

DECEMBER 19, 2012

WSCF Laboratory

PO Box 650 S3-30
Richland, WA 99352



December 19, 2012

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

Dear Scot Fitzgerald,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF121541

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 WSCF121541

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

Very truly yours,

A handwritten signature in black ink, appearing to read "Dan T. Smith".

Electronically signed by Joseph Hale
For Lab Manager, Dan T. Smith
WSCF Analytical Lab
(509) 373-4804

Attachments 4

CC: w/Attachments

File/LB

DECEMBER 19, 2012

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF121541
 Data Deliverable Date 12/19/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F12-028	B2N860	121541001	WATER	12/04/12	12/04/12
F12-028	B2N874	121541002	WATER	12/04/12	12/04/12
F12-028	B2N871	121541003	WATER	12/04/12	12/04/12
F12-028	B2N868	121541004	WATER	12/04/12	12/04/12
F12-028	B2N864	121541005	WATER	12/04/12	12/04/12
F12-028	B2N883	121541006	WATER	12/04/12	12/04/12
F12-028	B2N880	121541007	WATER	12/04/12	12/04/12
F12-028	B2N856	121541008	WATER	12/04/12	12/04/12
F12-028	B2N861	121541009	WATER	12/04/12	12/04/12
F12-028	B2N881	121541010	WATER	12/04/12	12/04/12
F12-028	B2N875	121541011	WATER	12/04/12	12/04/12
F12-028	B2N872	121541012	WATER	12/04/12	12/04/12
F12-028	B2N869	121541013	WATER	12/04/12	12/04/12
F12-028	B2N865	121541014	WATER	12/04/12	12/04/12
F12-028	B2N884	121541015	WATER	12/04/12	12/04/12
F12-028	B2N857	121541016	WATER	12/04/12	12/04/12

DECEMBER 19, 2012

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Introduction

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

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

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

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

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

Analytical Methodology for Requested Analyses

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

Inorganic Comments

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.

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

- All 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. Technetium-99 is analyzed without prep therefore there is no Matrix Spike or Matrix Spike Duplicate with analysis. Analytical Note(s):

- Batch QC 211627
 - Vanadium and Arsenic were detected in the Blank and evaluated.
- Batch QC 211287
 - Aluminum and Strontium were detected in the Blank and evaluated.
 - All other 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):

- Samples B2N881 (121541010), B2N875 (121541011) and B2N857 (121541016) did not meet the acceptance limits for surrogate 1,2-dichloroethane-d4. Sample results

were not flagged. The quality control report was flagged for surrogate recovery failure.

- All other 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):

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.

DECEMBER 19, 2012

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 73 pages
Including cover page

DECEMBER 19, 2012

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Scot Fitzgerald

Contract # MOA-FH-CHPRC-2008
Group # WSCF121541
Report Date December 19, 2012

Analytical: Electronically signed by Joseph Hale

Client Services: Electronically signed by Heather Medley

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

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

Batch QC List

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121541

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
211247	211247	2	BLANK	86015	BLANK		Anions by Ion Chromatography (Water)
211247	211247	3	LCS	86016	LCS		Anions by Ion Chromatography (Water)
211247	211247	4	DUP	86017	B2MVK2(121539009DUP	121539009	Anions by Ion Chromatography (Water)
211247	211247	5	MS	86018	B2MVK2(121539009MS)	121539009	Anions by Ion Chromatography (Water)
211247	211247	6	MSD	86019	B2MVK2(121539009MSD	121539009	Anions by Ion Chromatography (Water)
211247	211247	11	SAMPLE	121541009	B2N861		Anions by Ion Chromatography (Water)
211247	211247	12	SAMPLE	121541010	B2N881		Anions by Ion Chromatography (Water)
211247	211247	13	SAMPLE	121541011	B2N875		Anions by Ion Chromatography (Water)
211247	211247	14	SAMPLE	121541012	B2N872		Anions by Ion Chromatography (Water)
211247	211247	15	SAMPLE	121541013	B2N869		Anions by Ion Chromatography (Water)
211247	211247	16	SAMPLE	121541014	B2N865		Anions by Ion Chromatography (Water)
211247	211247	17	SAMPLE	121541015	B2N884		Anions by Ion Chromatography (Water)
211247	211247	18	SAMPLE	121541016	B2N857		Anions by Ion Chromatography (Water)
211262	211317	5	BLANK	86048	BLANK		ICP-6010 - All possible metals
211262	211317	7	LCS	86050	LCS		ICP-6010 - All possible metals
211262	211317	9	MS	86051	B2MM08(121501017MS)	121501017	ICP-6010 - All possible metals
211262	211317	10	MSD	86052	B2MM08(121501017MSD	121501017	ICP-6010 - All possible metals
211262	211317	19	SAMPLE	121541009	B2N861		ICP-6010 - All possible metals
211262	211317	22	SAMPLE	121541010	B2N881		ICP-6010 - All possible metals
211262	211317	23	SAMPLE	121541011	B2N875		ICP-6010 - All possible metals
211262	211317	24	SAMPLE	121541012	B2N872		ICP-6010 - All possible metals
211262	211317	25	SAMPLE	121541013	B2N869		ICP-6010 - All possible metals
211262	211317	26	SAMPLE	121541014	B2N865		ICP-6010 - All possible metals

Batch QC List

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121541

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
211262	211317	27	SAMPLE	121541015	B2N884		ICP-6010 - All possible metals
211262	211317	28	SAMPLE	121541016	B2N857		ICP-6010 - All possible metals
211272	211272	2	BLANK	86069	BLANK		Anions by Ion Chromatography (Water)
211272	211272	3	LCS	86070	LCS		Anions by Ion Chromatography (Water)
211272	211272	4	DUP	86071	B2N1F7(121544007DUP) 121544007		Anions by Ion Chromatography (Water)
211272	211272	5	MS	86072	B2N1F7(121544007MS) 121544007		Anions by Ion Chromatography (Water)
211272	211272	6	MSD	86073	B2N1F7(121544007MSD) 121544007		Anions by Ion Chromatography (Water)
211272	211272	8	SAMPLE	121541010	B2N881		Anions by Ion Chromatography (Water)
211272	211272	9	SAMPLE	121541011	B2N875		Anions by Ion Chromatography (Water)
211272	211272	10	SAMPLE	121541012	B2N872		Anions by Ion Chromatography (Water)
211272	211272	11	SAMPLE	121541013	B2N869		Anions by Ion Chromatography (Water)
211272	211272	12	SAMPLE	121541014	B2N865		Anions by Ion Chromatography (Water)
211272	211272	13	SAMPLE	121541015	B2N884		Anions by Ion Chromatography (Water)
211287	211320	4	BLANK	86118	BLANK		ICP-2008 MS All possible metal
211287	211320	5	LCS	86119	LCS		ICP-2008 MS All possible metal
211287	211320	7	MS	86120	B2MML8(121469010MS) 121469010		ICP-2008 MS All possible metal
211287	211320	8	MSD	86121	B2MML8(121469010MSD) 121469010		ICP-2008 MS All possible metal
211287	211320	20	SAMPLE	121541010	B2N881		ICP-2008 MS All possible metal
211287	211320	21	SAMPLE	121541011	B2N875		ICP-2008 MS All possible metal
211287	211320	22	SAMPLE	121541012	B2N872		ICP-2008 MS All possible metal
211287	211320	23	SAMPLE	121541013	B2N869		ICP-2008 MS All possible metal
211287	211320	24	SAMPLE	121541014	B2N865		ICP-2008 MS All possible metal
211287	211320	25	SAMPLE	121541015	B2N884		ICP-2008 MS All possible metal

Batch QC List

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121541

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
211287	211320	26	SAMPLE	121541016	B2N857		ICP-2008 MS All possible metal
211293	211293	1	BLANK	86150	BLANK		Hexavalent chromium Discrete Analyzer
211293	211293	3	LCS	86152	LCS		Hexavalent chromium Discrete Analyzer
211293	211293	4	DUP	86153	B2N874(121541002DUP)	121541002	Hexavalent chromium Discrete Analyzer
211293	211293	5	MS	86154	B2N874(121541002MS)	121541002	Hexavalent chromium Discrete Analyzer
211293	211293	6	SAMPLE	121541001	B2N860		Hexavalent chromium Discrete Analyzer
211293	211293	7	SAMPLE	121541002	B2N874		Hexavalent chromium Discrete Analyzer
211293	211293	8	SAMPLE	121541003	B2N871		Hexavalent chromium Discrete Analyzer
211293	211293	9	SAMPLE	121541004	B2N868		Hexavalent chromium Discrete Analyzer
211293	211293	10	SAMPLE	121541005	B2N864		Hexavalent chromium Discrete Analyzer
211293	211293	11	SAMPLE	121541006	B2N883		Hexavalent chromium Discrete Analyzer
211293	211293	12	SAMPLE	121541007	B2N880		Hexavalent chromium Discrete Analyzer
211293	211293	13	SAMPLE	121541008	B2N856		Hexavalent chromium Discrete Analyzer
211627	211764	4	BLANK	86461	BLANK		ICP-2008 MS All possible metal
211627	211764	5	LCS	86462	LCS		ICP-2008 MS All possible metal
211627	211764	7	MS	86463	B2MYK0(121507004MS)	121507004	ICP-2008 MS All possible metal
211627	211764	8	MSD	86464	B2MYK0(121507004MSD)	121507004	ICP-2008 MS All possible metal
211627	211764	21	SAMPLE	121541009	B2N861		ICP-2008 MS All possible metal

DECEMBER 19, 2012

Batch QC List

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121541

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
	211276	18	SAMPLE	121541015	B2N884		SW-846 8260B Volatiles
211275	211276	1	BLANK	86086	BLANK		SW-846 8260B Volatiles
211275	211276	2	LCS	86087	LCS		SW-846 8260B Volatiles
211275	211276	3	MS	86088	B2N861(121541009MS)	121541009	SW-846 8260B Volatiles
211275	211276	4	MSD	86089	B2N861(121541009MSD)	121541009	SW-846 8260B Volatiles
211275	211276	5	SAMPLE	121541010	B2N881		SW-846 8260B Volatiles
211275	211276	6	SAMPLE	121541010	B2N881		SW-846 8260B Volatiles
211275	211276	7	SAMPLE	121541011	B2N875		SW-846 8260B Volatiles
211275	211276	9	SAMPLE	121541011	B2N875		SW-846 8260B Volatiles
211275	211276	10	SAMPLE	121541012	B2N872		SW-846 8260B Volatiles
211275	211276	11	SAMPLE	121541012	B2N872		SW-846 8260B Volatiles
211275	211276	12	SAMPLE	121541013	B2N869		SW-846 8260B Volatiles
211275	211276	13	SAMPLE	121541013	B2N869		SW-846 8260B Volatiles
211275	211276	14	SAMPLE	121541014	B2N865		SW-846 8260B Volatiles
211275	211276	15	SAMPLE	121541014	B2N865		SW-846 8260B Volatiles
211275	211276	17	SAMPLE	121541015	B2N884		SW-846 8260B Volatiles
211275	211276	19	SAMPLE	121541016	B2N857		SW-846 8260B Volatiles
211275	211276	20	SAMPLE	121541016	B2N857		SW-846 8260B Volatiles
211275	211276	26	SAMPLE	121541009	B2N861		SW-846 8260B Volatiles

Batch QC List

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121541

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
211243	211414	1	BLANK	85980	BLANK		Tritium by LSC
211243	211414	2	LCS	85981	LCS		Tritium by LSC
211243	211414	3	SAMPLE	121541009	B2N861		Tritium by LSC
211243	211414	4	DUP	85982	B2N861(121541009DUP)	121541009	Tritium by LSC
211243	211414	5	MS	85983	B2N861(121541009MS)	121541009	Tritium by LSC
211243	211414	6	SAMPLE	121541010	B2N881		Tritium by LSC
211243	211414	7	SAMPLE	121541011	B2N875		Tritium by LSC
211243	211414	8	SAMPLE	121541012	B2N872		Tritium by LSC
211243	211414	9	SAMPLE	121541013	B2N869		Tritium by LSC
211243	211414	10	SAMPLE	121541014	B2N865		Tritium by LSC
211243	211414	11	SAMPLE	121541015	B2N884		Tritium by LSC
211243	211414	12	SAMPLE	121541016	B2N857		Tritium by LSC
211766	211844	1	BLANK	86682	BLANK		Technetium-99 by ICP MS
211766	211844	2	LCS	86683	LCS		Technetium-99 by ICP MS
211766	211844	3	SAMPLE	121541009	B2N861		Technetium-99 by ICP MS
211766	211844	4	SAMPLE	121541010	B2N881		Technetium-99 by ICP MS
211766	211844	5	SAMPLE	121541011	B2N875		Technetium-99 by ICP MS
211766	211844	6	SAMPLE	121541012	B2N872		Technetium-99 by ICP MS
211766	211844	7	SAMPLE	121541013	B2N869		Technetium-99 by ICP MS
211766	211844	8	SAMPLE	121541014	B2N865		Technetium-99 by ICP MS
211766	211844	9	SAMPLE	121541015	B2N884		Technetium-99 by ICP MS
211766	211844	10	SAMPLE	121541016	B2N857		Technetium-99 by ICP MS

