO_IE_PRECIP_AEA: List-1 (3)	6 Months	HNO3 to pH <2

	Print	Sign	Date/Time
Relinquished By JANELLE ZUNKER		NOV 15 2012	1440
Received By			
Relinquished By			
Received By			
Relinquished By			
Received By			
Relinquished By			
Received By			

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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Sample Receipt

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **X13-002-045**

Page 1 of 1

Collector	JANELLE ZUNKER	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 36 / 40		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 CACN 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
B2N2P5	N	W	11-15-12	0845	1x20-mL P	Activity Scan	6 Months	None
B2N2P6	N	W	11-15-12	0845	3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C

Relinquished By	Print JANELLE ZUNKER	Sign	Date/Time NOV 15 2012 1440	Received By	Print	Sign	Date/Time NOV 15 2012 1440
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposal 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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