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

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-265-403	Hexavalent Chromium Analysis		
	EPA SW-846	7196A	Hexavalent Chromium
	HEIS	7196_CR6	Hexavalent Chromium
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>

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121541

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>

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121541

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-508-421	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-505-412	Technicium-99 by ICP-MS		
	HEIS	RADISOTOPES_ICPMS	Tc-99 by ICPMS

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 # WSCF121541

Sample # 121541001
SAF# F12-028
Sample ID B2N860

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Hexavalent chromium Discrete Analyzer				<0.0020		mg/L	1	0.0020	0.0050	12/04/12
12/04/12										
Hexavalent chromium										
Hexavalent chromium	18540-29-9	LA-265-403	U	<0.0020		mg/L	1	0.0020	0.0050	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 # WSCF121541

Sample # 121541002
SAF# F12-028
Sample ID B2N874

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
12/04/12										
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.0567		mg/L	1	0.0020	0.0050	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 # WSCF121541

Sample # 121541003
SAF# F12-028
Sample ID B2N871

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
12/04/12										
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.0428		mg/L	1	0.0020	0.0050	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 # WSCF121541

Sample # 121541004
SAF# F12-028
Sample ID B2N868

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
12/04/12										
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.0548		mg/L	1	0.0020	0.0050	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 # WSCF121541

Sample # 121541005
SAF# F12-028
Sample ID B2N864

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
12/04/12										
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium	18540-29-9	LA-265-403		0.0709		mg/L	1	0.0020	0.0050	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 # WSCF121541

Sample # 121541006
SAF# F12-028
Sample ID B2N883

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
12/04/12										
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium 18540-29-9 LA-265-403 0.0438 mg/L 1 0.0020 0.0050 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 # WSCF121541

Sample # 121541007
SAF# F12-028
Sample ID B2N880

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
12/04/12										
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium 18540-29-9 LA-265-403 0.0706 mg/L 1 0.0020 0.0050 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 # WSCF121541

Sample # 121541008
SAF# F12-028
Sample ID B2N856

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
12/04/12										
Hexavalent chromium Discrete Analyzer										
Hexavalent chromium 18540-29-9 LA-265-403 0.0222 mg/L 1 0.0020 0.0050 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 # WSCF121541

Sample #	121541009	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N861	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										12/04/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.323		ug/mL	2	0.046	0.14	12/04/12
Chloride	16887-00-6	LA-533-410	D	36.4		ug/mL	2	0.12	0.81	12/04/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	12/04/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	12/04/12
Nitrate-N	NO3-N	LA-533-410	D	13.2		ug/mL	2	0.038	0.20	12/04/12
Phosphate-P	PO4-P	LA-533-410	BD	0.147		ug/mL	2	0.084	0.72	12/04/12
Sulfate	14808-79-8	LA-533-410	D	98.8		ug/mL	2	0.22	2.1	12/04/12
ICPAES Prep (W)										12/10/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/11/12
ICPMS Prep (W)										12/18/12
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	12/18/12
Manganese	7439-96-5	LA-505-412	D	91.8		ug/L	2	0.20	2.0	12/18/12
Nickel	7440-02-0	LA-505-412	D	3.25		ug/L	2	0.40	2.0	12/18/12
Barium	7440-39-3	LA-505-412	D	36.3		ug/L	2	0.40	4.0	12/18/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/18/12

MDL = Minimum Detection Limit

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

U - Analyzed for but not detected above limiting criteria.

RQ = Result Qualifier

C - Analyte was found in the Associated Blank. (Inorganic)

X,Y or Z - See comment detail and/or narrative.

TP Err = Total Propagated Error

D - Analyte was reported at a secondary dilution factor.

PQL is equivalent to Estimated Quantitation Limit (EQL)

DF = Dilution Factor

E - Analyte is an estimate, see comment section.

o - LCS recovery outside established laboratory acceptance limits.

+ - Indicates more than nine qualifier

N - MS and/or MSD recovery outside control limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541009	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N861	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Chromium	7440-47-3	LA-505-412	D	2.21		ug/L	2	0.20	2.0	12/18/12
Cobalt	7440-48-4	LA-505-412	D	18.4		ug/L	2	0.10	0.50	12/18/12
Copper	7440-50-8	LA-505-412	D	4.39		ug/L	2	0.20	2.0	12/18/12
Vanadium	7440-62-2	LA-505-412	DC	12.5		ug/L	2	0.40	4.0	12/18/12
Zinc	7440-66-6	LA-505-412	BD	3.59		ug/L	2	1.6	20	12/18/12
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	1.0	12/18/12
Molybdenum	7439-98-7	LA-505-412	D	31.1		ug/L	2	0.10	1.0	12/18/12
Strontium	7440-24-6	LA-505-412	D	249		ug/L	2	0.20	2.0	12/18/12
Uranium	7440-61-1	LA-505-412	D	0.542		ug/L	2	0.10	0.50	12/18/12
Arsenic	7440-38-2	LA-505-412	BDC	1.26		ug/L	2	0.80	4.0	12/18/12
Selenium	7782-49-2	LA-505-412	BD	2.85		ug/L	2	0.60	20	12/18/12
Boron	7440-42-8	LA-505-412	D	20.5		ug/L	2	1.0	10	12/18/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte < the 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 # WSCF121541

Sample #	121541010	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N881	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
12/04/12										
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.394		ug/mL	2	0.046	0.14	12/04/12
Chloride	16887-00-6	LA-533-410	D	17.2		ug/mL	2	0.12	0.81	12/04/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	12/04/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	12/04/12
Nitrate-N	NO3-N	LA-533-410	D	37.6		ug/mL	10	0.19	0.99	12/05/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	12/04/12
Sulfate	14808-79-8	LA-533-410	D	67.2		ug/mL	2	0.22	2.1	12/04/12
ICPAES Prep (W)										12/10/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	92.6		ug/L	1	19	95	12/11/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	12/10/12
Manganese	7439-96-5	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/10/12
Nickel	7440-02-0	LA-505-412	BD	0.536		ug/L	2	0.20	2.0	12/10/12
Barium	7440-39-3	LA-505-412	D	70.0		ug/L	2	0.40	4.0	12/10/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12

MDL = Minimum Detection Limit

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

U - Analyzed for but not detected above limiting criteria.

RQ = Result Qualifier

C - Analyte was found in the Associated Blank. (Inorganic)

X,Y or Z - See comment detail and/or narrative.

TP Err = Total Propagated Error

D - Analyte was reported at a secondary dilution factor.

PQL is equivalent to Estimated Quantitation Limit (EQL)

DF = Dilution Factor

E - Analyte is an estimate, see comment section.

o - LCS recovery outside established laboratory acceptance limits.

+ - Indicates more than nine qualifier

N - MS and/or MSD recovery outside control limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541010	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N881	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Chromium	7440-47-3	LA-505-412	D	72.4		ug/L	2	0.20	2.0	12/10/12
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/10/12
Copper	7440-50-8	LA-505-412	BD	0.524		ug/L	2	0.20	2.0	12/10/12
Vanadium	7440-62-2	LA-505-412	D	25.3		ug/L	2	0.40	4.0	12/10/12
Zinc	7440-66-6	LA-505-412	BD	3.90		ug/L	2	2.0	20	12/10/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12
Molybdenum	7439-98-7	LA-505-412	D	3.76		ug/L	2	0.10	1.0	12/10/12
Strontium	7440-24-6	LA-505-412	D	281		ug/L	2	0.20	2.0	12/10/12
Uranium	7440-61-1	LA-505-412	D	1.99		ug/L	2	0.10	0.50	12/10/12
Arsenic	7440-38-2	LA-505-412	BD	1.74		ug/L	2	0.40	4.0	12/10/12
Selenium	7782-49-2	LA-505-412	BD	3.87		ug/L	2	2.0	20	12/10/12
Boron	7440-42-8	LA-505-412	D	17.1		ug/L	2	1.0	10	12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

C - Analyte was found in the Associated Blank. (Inorganic)

D - Analyte was reported at a secondary dilution factor.

E - Analyte is an estimate, see comment section.

N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541011	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N875	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										12/04/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.404		ug/mL	2	0.046	0.14	12/04/12
Chloride	16887-00-6	LA-533-410	D	17.4		ug/mL	2	0.12	0.81	12/04/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	12/04/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	12/04/12
Nitrate-N	NO3-N	LA-533-410	D	37.3		ug/mL	10	0.19	0.99	12/05/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	12/04/12
Sulfate	14808-79-8	LA-533-410	D	69.8		ug/mL	2	0.22	2.1	12/04/12
ICPAES Prep (W)										12/10/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	22.4		ug/L	1	19	95	12/11/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	12/10/12
Manganese	7439-96-5	LA-505-412	D	6.54		ug/L	2	0.20	2.0	12/10/12
Nickel	7440-02-0	LA-505-412	BD	1.11		ug/L	2	0.20	2.0	12/10/12
Barium	7440-39-3	LA-505-412	D	65.5		ug/L	2	0.40	4.0	12/10/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12

MDL = Minimum Detection Limit

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

U - Analyzed for but not detected above limiting criteria.

RQ = Result Qualifier

C - Analyte was found in the Associated Blank. (Inorganic)

X,Y or Z - See comment detail and/or narrative.

TP Err = Total Propagated Error

D - Analyte was reported at a secondary dilution factor.

PQL is equivalent to Estimated Quantitation Limit (EQL)

DF = Dilution Factor

E - Analyte is an estimate, see comment section.

o - LCS recovery outside established laboratory acceptance limits.

+ - Indicates more than nine qualifier

N - MS and/or MSD recovery outside control limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541011	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N875	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Chromium	7440-47-3	LA-505-412	D	61.9		ug/L	2	0.20	2.0	12/10/12
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/10/12
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/10/12
Vanadium	7440-62-2	LA-505-412	D	23.8		ug/L	2	0.40	4.0	12/10/12
Zinc	7440-66-6	LA-505-412	BD	2.44		ug/L	2	2.0	20	12/10/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12
Molybdenum	7439-98-7	LA-505-412	D	3.71		ug/L	2	0.10	1.0	12/10/12
Strontium	7440-24-6	LA-505-412	D	269		ug/L	2	0.20	2.0	12/10/12
Uranium	7440-61-1	LA-505-412	D	1.51		ug/L	2	0.10	0.50	12/10/12
Arsenic	7440-38-2	LA-505-412	BD	1.55		ug/L	2	0.40	4.0	12/10/12
Selenium	7782-49-2	LA-505-412	BD	3.57		ug/L	2	2.0	20	12/10/12
Boron	7440-42-8	LA-505-412	D	15.9		ug/L	2	1.0	10	12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

C - Analyte was found in the Associated Blank. (Inorganic)

D - Analyte was reported at a secondary dilution factor.

E - Analyte is an estimate, see comment section.

N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541012	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N872	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										12/04/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.404		ug/mL	2	0.046	0.14	12/04/12
Chloride	16887-00-6	LA-533-410	D	17.8		ug/mL	2	0.12	0.81	12/04/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	12/04/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	12/04/12
Nitrate-N	NO3-N	LA-533-410	D	37.8		ug/mL	10	0.19	0.99	12/05/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	12/04/12
Sulfate	14808-79-8	LA-533-410	D	69.4		ug/mL	2	0.22	2.1	12/04/12
ICPAES Prep (W)										12/10/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/11/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	12/10/12
Manganese	7439-96-5	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/10/12
Nickel	7440-02-0	LA-505-412	BD	0.948		ug/L	2	0.20	2.0	12/10/12
Barium	7440-39-3	LA-505-412	D	64.9		ug/L	2	0.40	4.0	12/10/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12

MDL = Minimum Detection Limit

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

U - Analyzed for but not detected above limiting criteria.

RQ = Result Qualifier

C - Analyte was found in the Associated Blank. (Inorganic)

X,Y or Z - See comment detail and/or narrative.

TP Err = Total Propagated Error

D - Analyte was reported at a secondary dilution factor.

PQL is equivalent to Estimated Quantitation Limit (EQL)

DF = Dilution Factor

E - Analyte is an estimate, see comment section.

o - LCS recovery outside established laboratory acceptance limits.

+ - Indicates more than nine qualifier

N - MS and/or MSD recovery outside control limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541012	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N872	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Chromium	7440-47-3	LA-505-412	D	51.4		ug/L	2	0.20	2.0	12/10/12
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/10/12
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/10/12
Vanadium	7440-62-2	LA-505-412	D	24.1		ug/L	2	0.40	4.0	12/10/12
Zinc	7440-66-6	LA-505-412	UD	<2.0		ug/L	2	2.0	20	12/10/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12
Molybdenum	7439-98-7	LA-505-412	D	3.60		ug/L	2	0.10	1.0	12/10/12
Strontium	7440-24-6	LA-505-412	D	259		ug/L	2	0.20	2.0	12/10/12
Uranium	7440-61-1	LA-505-412	BD	0.388		ug/L	2	0.10	0.50	12/10/12
Arsenic	7440-38-2	LA-505-412	BD	1.69		ug/L	2	0.40	4.0	12/10/12
Selenium	7782-49-2	LA-505-412	BD	3.70		ug/L	2	2.0	20	12/10/12
Boron	7440-42-8	LA-505-412	D	16.9		ug/L	2	1.0	10	12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

C - Analyte was found in the Associated Blank. (Inorganic)

D - Analyte was reported at a secondary dilution factor.

E - Analyte is an estimate, see comment section.

N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541013	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N869	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										12/04/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.398		ug/mL	2	0.046	0.14	12/04/12
Chloride	16887-00-6	LA-533-410	D	17.4		ug/mL	2	0.12	0.81	12/04/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	12/04/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	12/04/12
Nitrate-N	NO3-N	LA-533-410	D	37.7		ug/mL	10	0.19	0.99	12/05/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	12/04/12
Sulfate	14808-79-8	LA-533-410	D	68.5		ug/mL	2	0.22	2.1	12/04/12
ICPAES Prep (W)										12/10/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/11/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	12/10/12
Manganese	7439-96-5	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/10/12
Nickel	7440-02-0	LA-505-412	BD	0.682		ug/L	2	0.20	2.0	12/10/12
Barium	7440-39-3	LA-505-412	D	66.0		ug/L	2	0.40	4.0	12/10/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12

MDL = Minimum Detection Limit

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

U - Analyzed for but not detected above limiting criteria.

RQ = Result Qualifier

C - Analyte was found in the Associated Blank. (Inorganic)

X,Y or Z - See comment detail and/or narrative.

TP Err = Total Propagated Error

D - Analyte was reported at a secondary dilution factor.

PQL is equivalent to Estimated Quantitation Limit (EQL)

DF = Dilution Factor

E - Analyte is an estimate, see comment section.

o - LCS recovery outside established laboratory acceptance limits.

+ - Indicates more than nine qualifier

N - MS and/or MSD recovery outside control limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample # 121541013
SAF# F12-028
Sample ID B2N869

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Chromium	7440-47-3	LA-505-412	D	60.9		ug/L	2	0.20	2.0	12/10/12
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/10/12
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/10/12
Vanadium	7440-62-2	LA-505-412	D	24.7		ug/L	2	0.40	4.0	12/10/12
Zinc	7440-66-6	LA-505-412	UD	<2.0		ug/L	2	2.0	20	12/10/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12
Molybdenum	7439-98-7	LA-505-412	D	3.71		ug/L	2	0.10	1.0	12/10/12
Strontium	7440-24-6	LA-505-412	D	265		ug/L	2	0.20	2.0	12/10/12
Uranium	7440-61-1	LA-505-412	D	1.14		ug/L	2	0.10	0.50	12/10/12
Arsenic	7440-38-2	LA-505-412	BD	1.76		ug/L	2	0.40	4.0	12/10/12
Selenium	7782-49-2	LA-505-412	BD	3.91		ug/L	2	2.0	20	12/10/12
Boron	7440-42-8	LA-505-412	D	14.7		ug/L	2	1.0	10	12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

C - Analyte was found in the Associated Blank. (Inorganic)

D - Analyte was reported at a secondary dilution factor.

E - Analyte is an estimate, see comment section.

N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541014	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N865	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										12/04/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.410		ug/mL	2	0.046	0.14	12/04/12
Chloride	16887-00-6	LA-533-410	D	17.4		ug/mL	2	0.12	0.81	12/04/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	12/04/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	12/04/12
Nitrate-N	NO3-N	LA-533-410	D	37.7		ug/mL	10	0.19	0.99	12/05/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	12/04/12
Sulfate	14808-79-8	LA-533-410	D	68.2		ug/mL	2	0.22	2.1	12/04/12
ICPAES Prep (W)										12/10/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/11/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	12/10/12
Manganese	7439-96-5	LA-505-412	BD	0.324		ug/L	2	0.20	2.0	12/10/12
Nickel	7440-02-0	LA-505-412	BD	0.588		ug/L	2	0.20	2.0	12/10/12
Barium	7440-39-3	LA-505-412	D	70.5		ug/L	2	0.40	4.0	12/10/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12

MDL = Minimum Detection Limit

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

U - Analyzed for but not detected above limiting criteria.

RQ = Result Qualifier

C - Analyte was found in the Associated Blank. (Inorganic)

X,Y or Z - See comment detail and/or narrative.

TP Err = Total Propagated Error

D - Analyte was reported at a secondary dilution factor.

PQL is equivalent to Estimated Quantitation Limit (EQL)

DF = Dilution Factor

E - Analyte is an estimate, see comment section.

o - LCS recovery outside established laboratory acceptance limits.

+ - Indicates more than nine qualifier

N - MS and/or MSD recovery outside control limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541014	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N865	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Chromium	7440-47-3	LA-505-412	D	72.6		ug/L	2	0.20	2.0	12/10/12
Cobalt	7440-48-4	LA-505-412	BD	0.136		ug/L	2	0.10	0.50	12/10/12
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/10/12
Vanadium	7440-62-2	LA-505-412	D	25.5		ug/L	2	0.40	4.0	12/10/12
Zinc	7440-66-6	LA-505-412	UD	<2.0		ug/L	2	2.0	20	12/10/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12
Molybdenum	7439-98-7	LA-505-412	D	3.92		ug/L	2	0.10	1.0	12/10/12
Strontium	7440-24-6	LA-505-412	D	282		ug/L	2	0.20	2.0	12/10/12
Uranium	7440-61-1	LA-505-412	D	2.03		ug/L	2	0.10	0.50	12/10/12
Arsenic	7440-38-2	LA-505-412	BD	1.71		ug/L	2	0.40	4.0	12/10/12
Selenium	7782-49-2	LA-505-412	BD	3.62		ug/L	2	2.0	20	12/10/12
Boron	7440-42-8	LA-505-412	D	14.7		ug/L	2	1.0	10	12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

C - Analyte was found in the Associated Blank. (Inorganic)

D - Analyte was reported at a secondary dilution factor.

E - Analyte is an estimate, see comment section.

N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample # 121541015
SAF# F12-028
Sample ID B2N884

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										12/04/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.400		ug/mL	2	0.046	0.14	12/04/12
Chloride	16887-00-6	LA-533-410	D	17.2		ug/mL	2	0.12	0.81	12/04/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	12/04/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	12/04/12
Nitrate-N	NO3-N	LA-533-410	D	38.8		ug/mL	10	0.19	0.99	12/05/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	12/04/12
Sulfate	14808-79-8	LA-533-410	D	67.2		ug/mL	2	0.22	2.1	12/04/12
ICPAES Prep (W)										12/10/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	U	<19		ug/L	1	19	95	12/11/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	12/10/12
Manganese	7439-96-5	LA-505-412	D	6.42		ug/L	2	0.20	2.0	12/10/12
Nickel	7440-02-0	LA-505-412	BD	1.13		ug/L	2	0.20	2.0	12/10/12
Barium	7440-39-3	LA-505-412	D	64.9		ug/L	2	0.40	4.0	12/10/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12

MDL = Minimum Detection Limit

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

U - Analyzed for but not detected above limiting criteria.

RQ = Result Qualifier

C - Analyte was found in the Associated Blank. (Inorganic)

X,Y or Z - See comment detail and/or narrative.

TP Err = Total Propagated Error

D - Analyte was reported at a secondary dilution factor.

PQL is equivalent to Estimated Quantitation Limit (EQL)

DF = Dilution Factor

E - Analyte is an estimate, see comment section.

o - LCS recovery outside established laboratory acceptance limits.

+ - Indicates more than nine qualifier

N - MS and/or MSD recovery outside control limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541015	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N884	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Chromium	7440-47-3	LA-505-412	D	52.0		ug/L	2	0.20	2.0	12/10/12
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/10/12
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/10/12
Vanadium	7440-62-2	LA-505-412	D	23.6		ug/L	2	0.40	4.0	12/10/12
Zinc	7440-66-6	LA-505-412	UD	<2.0		ug/L	2	2.0	20	12/10/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12
Molybdenum	7439-98-7	LA-505-412	D	3.52		ug/L	2	0.10	1.0	12/10/12
Strontium	7440-24-6	LA-505-412	D	259		ug/L	2	0.20	2.0	12/10/12
Uranium	7440-61-1	LA-505-412	D	0.506		ug/L	2	0.10	0.50	12/10/12
Arsenic	7440-38-2	LA-505-412	BD	1.52		ug/L	2	0.40	4.0	12/10/12
Selenium	7782-49-2	LA-505-412	BD	3.75		ug/L	2	2.0	20	12/10/12
Boron	7440-42-8	LA-505-412	D	14.5		ug/L	2	1.0	10	12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

C - Analyte was found in the Associated Blank. (Inorganic)

D - Analyte was reported at a secondary dilution factor.

E - Analyte is an estimate, see comment section.

N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541016	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N857	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										12/04/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.307		ug/mL	2	0.046	0.14	12/04/12
Chloride	16887-00-6	LA-533-410	D	29.2		ug/mL	2	0.12	0.81	12/04/12
Nitrite-N	NO2-N	LA-533-410	UD	<0.038		ug/mL	2	0.038	0.20	12/04/12
Bromide	24959-67-9	LA-533-410	UD	<0.22		ug/mL	2	0.22	0.96	12/04/12
Nitrate-N	NO3-N	LA-533-410	D	22.7		ug/mL	2	0.038	0.20	12/04/12
Phosphate-P	PO4-P	LA-533-410	UD	<0.084		ug/mL	2	0.084	0.72	12/04/12
Sulfate	14808-79-8	LA-533-410	D	47.9		ug/mL	2	0.22	2.1	12/04/12
ICPAES Prep (W)										12/10/12
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	21.4		ug/L	1	19	95	12/11/12
ICPMS Prep (W)										12/06/12
ICP-2008 MS All possible metal										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	100	12/10/12
Manganese	7439-96-5	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/10/12
Nickel	7440-02-0	LA-505-412	BD	0.420		ug/L	2	0.20	2.0	12/10/12
Barium	7440-39-3	LA-505-412	D	62.1		ug/L	2	0.40	4.0	12/10/12
Cadmium	7440-43-9	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12

MDL = Minimum Detection Limit

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

U - Analyzed for but not detected above limiting criteria.

RQ = Result Qualifier

C - Analyte was found in the Associated Blank. (Inorganic)

X,Y or Z - See comment detail and/or narrative.

TP Err = Total Propagated Error

D - Analyte was reported at a secondary dilution factor.

PQL is equivalent to Estimated Quantitation Limit (EQL)

DF = Dilution Factor

E - Analyte is an estimate, see comment section.

o - LCS recovery outside established laboratory acceptance limits.

+ - Indicates more than nine qualifier

N - MS and/or MSD recovery outside control limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Sample #	121541016	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N857	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Chromium	7440-47-3	LA-505-412	D	29.1		ug/L	2	0.20	2.0	12/10/12
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/10/12
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/10/12
Vanadium	7440-62-2	LA-505-412	D	25.9		ug/L	2	0.40	4.0	12/10/12
Zinc	7440-66-6	LA-505-412	UD	<2.0		ug/L	2	2.0	20	12/10/12
Lead	7439-92-1	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/10/12
Molybdenum	7439-98-7	LA-505-412	D	3.16		ug/L	2	0.10	1.0	12/10/12
Strontium	7440-24-6	LA-505-412	D	266		ug/L	2	0.20	2.0	12/10/12
Uranium	7440-61-1	LA-505-412	D	0.798		ug/L	2	0.10	0.50	12/10/12
Arsenic	7440-38-2	LA-505-412	BD	1.63		ug/L	2	0.40	4.0	12/10/12
Selenium	7782-49-2	LA-505-412	BD	2.51		ug/L	2	2.0	20	12/10/12
Boron	7440-42-8	LA-505-412	D	15.0		ug/L	2	1.0	10	12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)

C - Analyte was found in the Associated Blank. (Inorganic)

D - Analyte was reported at a secondary dilution factor.

E - Analyte is an estimate, see comment section.

N - MS and/or MSD recovery outside control limits.

U - Analyzed for but not detected above limiting criteria.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF121541

Sample #	121541009	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N861	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										12/06/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Trichloroethene	79-01-6	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Benzene	71-43-2	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Toluene	108-88-3	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Chlorobenzene	108-90-7	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Carbon tetrachloride	56-23-5	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Chloroform	67-66-3	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Vinyl chloride	75-01-4	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Methylene chloride	75-09-2	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<2		ug/L	1	2	10	12/12/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte 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 # WSCF121541

Sample #	121541010	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N881	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										12/06/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Trichloroethene	79-01-6	LA-523-455	J	9.6		ug/L	1	2	10	12/12/12
Benzene	71-43-2	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Toluene	108-88-3	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Chlorobenzene	108-90-7	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Carbon tetrachloride	56-23-5	LA-523-455		1000		ug/L	1	20	100	12/06/12
Chloroform	67-66-3	LA-523-455		13		ug/L	1	2	10	12/12/12
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Vinyl chloride	75-01-4	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
Methylene chloride	75-09-2	LA-523-455	U	<2		ug/L	1	2	10	12/12/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<2		ug/L	1	2	10	12/12/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte 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 # WSCF121541

Sample #	121541011	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N875	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										12/06/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Trichloroethene	79-01-6	LA-523-455	J	8.5		ug/L	1	2	10	12/13/12
Benzene	71-43-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Toluene	108-88-3	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Chlorobenzene	108-90-7	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Carbon tetrachloride	56-23-5	LA-523-455		700		ug/L	1	20	100	12/18/12
Chloroform	67-66-3	LA-523-455		14		ug/L	1	2	10	12/13/12
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Vinyl chloride	75-01-4	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Methylene chloride	75-09-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12

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 # WSCF121541

Sample #	121541012	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N872	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										12/06/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Trichloroethene	79-01-6	LA-523-455	J	4.1		ug/L	1	2	10	12/13/12
Benzene	71-43-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Toluene	108-88-3	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Chlorobenzene	108-90-7	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Carbon tetrachloride	56-23-5	LA-523-455		920		ug/L	1	20	100	12/06/12
Chloroform	67-66-3	LA-523-455		27		ug/L	1	2	10	12/13/12
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Vinyl chloride	75-01-4	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Methylene chloride	75-09-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12

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 # WSCF121541

Sample # 121541013
SAF# F12-028
Sample ID B2N869

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										12/06/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Trichloroethene	79-01-6	LA-523-455	J	7.3		ug/L	1	2	10	12/13/12
Benzene	71-43-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Toluene	108-88-3	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Chlorobenzene	108-90-7	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Carbon tetrachloride	56-23-5	LA-523-455		1100		ug/L	1	20	100	12/06/12
Chloroform	67-66-3	LA-523-455		18		ug/L	1	2	10	12/13/12
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Vinyl chloride	75-01-4	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Methylene chloride	75-09-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12

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 # WSCF121541

Sample #	121541014	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N865	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										12/06/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Trichloroethene	79-01-6	LA-523-455	J	8.2		ug/L	1	2	10	12/13/12
Benzene	71-43-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Toluene	108-88-3	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Chlorobenzene	108-90-7	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Carbon tetrachloride	56-23-5	LA-523-455		1100		ug/L	1	20	100	12/06/12
Chloroform	67-66-3	LA-523-455		12		ug/L	1	2	10	12/13/12
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Vinyl chloride	75-01-4	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Methylene chloride	75-09-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12

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 # WSCF121541

Sample #	121541015	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N884	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										12/14/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<2		ug/L	1	2	10	12/14/12
Trichloroethene	79-01-6	LA-523-455	J	5.6		ug/L	1	2	10	12/14/12
Benzene	71-43-2	LA-523-455	U	<2		ug/L	1	2	10	12/14/12
Toluene	108-88-3	LA-523-455	U	<2		ug/L	1	2	10	12/14/12
Chlorobenzene	108-90-7	LA-523-455	U	<2		ug/L	1	2	10	12/14/12
Carbon tetrachloride	56-23-5	LA-523-455		680		ug/L	1	20	100	12/06/12
Chloroform	67-66-3	LA-523-455	J	8.8		ug/L	1	2	10	12/14/12
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	12/14/12
Vinyl chloride	75-01-4	LA-523-455	U	<2		ug/L	1	2	10	12/14/12
Methylene chloride	75-09-2	LA-523-455	U	<2		ug/L	1	2	10	12/14/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<2		ug/L	1	2	10	12/14/12

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 # WSCF121541

Sample #	121541016	Matrix	WATER
SAF#	F12-028	Sampled	12/04/12
Sample ID	B2N857	Received	12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										12/06/12
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Trichloroethene	79-01-6	LA-523-455	J	4.9		ug/L	1	2	10	12/13/12
Benzene	71-43-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Toluene	108-88-3	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Chlorobenzene	108-90-7	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Carbon tetrachloride	56-23-5	LA-523-455		760		ug/L	1	20	100	12/06/12
Chloroform	67-66-3	LA-523-455		11		ug/L	1	2	10	12/13/12
Chloromethane	74-87-3	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Vinyl chloride	75-01-4	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
Methylene chloride	75-09-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<2		ug/L	1	2	10	12/13/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE

D - Analyte was reported at a secondary dilution factor.

E - The calibration exceeds the calibration range (GC/MS).

J - Analyte < PQL (or EQL) >= MDL.

N - Presumed evidence based on MS library search(GC/MS only)

T - GC/MS or N - Non GC/MS - MS/MSD recovery outside control limits

U - Analyzed for but not detected above limiting criteria.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121541

Sample # 121541009
SAF# F12-028
Sample ID B2N861

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										12/18/12
Technetium-99 by ICP MS										
Technetium-99	14133-76-7	LA-505-412		0.0020		ug/L	1	0.0010		12/18/12
Tritium by LSC EICHROM WA/LIQ PREP										12/06/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		5500	1200	pCi/L	1	330		12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE

U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121541

Sample # 121541010
SAF# F12-028
Sample ID B2N881

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										12/18/12
Technetium-99 by ICP MS										
Technetium-99	14133-76-7	LA-505-412		0.098		ug/L	1	0.0010		12/18/12
Tritium by LSC EICHROM WA/LIQ PREP										12/06/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		1.3E4	2600	pCi/L	1	330		12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE

U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121541

Sample # 121541011
SAF# F12-028
Sample ID B2N875

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										12/18/12
Technetium-99 by ICP MS										
Technetium-99	14133-76-7	LA-505-412		0.0030		ug/L	1	0.0010		12/18/12
Tritium by LSC EICHROM WA/LIQ PREP										12/06/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		1.3E4	2600	pCi/L	1	330		12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE

U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121541

Sample # 121541012
SAF# F12-028
Sample ID B2N872

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										12/18/12
Technetium-99 by ICP MS										
Technetium-99	14133-76-7	LA-505-412	U	<0.0010		ug/L	1	0.0010		12/18/12
Tritium by LSC EICHROM WA/LIQ PREP										12/06/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		1.2E4	2500	pCi/L	1	330		12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE

U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121541

Sample # 121541013
SAF# F12-028
Sample ID B2N869

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										12/18/12
Technetium-99 by ICP MS										
Technetium-99	14133-76-7	LA-505-412		0.0050		ug/L	1	0.0010		12/18/12
Tritium by LSC EICHROM WA/LIQ PREP										12/06/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		1.2E4	2500	pCi/L	1	330		12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE

U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121541

Sample # 121541014
SAF# F12-028
Sample ID B2N865

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										12/18/12
Technetium-99 by ICP MS										
Technetium-99	14133-76-7	LA-505-412		0.099		ug/L	1	0.0010		12/18/12
Tritium by LSC EICHROM WA/LIQ PREP										12/06/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		1.3E4	2700	pCi/L	1	330		12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE

U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121541

Sample # 121541015
SAF# F12-028
Sample ID B2N884

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										12/18/12
Technetium-99 by ICP MS										
Technetium-99	14133-76-7	LA-505-412	U	<0.0010		ug/L	1	0.0010		12/18/12
Tritium by LSC EICHROM WA/LIQ PREP										12/06/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		1.3E4	2600	pCi/L	1	330		12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte was detected in both the BLANK and SAMPLE

U - Analyzed for but not detected above limiting criteria.

N - Spike Recovery is Outside Control Limits.

X,Y or Z - See comment detail and/or narrative.

PQL is equivalent to Estimated Quantitation Limit (EQL)

o - LCS recovery outside established laboratory acceptance limits.

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF121541

Sample # 121541016
SAF# F12-028
Sample ID B2N857

Matrix WATER
Sampled 12/04/12
Received 12/04/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										12/18/12
Technetium-99 by ICP MS										
Technetium-99	14133-76-7	LA-505-412		0.0030		ug/L	1	0.0010		12/18/12
Tritium by LSC EICHROM WA/LIQ PREP										12/06/12
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		4900	1000	pCi/L	1	330		12/10/12

MDL = Minimum Detection Limit

RQ = Result Qualifier

TP Err = Total Propagated Error

DF = Dilution Factor

+ - Indicates more than nine qualifier

B - Analyte 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.

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121541

Analytical Batch 211247 (QC Batch: 211247) Test Anions by Ion Chromatography (Water)
 Associated Samples 121541009, 121541010, 121541011, 121541012, 121541013, 121541014, 121541015, 121541016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
QC Sample #86015										
Fluoride	16984-48-8	<0.023	ug/mL					U		12/04/12
Chloride	16887-00-6	<0.058	ug/mL					U		12/04/12
Nitrite-N	NO2-N	<0.019	ug/mL					U		12/04/12
Bromide	24959-67-9	<0.11	ug/mL					U		12/04/12
Nitrate-N	NO3-N	<0.019	ug/mL					U		12/04/12
Phosphate-P	PO4-P	<0.042	ug/mL					U		12/04/12
Sulfate	14808-79-8	<0.11	ug/mL					U		12/04/12
LCS										
QC Sample #86016										
Fluoride	16984-48-8	0.952	ug/mL	96.1	90 - 110					12/04/12
Chloride	16887-00-6	1.87	ug/mL	94.4	90 - 110					12/04/12
Nitrite-N	NO2-N	0.983	ug/mL	100.5	90 - 110					12/04/12
Bromide	24959-67-9	3.96	ug/mL	100.9	90 - 110					12/04/12
Nitrate-N	NO3-N	0.907	ug/mL	102.4	90 - 110					12/04/12
Phosphate-P	PO4-P	1.94	ug/mL	101.5	90 - 110					12/04/12
Sulfate	14808-79-8	3.94	ug/mL	100.4	90 - 110					12/04/12
DUP										
QC Sample #86017										
Original 121539009										

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
Department Inorganic

Group #

WSCF121541

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed	
Fluoride	16984-48-8	0.122	ug/mL				4.20	20	BD	12/04/12	
Chloride	16887-00-6	6.45	ug/mL				4.60	20	D	12/04/12	
Nitrite-N	NO2-N	0.0487	ug/mL				27.00	20	*	BXD	12/04/12
Bromide	24959-67-9	<0.22	ug/mL				0.00	20	UD	12/04/12	
Nitrate-N	NO3-N	1.29	ug/mL				2.20	20	D	12/04/12	
Phosphate-P	PO4-P	<0.084	ug/mL				0.00	20	UD	12/04/12	
Sulfate	14808-79-8	27.5	ug/mL				3.90	20	D	12/04/12	
MS		QC Sample #86018									
		Original 121539009									
Fluoride	16984-48-8	0.972	ug/mL	97.2	80 - 120				D	12/04/12	
Chloride	16887-00-6	1.80	ug/mL	90	80 - 120				D	12/04/12	
Nitrite-N	NO2-N	0.930	ug/mL	94.1	80 - 120				D	12/04/12	
Bromide	24959-67-9	4.08	ug/mL	103.1	80 - 120				D	12/04/12	
Nitrate-N	NO3-N	0.901	ug/mL	100.8	80 - 120				D	12/04/12	
Phosphate-P	PO4-P	1.97	ug/mL	102.1	80 - 120				D	12/04/12	
Sulfate	14808-79-8	4.06	ug/mL	102.4	80 - 120				D	12/04/12	
MSD		QC Sample #86019									
		Original 121539009									
		Paired 86018									
Fluoride	16984-48-8	0.993	ug/mL	99.3	80 - 120	1.90	20		D	12/04/12	
Chloride	16887-00-6	1.85	ug/mL	92.6	80 - 120	0.70	20		D	12/04/12	
Nitrite-N	NO2-N	0.948	ug/mL	95.9	80 - 120	1.90	20		D	12/04/12	
Bromide	24959-67-9	4.10	ug/mL	103.6	80 - 120	0.50	20		D	12/04/12	
Nitrate-N	NO3-N	0.934	ug/mL	104.4	80 - 120	1.50	20		D	12/04/12	
Phosphate-P	PO4-P	2.01	ug/mL	104.1	80 - 120	1.90	20		D	12/04/12	

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
Department Inorganic

Group #

WSFC121541

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits		RPD	RPD Limit	RQ	Analyzed
Sulfate	14808-79-8	4.29		ug/mL	108.4	80 - 120	0.80	20	D	12/04/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121541

Analytical Batch 211272 (QC Batch: 211272) Test Anions by Ion Chromatography (Water)
 Associated Samples 121541010, 121541011, 121541012, 121541013, 121541014, 121541015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed	
BLANK										QC Sample #86069	
Nitrate-N	NO3-N	<0.019 ug/mL									
LCS										QC Sample #86070	
Nitrate-N	NO3-N	0.909	ug/mL	102.7	90 - 110					12/05/12	
DUP										QC Sample #86071	
Original 121544007											
Nitrate-N	NO3-N	0.269	ug/mL				3.60	20	D	12/05/12	
MS										QC Sample #86072	
Original 121544007											
Nitrate-N	NO3-N	0.938	ug/mL	104.9	80 - 120				D	12/05/12	
MSD										QC Sample #86073	
Original 121544007											
Nitrate-N	NO3-N	0.938	ug/mL	104.9	80 - 120				D	12/05/12	
Paired 86072											
Nitrate-N	NO3-N	0.951	ug/mL	106.4	80 - 120		1.10	20	D	12/05/12	

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121541

Analytical Batch 211276 (QC Batch: 211275) Test SW-846 8260B Volatiles
 Associated Samples 121541009, 121541010, 121541011, 121541012, 121541013, 121541014, 121541015, 121541016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										QC Sample #86086
1,1-Dichloroethene	75-35-4		<1	ug/L				U		12/12/12
Trichloroethene	79-01-6		<1	ug/L				U		12/12/12
Benzene	71-43-2		<1	ug/L				U		12/12/12
Toluene	108-88-3		<1	ug/L				U		12/12/12
Chlorobenzene	108-90-7		<1	ug/L				U		12/12/12
Carbon tetrachloride	56-23-5		<1	ug/L				U		12/12/12
Chloroform	67-66-3		<1	ug/L				U		12/12/12
Chloromethane	74-87-3		<1	ug/L				U		12/12/12
Vinyl chloride	75-01-4		<1	ug/L				U		12/12/12
Methylene chloride	75-09-2		<1	ug/L				U		12/12/12
cis-1,2-Dichloroethene	156-59-2		<1	ug/L				U		12/12/12
LCS										QC Sample #86087
1,1-Dichloroethene	75-35-4		21	ug/L	82.2	75 - 125				12/12/12
Trichloroethene	79-01-6		21	ug/L	83	75 - 125				12/12/12
Benzene	71-43-2		22	ug/L	87.5	75 - 125				12/12/12
Toluene	108-88-3		22	ug/L	86.6	75 - 125				12/12/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group #

WSCF121541

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chlorobenzene	108-90-7		21	ug/L	85.8	75 - 125				12/12/12
cis-1,2-Dichloroethene	156-59-2		22	ug/L	87	75 - 125				12/12/12
MS										
QC Sample #86088										
Original 121541009										
1,1-Dichloroethene	75-35-4	<2	43	ug/L	85.4	75 - 125				12/12/12
Trichloroethene	79-01-6	<2	43	ug/L	86.1	75 - 125				12/12/12
Benzene	71-43-2	<2	47	ug/L	93.2	75 - 125				12/12/12
Toluene	108-88-3	<2	44	ug/L	88.2	75 - 125				12/12/12
Chlorobenzene	108-90-7	<2	44	ug/L	88.6	75 - 125				12/12/12
cis-1,2-Dichloroethene	156-59-2	<2	47	ug/L	94.3	75 - 125				12/12/12
MSD										
QC Sample #86089										
Original 121541009										
Paired 86088										
1,1-Dichloroethene	75-35-4	<2	44	ug/L	88.3	75 - 125	3.40	20		12/12/12
Trichloroethene	79-01-6	<2	44	ug/L	88.2	75 - 125	2.40	20		12/12/12
Benzene	71-43-2	<2	48	ug/L	95.8	75 - 125	2.80	20		12/12/12
Toluene	108-88-3	<2	45	ug/L	90.2	75 - 125	2.20	20		12/12/12
Chlorobenzene	108-90-7	<2	45	ug/L	90.5	75 - 125	2.10	20		12/12/12
cis-1,2-Dichloroethene	156-59-2	<2	48	ug/L	96.2	75 - 125	1.90	20		12/12/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121541

Analytical Batch 211293 (QC Batch: 211293) **Test** Hexavalent chromium Discrete Analyzer
Associated Samples 121541001, 121541002, 121541003, 121541004, 121541005, 121541006, 121541007, 121541008

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
Hexavalent chromium	18540-29-9		<0.0020	mg/L					U	12/04/12
LCS										
Hexavalent chromium	18540-29-9		0.0530	mg/L	106	90 - 110				12/04/12
DUP										
Hexavalent chromium	18540-29-9	0.0567	0.0565	mg/L			0.40	20		12/04/12
MS										
Hexavalent chromium	18540-29-9	0.0567	0.0413	mg/L	103.2	85 - 115				12/04/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121541

Analytical Batch 211317 (QC Batch: 211262) Test ICP-6010 - All possible metals
 Associated Samples 121541009, 121541010, 121541011, 121541012, 121541013, 121541014, 121541015, 121541016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										QC Sample #86048
Iron LCS										<19 ug/L
										QC Sample #86050
Iron MS	7439-89-6		1040	ug/L	103.5	80 - 120				12/11/12
										QC Sample #86051
										Original 121501017
Iron MSD	7439-89-6		1040	ug/L	103.5	75 - 125				12/11/12
										QC Sample #86052
										Original 121501017
Iron	7439-89-6		1010	ug/L	100.6	75 - 125	2.80	20		Paired 86051
										12/11/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121541

Analytical Batch 211320 (QC Batch: 211287) Test ICP-2008 MS All possible metal
 Associated Samples 121541010, 121541011, 121541012, 121541013, 121541014, 121541015, 121541016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
QC Sample #86118										
Aluminum	7429-90-5		9.58	ug/L				B		12/10/12
Manganese	7439-96-5		<0.10	ug/L				U		12/10/12
Nickel	7440-02-0		<0.10	ug/L				U		12/10/12
Barium	7440-39-3		<0.20	ug/L				U		12/10/12
Cadmium	7440-43-9		<0.050	ug/L				U		12/10/12
Chromium	7440-47-3		<0.10	ug/L				U		12/10/12
Cobalt	7440-48-4		<0.050	ug/L				U		12/10/12
Copper	7440-50-8		<0.10	ug/L				U		12/10/12
Vanadium	7440-62-2		<0.20	ug/L				U		12/10/12
Zinc	7440-66-6		<1.0	ug/L				U		12/10/12
Lead	7439-92-1		<0.050	ug/L				U		12/10/12
Molybdenum	7439-98-7		<0.050	ug/L				U		12/10/12
Strontium	7440-24-6		0.856	ug/L				B		12/10/12
Uranium	7440-61-1		<0.050	ug/L				U		12/10/12
Arsenic	7440-38-2		<0.20	ug/L				U		12/10/12
Selenium	7782-49-2		<1.0	ug/L				U		12/10/12

* - QC result out of range

n/a - Not Applicable

DECEMBER 19, 2012

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121541

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS										QC Sample #86119
Aluminum	7429-90-5	400	ug/L		99.9	85 - 115				12/10/12
Manganese	7439-96-5	39.9	ug/L		99.7	85 - 115				12/10/12
Nickel	7440-02-0	39.9	ug/L		99.8	85 - 115				12/10/12
Barium	7440-39-3	40.0	ug/L		100	85 - 115				12/10/12
Cadmium	7440-43-9	38.8	ug/L		97.1	85 - 115				12/10/12
Chromium	7440-47-3	40.2	ug/L		100.4	85 - 115				12/10/12
Cobalt	7440-48-4	40.3	ug/L		100.8	85 - 115				12/10/12
Copper	7440-50-8	40.0	ug/L		99.9	85 - 115				12/10/12
Vanadium	7440-62-2	39.8	ug/L		99.5	85 - 115				12/10/12
Zinc	7440-66-6	39.0	ug/L		97.4	85 - 115				12/10/12
Lead	7439-92-1	40.9	ug/L		102.3	85 - 115				12/10/12
Molybdenum	7439-98-7	40.4	ug/L		100.9	85 - 115				12/10/12
Strontium	7440-24-6	399	ug/L		99.7	85 - 115				12/10/12
Uranium	7440-61-1	41.0	ug/L		102.6	85 - 115				12/10/12
Arsenic	7440-38-2	39.2	ug/L		98	85 - 115				12/10/12
Selenium	7782-49-2	38.6	ug/L		96.6	85 - 115				12/10/12
MS										QC Sample #86120
										Original 121469010
Aluminum	7429-90-5	384	ug/L		96	70 - 130				12/10/12
Manganese	7439-96-5	38.3	ug/L		95.7	70 - 130				12/10/12
Nickel	7440-02-0	38.4	ug/L		96.1	70 - 130				12/10/12
Barium	7440-39-3	38.3	ug/L		95.8	70 - 130				12/10/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
Department Inorganic

Group #

WSCF121541

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Cadmium	7440-43-9	39.5	ug/L	98.8	70 - 130					12/10/12
Chromium	7440-47-3	38.9	ug/L	97.3	70 - 130					12/10/12
Cobalt	7440-48-4	39.1	ug/L	97.9	70 - 130					12/10/12
Copper	7440-50-8	38.2	ug/L	95.4	70 - 130					12/10/12
Vanadium	7440-62-2	39.4	ug/L	98.6	70 - 130					12/10/12
Zinc	7440-66-6	39.3	ug/L	98.3	70 - 130					12/10/12
Lead	7439-92-1	41.0	ug/L	102.4	70 - 130					12/10/12
Molybdenum	7439-98-7	40.6	ug/L	101.5	70 - 130					12/10/12
Strontium	7440-24-6	385	ug/L	96.3	70 - 130					12/10/12
Uranium	7440-61-1	42.3	ug/L	105.7	70 - 130					12/10/12
Arsenic	7440-38-2	39.4	ug/L	98.6	70 - 130					12/10/12
Selenium	7782-49-2	39.2	ug/L	98	70 - 130					12/10/12
MSD		QC Sample #86121								
		Original 121469010						Paired	86120	
Aluminum	7429-90-5	377	ug/L	94.2	70 - 130	1.80	20			12/10/12
Manganese	7439-96-5	37.4	ug/L	93.6	70 - 130	0.90	20			12/10/12
Nickel	7440-02-0	37.4	ug/L	93.5	70 - 130	2.70	20			12/10/12
Barium	7440-39-3	37.3	ug/L	93.4	70 - 130	0.80	20			12/10/12
Cadmium	7440-43-9	38.8	ug/L	96.9	70 - 130	2.00	20			12/10/12
Chromium	7440-47-3	38.4	ug/L	95.9	70 - 130	1.40	20			12/10/12
Cobalt	7440-48-4	38.5	ug/L	96.3	70 - 130	1.60	20			12/10/12
Copper	7440-50-8	37.6	ug/L	94	70 - 130	1.40	20			12/10/12
Vanadium	7440-62-2	39.3	ug/L	98.3	70 - 130	0.30	20			12/10/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report**DECEMBER 19, 2012**Attention Scot Fitzgerald
Department Inorganic**Group #**

WSCF121541

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Zinc	7440-66-6	38.1	ug/L	95.3	70 - 130	3.00	20			12/10/12
Lead	7439-92-1	41.1	ug/L	102.6	70 - 130	0.20	20			12/10/12
Molybdenum	7439-98-7	39.7	ug/L	99.3	70 - 130	2.00	20			12/10/12
Strontium	7440-24-6	379	ug/L	94.7	70 - 130	1.10	20			12/10/12
Uranium	7440-61-1	42.2	ug/L	105.6	70 - 130	0.10	20			12/10/12
Arsenic	7440-38-2	38.9	ug/L	97.2	70 - 130	1.20	20			12/10/12
Selenium	7782-49-2	38.6	ug/L	96.6	70 - 130	1.50	20			12/10/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
 Department Radiochemistry

Group # WSCF121541

Analytical Batch 211414 (QC Batch: 211243) **Test** Tritium by LSC
Associated Samples 121541009, 121541010, 121541011, 121541012, 121541013, 121541014, 121541015, 121541016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										QC Sample #85980
Tritium LCS										-89 pCi/L
										QC Sample #85981
Tritium DUP	10028-17-8		3200	pCi/L	101.1	80 - 120				12/10/12
										QC Sample #85982
										Original 121541009
Tritium MS	10028-17-8	5500	5800	pCi/L			5.60	20		12/10/12
										QC Sample #85983
										Original 121541009
Tritium	10028-17-8	5500	20000	pCi/L	97.2	75 - 125				12/10/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121541

Analytical Batch 211764 (QC Batch: 211627) Test ICP-2008 MS All possible metal
 Associated Samples 121541009

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										QC Sample #86461
Aluminum	7429-90-5		<5.0	ug/L				U		12/18/12
Manganese	7439-96-5		<0.10	ug/L				U		12/18/12
Nickel	7440-02-0		<0.10	ug/L				U		12/18/12
Barium	7440-39-3		<0.20	ug/L				U		12/18/12
Cadmium	7440-43-9		<0.050	ug/L				U		12/18/12
Chromium	7440-47-3		<0.10	ug/L				U		12/18/12
Cobalt	7440-48-4		<0.050	ug/L				U		12/18/12
Copper	7440-50-8		<0.10	ug/L				U		12/18/12
Vanadium	7440-62-2		0.915	ug/L				B		12/18/12
Zinc	7440-66-6		<1.0	ug/L				U		12/18/12
Lead	7439-92-1		<0.050	ug/L				U		12/18/12
Molybdenum	7439-98-7		<0.050	ug/L				U		12/18/12
Strontium	7440-24-6		<0.10	ug/L				U		12/18/12
Uranium	7440-61-1		<0.050	ug/L				U		12/18/12
Arsenic	7440-38-2		0.221	ug/L				B		12/18/12
Selenium	7782-49-2		<1.0	ug/L				U		12/18/12

* - QC result out of range

n/a - Not Applicable

DECEMBER 19, 2012

Quality Control Report

Attention Scot Fitzgerald
 Department Inorganic

Group # WSCF121541

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS										QC Sample #86462
Aluminum	7429-90-5	408	ug/L		101.9	85 - 115				12/18/12
Manganese	7439-96-5	41.3	ug/L		103.2	85 - 115				12/18/12
Nickel	7440-02-0	40.9	ug/L		102.3	85 - 115				12/18/12
Barium	7440-39-3	42.4	ug/L		105.9	85 - 115				12/18/12
Cadmium	7440-43-9	41.6	ug/L		103.9	85 - 115				12/18/12
Chromium	7440-47-3	41.6	ug/L		104.1	85 - 115				12/18/12
Cobalt	7440-48-4	41.2	ug/L		103.1	85 - 115				12/18/12
Copper	7440-50-8	41.1	ug/L		102.7	85 - 115				12/18/12
Vanadium	7440-62-2	41.6	ug/L		103.9	85 - 115				12/18/12
Zinc	7440-66-6	40.2	ug/L		100.4	85 - 115				12/18/12
Lead	7439-92-1	42.5	ug/L		106.2	85 - 115				12/18/12
Molybdenum	7439-98-7	42.0	ug/L		105	85 - 115				12/18/12
Strontium	7440-24-6	416	ug/L		104.1	85 - 115				12/18/12
Uranium	7440-61-1	42.7	ug/L		106.6	85 - 115				12/18/12
Arsenic	7440-38-2	41.6	ug/L		104	85 - 115				12/18/12
Selenium	7782-49-2	40.3	ug/L		100.8	85 - 115				12/18/12
MS										QC Sample #86463
										Original 121507004
Aluminum	7429-90-5	399	ug/L		99.7	70 - 130				12/18/12
Manganese	7439-96-5	40.1	ug/L		100.2	70 - 130				12/18/12
Nickel	7440-02-0	38.7	ug/L		96.8	70 - 130				12/18/12
Barium	7440-39-3	42.5	ug/L		106.3	70 - 130				12/18/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF121541

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Cadmium	7440-43-9	40.4	ug/L	100.9	70 - 130					12/18/12
Chromium	7440-47-3	40.6	ug/L	101.6	70 - 130					12/18/12
Cobalt	7440-48-4	39.5	ug/L	98.6	70 - 130					12/18/12
Copper	7440-50-8	38.0	ug/L	94.9	70 - 130					12/18/12
Vanadium	7440-62-2	40.4	ug/L	100.9	70 - 130					12/18/12
Zinc	7440-66-6	39.5	ug/L	98.8	70 - 130					12/18/12
Lead	7439-92-1	42.6	ug/L	106.4	70 - 130					12/18/12
Molybdenum	7439-98-7	42.0	ug/L	104.9	70 - 130					12/18/12
Strontium	7440-24-6	417	ug/L	104.2	70 - 130					12/18/12
Uranium	7440-61-1	44.7	ug/L	111.8	70 - 130					12/18/12
Arsenic	7440-38-2	41.9	ug/L	104.8	70 - 130					12/18/12
Selenium	7782-49-2	40.4	ug/L	101.1	70 - 130					12/18/12
MSD	QC Sample #86464									
		Original	121507004				Paired	86463		
Aluminum	7429-90-5	391	ug/L	97.8	70 - 130	1.90	20			12/18/12
Manganese	7439-96-5	39.5	ug/L	98.8	70 - 130	1.40	20			12/18/12
Nickel	7440-02-0	37.7	ug/L	94.4	70 - 130	2.30	20			12/18/12
Barium	7440-39-3	41.2	ug/L	103.1	70 - 130	1.00	20			12/18/12
Cadmium	7440-43-9	39.8	ug/L	99.6	70 - 130	1.30	20			12/18/12
Chromium	7440-47-3	39.9	ug/L	99.8	70 - 130	1.00	20			12/18/12
Cobalt	7440-48-4	38.9	ug/L	97.2	70 - 130	1.50	20			12/18/12
Copper	7440-50-8	36.9	ug/L	92.3	70 - 130	2.80	20			12/18/12
Vanadium	7440-62-2	39.9	ug/L	99.7	70 - 130	1.10	20			12/18/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report**DECEMBER 19, 2012**Attention Scot Fitzgerald
Department Inorganic**Group #**

WSCF121541

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Zinc	7440-66-6	38.2	ug/L	95.6	70 - 130	3.30	20			12/18/12
Lead	7439-92-1	41.9	ug/L	104.8	70 - 130	1.50	20			12/18/12
Molybdenum	7439-98-7	41.8	ug/L	104.4	70 - 130	0.50	20			12/18/12
Strontium	7440-24-6	411	ug/L	102.7	70 - 130	0.70	20			12/18/12
Uranium	7440-61-1	44.2	ug/L	110.6	70 - 130	1.00	20			12/18/12
Arsenic	7440-38-2	41.0	ug/L	102.6	70 - 130	2.00	20			12/18/12
Selenium	7782-49-2	40.9	ug/L	102.3	70 - 130	1.10	20			12/18/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report**DECEMBER 19, 2012****Attention** Scot Fitzgerald
Department Radiochemistry**Group #** WSCF121541**Analytical Batch** 211844 (QC Batch: 211766) **Test** Technetium-99 by ICP MS
Associated Samples 121541009, 121541010, 121541011, 121541012, 121541013, 121541014, 121541015, 121541016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed		
BLANK			QC Sample #86682									
Technetium-99	14133-76-7		<0.0010	ug/L					U	12/18/12		
LCS			QC Sample #86683									
Technetium-99	14133-76-7		0.052	ug/L	97.4	85 - 115				12/18/12		

* - QC result out of range

n/a - Not Applicable

Quality Control Report

DECEMBER 19, 2012

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121541

Analytical Batch 211276 (QC Batch: 211275) Test SW-846 8260B Volatiles
 Associated Samples 121541009, 121541010, 121541011, 121541012, 121541013, 121541014, 121541015, 121541016

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE		Sample #121541009								
1,2-Dichloroethane-d4	17060-07-0				100.2	75 - 125				12/12/12
Toluene-d8	2037-26-5				90.2	75 - 125				12/12/12
4-Bromofluorobenzene	460-00-4				97.2	75 - 125				12/12/12
SAMPLE		Sample #121541010								
1,2-Dichloroethane-d4	17060-07-0				127	75 - 125		X		12/12/12
Toluene-d8	2037-26-5				85	75 - 125				12/12/12
4-Bromofluorobenzene	460-00-4				96.4	75 - 125				12/12/12
SAMPLE		Sample #121541011								
1,2-Dichloroethane-d4	17060-07-0				125.3	75 - 125		X		12/13/12
Toluene-d8	2037-26-5				84.4	75 - 125				12/13/12
4-Bromofluorobenzene	460-00-4				97.1	75 - 125				12/13/12
SAMPLE		Sample #121541012								
1,2-Dichloroethane-d4	17060-07-0				122.6	75 - 125				12/13/12

* - QC result out of range

n/a - Not Applicable

DECEMBER 19, 2012

Quality Control Report

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121541

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Toluene-d8	2037-26-5				85.4	75 - 125				12/13/12
4-Bromofluorobenzene	460-00-4				97.4	75 - 125				12/13/12
SAMPLE Sample #121541013										
1,2-Dichloroethane-d4	17060-07-0				113.2	75 - 125				12/13/12
Toluene-d8	2037-26-5				87.5	75 - 125				12/13/12
4-Bromofluorobenzene	460-00-4				97.4	75 - 125				12/13/12
SAMPLE Sample #121541014										
1,2-Dichloroethane-d4	17060-07-0				120.4	75 - 125				12/13/12
Toluene-d8	2037-26-5				86.5	75 - 125				12/13/12
4-Bromofluorobenzene	460-00-4				97.2	75 - 125				12/13/12
SAMPLE Sample #121541015										
1,2-Dichloroethane-d4	17060-07-0				99.3	75 - 125				12/14/12
Toluene-d8	2037-26-5				89.7	75 - 125				12/14/12
4-Bromofluorobenzene	460-00-4				96	75 - 125				12/14/12
SAMPLE Sample #121541016										
1,2-Dichloroethane-d4	17060-07-0				125.8	75 - 125		X		12/13/12
Toluene-d8	2037-26-5				83.8	75 - 125				12/13/12

* - QC result out of range

n/a - Not Applicable

DECEMBER 19, 2012

Quality Control Report

Attention Scot Fitzgerald
 Department Organic, Volatiles

Group # WSCF121541

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed	
4-Bromofluorobenzene	460-00-4				96.4	75 - 125				12/13/12	
BLANK											
			QC Sample #86086								
1,2-Dichloroethane-d4	17060-07-0				89.4	75 - 125				12/12/12	
Toluene-d8	2037-26-5				91.8	75 - 125				12/12/12	
4-Bromofluorobenzene	460-00-4				97	75 - 125				12/12/12	
LCS											
			QC Sample #86087								
1,2-Dichloroethane-d4	17060-07-0				93.1	75 - 125				12/12/12	
Toluene-d8	2037-26-5				91.3	75 - 125				12/12/12	
4-Bromofluorobenzene	460-00-4				95.6	75 - 125				12/12/12	
MS											
			QC Sample #86088								
			Original 121541009								
1,2-Dichloroethane-d4	17060-07-0				105.3	75 - 125				12/12/12	
Toluene-d8	2037-26-5				88.7	75 - 125				12/12/12	
4-Bromofluorobenzene	460-00-4				94.4	75 - 125				12/12/12	
MSD											
			QC Sample #86089								
			Original 121541009								
									Paired 86088		
1,2-Dichloroethane-d4	17060-07-0				106.9	75 - 125	n/a			12/12/12	
Toluene-d8	2037-26-5				89.2	75 - 125	n/a			12/12/12	
4-Bromofluorobenzene	460-00-4				96.1	75 - 125	n/a			12/12/12	

* - QC result out of range

n/a - Not Applicable

Tentatively Identified Peak Report**DECEMBER 19, 2012****Attention** Scot Fitzgerald
Department Organic, Volatiles**Group #** WSCF121541

Peak Name	CAS #	RT	RQ	Result	Units
121541016	B2N857				
1-Propene, 3-methoxy-	627-40-7	14.883		320	ug/L
Unknown	UNKNOWN-02	14.986		2.4	ug/L
121541012	B2N872				
Trichloronitromethane	76-06-2	15.780		330	ug/L

Attention: Scot Fitzgerald

Group #

WSCF121541

121541010	B2N881
-----------	--------

Department Organic, Volatiles

Analyte 1,2-Dichloroethane-d4 - SW-846 8260B Volatiles
[1] Surrogate recovery outside of established laboratory control limits.

121541011	B2N875
-----------	--------

Department Organic, Volatiles

Analyte 1,2-Dichloroethane-d4 - SW-846 8260B Volatiles
[1] Surrogate recovery outside of established laboratory control limits.

121541016	B2N857
-----------	--------

Department Organic, Volatiles

Analyte 1,2-Dichloroethane-d4 - SW-846 8260B Volatiles
[1] Surrogate recovery outside of established laboratory control limits.

Quality Control Comments

Department Inorganic

86017 B2MVK2(121539009DUP)

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.

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 28 pages
Including cover page

Waste Sampling and Characterization Facility
P.O. Box 650 S3-30, Richland WA 99352
Phone: (509) 373-7005/FAX: (509) 372-0456

ACKNOWLEDGEMENT OF SAMPLES RECEIVED

WSCF Laboratory

 PO Box 650 S3-30
 Richland, WA 99352

ATTN: Scot Fitzgerald

Customer Code:	CHPRC
CACN:	403315
Work Order #:	121541
Customer Work ID:	F12-028-359
Due Date:	12/19/2012

The following samples were received from you on 12/4/2012 2:00:00 PM. They have been scheduled for the tests listed below 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
121541001	B2N860	WATER	12/4/2012 09:50	12/4/2012 14:00
Procedure Compound List				
Hexavalent chromium Discrete Analyzer Cr6				
Sample #	Sample ID	Matrix	Collected	Received
121541002	B2N874	WATER	12/4/2012 11:05	12/4/2012 14:00
Procedure Compound List				
Hexavalent chromium Discrete Analyzer Cr6				
Sample #	Sample ID	Matrix	Collected	Received
121541003	B2N871	WATER	12/4/2012 10:45	12/4/2012 14:00
Procedure Compound List				
Hexavalent chromium Discrete Analyzer Cr6				
Sample #	Sample ID	Matrix	Collected	Received
121541004	B2N868	WATER	12/4/2012 10:30	12/4/2012 14:00
Procedure Compound List				
Hexavalent chromium Discrete Analyzer Cr6				
Sample #	Sample ID	Matrix	Collected	Received
121541005	B2N864	WATER	12/4/2012 10:55	12/4/2012 14:00
Procedure Compound List				
Hexavalent chromium Discrete Analyzer Cr6				
Sample #	Sample ID	Matrix	Collected	Received
121541006	B2N883	WATER	12/4/2012 11:36	12/4/2012 14:00
Procedure Compound List				
Hexavalent chromium Discrete Analyzer Cr6				
Sample #	Sample ID	Matrix	Collected	Received
121541007	B2N880	WATER	12/4/2012 11:15	12/4/2012 14:00
Procedure Compound List				
Hexavalent chromium Discrete Analyzer Cr6				
Sample #	Sample ID	Matrix	Collected	Received
121541008	B2N856	WATER	12/4/2012 09:00	12/4/2012 14:00
Procedure Compound List				
Hexavalent chromium Discrete Analyzer Cr6				

Waste Sampling and Characterization Facility
P.O. Box 650 S3-30, Richland WA 99352
Phone: (509) 373-7005/FAX: (509) 372-0456

Sample #	Sample ID	Matrix	Collected	Received
121541009	B2N861	WATER	12/4/2012 09:50	12/4/2012 14:00
Procedure	Compound List			
Anions by Ion Chromatography (Water)	F,Cl,NO2,Br,NO3,PO4,SO4			
ICP-2008 MS All possible metal	Al,Mn,Ni,Ba,Cd,Cr,Co,Cu,V,Zn,Pb,Mo,Sr,U,As,Se,B			
ICP-6010 - All possible metals	Fe			
SW-846 8260B Volatiles	more than 50 compounds...			
Technetium-99 by ICP MS	Tc-99			
Tritium by LSC	H3			
Sample #	Sample ID	Matrix	Collected	Received
121541010	B2N881	WATER	12/4/2012 11:15	12/4/2012 14:00
Procedure	Compound List			
Anions by Ion Chromatography (Water)	F,Cl,NO2,Br,NO3,PO4,SO4			
ICP-2008 MS All possible metal	Al,Mn,Ni,Ba,Cd,Cr,Co,Cu,V,Zn,Pb,Mo,Sr,U,As,Se,B			
ICP-6010 - All possible metals	Fe			
SW-846 8260B Volatiles	more than 50 compounds...			
Technetium-99 by ICP MS	Tc-99			
Tritium by LSC	H3			
Sample #	Sample ID	Matrix	Collected	Received
121541011	B2N875	WATER	12/4/2012 11:05	12/4/2012 14:00
Procedure	Compound List			
Anions by Ion Chromatography (Water)	F,Cl,NO2,Br,NO3,PO4,SO4			
ICP-2008 MS All possible metal	Al,Mn,Ni,Ba,Cd,Cr,Co,Cu,V,Zn,Pb,Mo,Sr,U,As,Se,B			
ICP-6010 - All possible metals	Fe			
SW-846 8260B Volatiles	more than 50 compounds...			
Technetium-99 by ICP MS	Tc-99			
Tritium by LSC	H3			
Sample #	Sample ID	Matrix	Collected	Received
121541012	B2N872	WATER	12/4/2012 10:45	12/4/2012 14:00
Procedure	Compound List			
Anions by Ion Chromatography (Water)	F,Cl,NO2,Br,NO3,PO4,SO4			
ICP-2008 MS All possible metal	Al,Mn,Ni,Ba,Cd,Cr,Co,Cu,V,Zn,Pb,Mo,Sr,U,As,Se,B			
ICP-6010 - All possible metals	Fe			
SW-846 8260B Volatiles	more than 50 compounds...			
Technetium-99 by ICP MS	Tc-99			
Tritium by LSC	H3			
Sample #	Sample ID	Matrix	Collected	Received
121541013	B2N869	WATER	12/4/2012 10:30	12/4/2012 14:00
Procedure	Compound List			
Anions by Ion Chromatography (Water)	F,Cl,NO2,Br,NO3,PO4,SO4			
ICP-2008 MS All possible metal	Al,Mn,Ni,Ba,Cd,Cr,Co,Cu,V,Zn,Pb,Mo,Sr,U,As,Se,B			
ICP-6010 - All possible metals	Fe			
SW-846 8260B Volatiles	more than 50 compounds...			
Technetium-99 by ICP MS	Tc-99			
Tritium by LSC	H3			
Sample #	Sample ID	Matrix	Collected	Received
121541014	B2N865	WATER	12/4/2012 10:55	12/4/2012 14:00
Procedure	Compound List			
Anions by Ion Chromatography (Water)	F,Cl,NO2,Br,NO3,PO4,SO4			

Waste Sampling and Characterization Facility
P.O. Box 650 S3-30, Richland WA 99352
Phone: (509) 373-7005/FAX: (509) 372-0456

ICP-2008 MS All possible metal	Al,Mn,Ni,Ba,Cd,Cr,Co,Cu,V,Zn,Pb,Mo,Sr,U,As,Se,B
ICP-6010 - All possible metals	Fe
SW-846 8260B Volatiles	more than 50 compounds...
Technetium-99 by ICP MS	Tc-99
Tritium by LSC	H3

Sample #	Sample ID	Matrix	Collected	Received
121541015	B2N884	WATER	12/4/2012 11:36	12/4/2012 14:00

Procedure	Compound List
Anions by Ion Chromatography (Water)	F,Cl,NO2,Br,NO3,PO4,SO4
ICP-2008 MS All possible metal	Al,Mn,Ni,Ba,Cd,Cr,Co,Cu,V,Zn,Pb,Mo,Sr,U,As,Se,B
ICP-6010 - All possible metals	Fe
SW-846 8260B Volatiles	more than 50 compounds...
Technetium-99 by ICP MS	Tc-99
Tritium by LSC	H3

Sample #	Sample ID	Matrix	Collected	Received
121541016	B2N857	WATER	12/4/2012 09:00	12/4/2012 14:00

Procedure	Compound List
Anions by Ion Chromatography (Water)	F,Cl,NO2,Br,NO3,PO4,SO4
ICP-2008 MS All possible metal	Al,Mn,Ni,Ba,Cd,Cr,Co,Cu,V,Zn,Pb,Mo,Sr,U,As,Se,B
ICP-6010 - All possible metals	Fe
SW-846 8260B Volatiles	more than 50 compounds...
Technetium-99 by ICP MS	Tc-99
Tritium by LSC	H3

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			PAGE 1 OF 1	
COLLECTOR	COMPANY CONTACT	PROJECT COORDINATOR	PRICE CODE	7C	DATA TURNAROUND	
F.M. Hall	Keville	EVANS, RT	AIR QUALITY	<input type="checkbox"/>	15 Days / 15 Days	
SAMPLING LOCATION	PROJECT DESIGNATION	SAF NO.				
289-T, Effluent Tank, Valve V07-780-D.	200W Pump & Treat - Treatment Plant Water Sampling	F12-028				
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT	GOVERNMENT VEHICLE	
HNF-N-585-6/62	N/A	N/A	303110ES10	BILL OF LADING/AIR BILL NO.	ORIGINAL	
SHIPPED TO	OFFSITE PROPERTY NO.	N/A	N/A			
Waste Sampling & Characterization		PRESERVATION	Cool~4C			
POSSIBLE SAMPLE HAZARDS / REMARKS		HOLDING TIME	24 Hours			
** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not relatable per DOE Order 458.1.**		TYPE OF CONTAINER	aG			
A=Air D=Drum L=Liquid DS=Drum Solids L=Liquid O=Oil S=Sediment T=Tablet SE=Sediment V=Vegetation W=Water WI=Water X=Other		NO. OF CONTAINER(S)	1			
SPECIAL HANDLING AND/OR STORAGE		VOLUME	125mL			
SAMPLE NO.		MATRIX*	SAMPLE ANALYSIS			
B2N860		WATER	75K ORB: CORROSION:			
SAMPLE DATE		SAMPLE TIME				
12-4-12		0950				

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN		DATE/TIME	
F.M. Hall	12-4-12 14:00	75K F12-028-12	L	12-4-12 14:00	
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN		DATE/TIME	
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN		DATE/TIME	
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN		DATE/TIME	
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN		DATE/TIME	
RELINQUISHED BY / REMOVED FROM	DATE/TIME	RECEIVED BY / STORED IN		DATE/TIME	
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	
PRINTED ON 11/26/2012					

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2MHILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		
COLLECTOR	F.M. Hall K4U072	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR
SAMPLING LOCATION	269-TA, Pre-Resin Tank B1, Valve Y2-Y1 181	PROJECT DESIGNATION	373-7924	EVANS, RT SAF NO. F12-028
ICE CHEST NO.		FIELD LOGBOOK NO.		AIR QUALITY <input type="checkbox"/>
SHIPPED TO	HNF-N- 585-662	ACTUAL SAMPLE DEPTH	N/A	DATA TURNAROUND 15 Days / 15 days
Waste Sampling & Characterization	N/A	BILL OF LADING/AIR BILL NO.	N/A	PAGE 1 OF 1
MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS			
A=Air D=Drum L=Liquid O=Drums S=Solids O=Oil S=Soil SE=Sediment T=Tissue V=Vaporization W=Water W=Water X=Other	**Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.** 200W Pump & Treat - Treatment Plant Water Sampling			
SPECIAL HANDLING AND/OR STORAGE				
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	
B2N874	2 WATER	12-4-12	11:05	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SPECIAL INSTRUCTIONS
F.M. Hall	12-4-12 1400	TA F12-028	12-4-12 1400	** The CAN for WSCF Analytical is 403315. <input type="checkbox"/> ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SPECIAL INSTRUCTIONS
F.M. Hall	12-4-12 1400	TA F12-028	12-4-12 1400	** The CAN for WSCF Analytical is 403315. <input type="checkbox"/> ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	
LABORATORY SECTION	RECEIVED BY	TITLE	DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY	DATE/TIME	

A-603-518 (REV 2)

PRINTED ON 11/26/2012

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2MHILL Plateau Remediation Company		CHAIN OF CUSTODY / SAMPLE ANALYSIS REQUEST																	
COLLECTOR F. M. Hall <i>Karen</i>	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT																
PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling		SAF NO. F12-328	PRICE CODE <input type="checkbox"/> 7C <input checked="" type="checkbox"/> DATA TURNAROUND 15 Days / 15 Days																
SAMPLING LOCATION 289-TA, Post Resin Tank A2, Valve V03-Y21A2	FIELD LOGBOOK NO. HNF-N- 585-662	ACTUAL SAMPLE DEPTH N/A	AIR QUALITY <input type="checkbox"/>																
ICE CHEST NO.	OFFSITE PROPERTY NO.	COA 30310ES:0	METHOD OF SHIPMENT GOVERNMENT VEHICLE																
SHIPPED TO	BILL OF LADING/AIR BILL NO. N/A	ORIGINAL																	
Waste Sampling & Characterization <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>MATRIX* A=Air DL=Drum Liquids Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water Wt=Whole X=Other</td> <td>Possible Sample Hazards / Remarks **Contains Radionuclides Material(s) at: concentrations that may or may not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not regulatable per DOE Order 158.1.** S=Soil SE=Sediment T=Tissue V=Vegetation W=Water Wt=Whole X=Other</td> <td>PRESERVATION Cool-4C</td> <td>HOLDING TIME 24 Hours</td> </tr> <tr> <td colspan="2"></td> <td>TYPE OF CONTAINER a5</td> <td>NO. OF CONTAINER(S) 1</td> </tr> <tr> <td colspan="2"></td> <td>VOLUME 1.25mL</td> <td>SAMPLE ANALYSIS 7796 CRB: Common;</td> </tr> <tr> <td>SAMPLE NO. B2NB71</td> <td>MATRIX* 3 WATER</td> <td>SAMPLE DATE 12-4-12</td> <td>SAMPLE TIME 10:45:--</td> </tr> </table>				MATRIX* A=Air DL=Drum Liquids Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water Wt=Whole X=Other	Possible Sample Hazards / Remarks **Contains Radionuclides Material(s) at: concentrations that may or may not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not regulatable per DOE Order 158.1.** S=Soil SE=Sediment T=Tissue V=Vegetation W=Water Wt=Whole X=Other	PRESERVATION Cool-4C	HOLDING TIME 24 Hours			TYPE OF CONTAINER a5	NO. OF CONTAINER(S) 1			VOLUME 1.25mL	SAMPLE ANALYSIS 7796 CRB: Common;	SAMPLE NO. B2NB71	MATRIX* 3 WATER	SAMPLE DATE 12-4-12	SAMPLE TIME 10:45:--
MATRIX* A=Air DL=Drum Liquids Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water Wt=Whole X=Other	Possible Sample Hazards / Remarks **Contains Radionuclides Material(s) at: concentrations that may or may not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not regulatable per DOE Order 158.1.** S=Soil SE=Sediment T=Tissue V=Vegetation W=Water Wt=Whole X=Other	PRESERVATION Cool-4C	HOLDING TIME 24 Hours																
		TYPE OF CONTAINER a5	NO. OF CONTAINER(S) 1																
		VOLUME 1.25mL	SAMPLE ANALYSIS 7796 CRB: Common;																
SAMPLE NO. B2NB71	MATRIX* 3 WATER	SAMPLE DATE 12-4-12	SAMPLE TIME 10:45:--																

CHAIN OF POSSESSION		SIGN/PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>F. M. Hall</i>	DATE/TIME 12-4-12 1400	RECEIVED BY/STORED IN <i>TA-NAT, 12-4-12</i>	DATE/TIME 12-4-12 1400	** The CACN for WSCF Analytical is 403315. <input type="checkbox"/> ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DISPOSED BY	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD				

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2MHILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				
COLLECTOR	COMPANY CONTACT	PROJECT DESIGNATION	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	PAGE 1 OF 1
F.M. Hall	EVANS, RT	ZUW Pump & treat - Treatment Plant Water Sampling	373-7924	EVANS, RT	7C	
SAMPLING LOCATION		FIELD LOGBOOK NO.		SAF NO.	AIR QUALITY	DATA TURNAROUND 15 Days / 15 Days
209-TA, Post Resin Tank A1, Valve V03-Y21A1		LINE-N- 585-962	N/A	F12-028	<input type="checkbox"/>	
ICE CHEST NO.		OFFSITE PROPERTY NO.		COA	METHOD OF SHIPMENT	
				303110ES0	GOVERNMENT VEHICLE	
SHIPPED TO				BILL OF LADING/AIR BILL NO.	ORIGINAL	
				N/A		

POSSIBLE SAMPLE HAZARDS/ REMARKS		PRESERVATION		COOL-4C	
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		HOLDING TIME	24 Hours		
		TYPE OF CONTAINER	aG		
		NO. OF CONTAINER(S)	1		
		VOLUME	125mL		
SPECIAL HANDLING AND/OR STORAGE		SAMPLE ANALYSIS	7196 CRB; COMMON;		
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2N868	4/ WATER	12-4-12	1030		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The CACN for WSCF Analytical is 403315. <input checked="" type="checkbox"/> ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.	
F.M. Hall	12-4-12 1400	TH. FHN-2, a. Cen. 7, 2	12-4-12 1400		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY			DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DATE/TIME	

A 603 618 (REV 2)

PRINTED ON 11/26/2012

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CHAMHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	PAGE 1 OF 1
F. M. Hill	EVANS, RT	373-7924	EVANS, RT	7C	
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.	AIR QUALITY	DATA TURNAROUND
289-TA, Pre-Resin Tank A1, Valve V25-Y21A1	280W Pump & Treat Treatment Plant Water Sampling		FL12-028	<input type="checkbox"/>	15 Days / 15 days
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA		
	HINF-N- 585- <i>662</i>	N/A	3031105S10		
SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.			
	N/A	N/A			
Waste Sampling & Characterization					
MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS				
A=Air	**Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not reclassifiable per DOE Order 458.1.**				
DL=Drum					
Liquids					
DS=Drum					
L=Liquid					
O=Oil					
S=Soil					
SE=Sediment					
T=Tissue					
V=Vegetation					
W=Water					
Wt=Water					
X=Other					
SPECIAL HANDLING AND/OR STORAGE					
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2N864	5	WATER	/2-24-12	/053-	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The CACN for WSCF Analytical is 403315. <i>L</i> ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.	
<i>F. M. Hill</i>	12-24-12 ~ 14:00	<i>FL12-028</i>	12-24-12 ~ 14:00		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>F. M. Hill</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>F. M. Hill</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>F. M. Hill</i>					
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
<i>F. M. Hill</i>					
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DATE/TIME	
PRINTED ON 11/26/2012					

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
COLLECTOR F. M. Hall	K4-C2	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7C
SAMPLING LOCATION 289-TA, Post Resin Tank D2, Valve V03-Y21B2		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling		SAF NO. F12-028	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO.		FIELD LOGBOOK NO. HIN-N- 855-6/62	ACTUAL SAMPLE DEPTH NA	COA 30310ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE
SHIPPED TO Waste Sampling & Characterization		OFFSITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A	ORIGINAL
MATRIX* A=Air D=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WI=Water X=Other		POSSIBLE SAMPLE HAZARDS/ REMARKS ** Contains Radioactive Material at: concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order-456.1.*	PRESERVATION Cool-4C	HOLDING TIME 24 Hours	
		TYPE OF CONTAINER SCS		NO. OF CONTAINER(S) 1	
		VOLUME 125mL			
		SPECIAL HANDLING AND/OR STORAGE SAMPLE ANALYSIS			
SAMPLE NO. E2NBB83	6	MATRIX* WATER	SAMPLE DATE 12-4-12	SAMPLE TIME 113C	

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM F. M. Hall	DATE/TIME 12-4-12 14:00	RECEIVED BY/STORED IN TA F102	DATE/TIME 12-4-12 14:00	** The CACN for WSCF Analytical is 403315. <input checked="" type="checkbox"/> The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	DATE/TIME	DISPOSED BY	DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD				

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 1 OF 1
COLLECTOR <i>F. M. Hall</i>	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE F12-028	AIR QUALITY <input type="checkbox"/>	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 289-TA, Post-Resin Tank B1, Valve V03-Y21B1 ICE CHEST NO.	PROJECT DESIGNATION 200(W Pump & Treat - Treatment Plant Water Sampling)	FIELD LOGBOOK NO. HNF-N- <i>585-662</i>	ACTUAL SAMPLE DEPTH N/A	COA 30310E510	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	N/A	BILL OF LADING/AIR BILL NO. N/A			
MATRIX* A=Air D=Drum L=Liquid O=Drum S=Solids L=Liquid O=Oil S=Sediment SE=Soil T=Tissue V=Vegetation W=Water W=Water X=Other	POSSIBLE SAMPLE HAZARDS / REMARKS **Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 455.1.**	PRESERVATION Code=dC	HOLDING TIME 24 Hours	TYPE OF CONTAINER 6G	NO. OF CONTAINER(S) 1	VOLUME 125mL
SAMPLE NO. B2N880	MATRIX* 7 WATER	SAMPLE DATE 12-4-12	SAMPLE TIME 1115	SAMPLE ANALYSIS 7196.CR6 CLAMPON		
SPECIAL HANDLING AND/OR STORAGE						
SPECIAL INSTRUCTIONS ** The CACN for WSCF Analytical is 403315. <input type="checkbox"/> ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.						
CHAIN OF POSSESSION						
RELINQUISHED BY/REMOVED FROM <i>F. M. Hall</i>	DATE/TIME 12-4-12 1400	RECEIVED BY/STORED IN <i>TA Frantz, J.</i>	DATE/TIME 12-4-12 1400	RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
<i>TA Frantz, J.</i>				<i>TA Frantz, J.</i>		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN
LABORATORY SECTION FINAL SAMPLE DISPOSITION	RECEIVED BY SECTION	DISPOSAL METHOD	DATE/TIME	DISPOSED BY	DATE/TIME	DATE/TIME
PRINTED ON 11/26/2012						
A 6003 618 (REV 2)						

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CHI2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				
COLLECTOR	COMPANY CONTACT	PROJECT NO.	PROJECT COORDINATOR	F12-028-355	PRICE CODE	7C
	EVANS, RT	373-7924	EVANS, RT		AIR QUALITY	<input type="checkbox"/>
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.		DATA TURNAROUND	15 Days / 15 days
289-T, Influent Tank, Valve V05-Y30	200W Pump & Treat - Treatment Plant Water Sampling		F12-028			
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA			
	HNF-N-5856/62	N/A	30310E510		METHOD OF SHIPMENT	GOVERNMENT VEHICLE
SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.				
	N/A	N/A				
Waste Sampling & Characterization		PRESERVATION	Cool-4C			
MATRIX*	POSSIBLE SAMPLE HAZARDS / REMARKS	HOLDING TIME	24 Hours			
A=Air	** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 158.1.4+	TYPE OF CONTAINER	aG			
D=Drum		NO. OF CONTAINER(S)	1			
L=Liquid		VOLUME	125mL			
S=Solids		SAMPLE ANALYSIS	7196 CRB; Common			
I=Liquid		SAMPLE DATE	12/4/12			
O=Oil		SAMPLE TIME	0900 ✓			
S=Soil						
SE=Sediment						
T=Tissue						
V=Vegetation						
W=Water						
WT=Wipe						
X=Other						
SAMPLE NO.	MATRIX*					
B2N856	8 WATER					

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	** The CACN for WSCF Analytical is 403315. <input type="checkbox"/> ** The 200 Area SR&RP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.	
	12-4-12 1400	TRVL-12-12-12 12:00 PM	12-4-12 1400		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DATE/TIME	

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2MHill Plateau Remediation Company		COMPANY CONTACT		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PROJECT COORDINATOR		F12-028-360		PAGE 1 OF 2	
COLLECTOR	F.M. Hall <i>Karen</i>	EVANS, RT	PROJECT DESIGNATION	TELEPHONE NO.	373-7024	EVANS, RT	SAF NO.	PRICE CODE	7C	DATA TURNAROUND	
SAMPLING LOCATION	288-T, Effluent Tank, Valve V07-7760 D*	FIELD LOGBOOK NO.		200W Pump & Treat - Treatment Plant Water Sampling		FIELD LOGBOOK NO.	F12-028	AIR QUALITY	<input type="checkbox"/>	15 Days / 15 days	
ICE CHEST NO.		ACTUAL SAMPLE DEPTH		N/A		COA	303100510	METHOD OF SHIPMENT		ORIGINAL	
SHIPPED TO		OFFSITE PROPERTY NO.		N/A		GOVERNMENT VEHICLE		BILL OF LADING/AIR BILL NO.		N/A	
Waste Sampling & Characterization											
POSSIBLE HAZARDS/REMARKS		PRESERVATION									
** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.**		HOLDING TIME		HCl or H2SO4 to pH <2		HNO3 to pH <2 (LiI/Hex)		Cool-4C		None	
		14 Days		6 Months		48 Hours		6 Months		None	
A=Air Dl=Drum Liquids DS=Drums Solids I=Liquid O=Oil S=Soil Se=Sediment T=Tissue V=Vegetation Wa=Water Wi=Wipe X=Other		TYPE OF CONTAINER		455*		CP		P		G	
SPECIAL HANDLING AND/OR STORAGE		NO. OF CONTAINER(S)		3		1		1		1	
SAMPLE NO.		MATRIX*		VOLUME		40mL		500mL		250mL	
B2N861		9 WATER		SAMPLE DATE		12-4-12		0550		60mL	
SIGN/ PRINT NAMES											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
F.M. Hall 12-4-12 1400 12-4-12 1400											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
LABORATORY SECTION RECEIVED BY DATE/TIME											
FINAL SAMPLE DISPOSITION DATE/TIME											
PRINTED ON 11/26/2012 DISPOSED BY DATE/TIME											

SPECIAL INSTRUCTIONS											
SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
F.M. Hall 12-4-12 1400 12-4-12 1400											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
RELINQUISHED BY/REMOVED FROM DATE/TIME RECEIVED BY/STORED IN DATE/TIME											
LABORATORY SECTION RECEIVED BY DATE/TIME											
FINAL SAMPLE DISPOSITION DATE/TIME											
PRINTED ON 11/26/2012 DISPOSED BY DATE/TIME											

Chain of Custody

CH2M Hill Plateau Remediation Company				CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 2 OF 2	
COLLECTOR F.M. Hall	FAUER	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7974	PROJECT COORDINATOR EVANS, RT	PRICE CODE F12-028	7C	AIR QUALITY <input type="checkbox"/>	DATA TURNAROUND 15 Days 15 Days	
SAMPLING LOCATION ICE CHEST NO.	289-T, Effluent Tank, Valve V07-180-D*	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling		SAF NO. F12-028					
SHIPPED TO	Waste Sampling & Characterization	FIELD LOGBOOK NO. HNF-N- 5855-662	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL			
SPECIAL INSTRUCTIONS	<p>** The CACN for WSCF Analytical is 403315. <input checked="" type="checkbox"/> ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this S&F.</p> <p>(1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Chloroform, Methylene chloride, Trichloroethene, Vinyl chloride}; 8260_VOA_GCMS: CH 01 {Chloromethane}; 8260_VOA_GCMS: COMMON (Add-on) {cis-1,2-Dichloroethylene};</p> <p>(2) 200.8_METALS_ICPMS: COMMON {Aluminum, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Selenium}; 200.8_METALS_ICPMS: COMMON (Add-on) {Boron, Manganese, Nickel, Strontium, Uranium, Vanadium, Zinc}; 6010_METALS_ICP: COMMON {Iron};</p> <p>(3) 300.0_ANIONS_IC: COMMON (Add-on);</p>								
					BILL OF LADING/AIR BILL NO. N/A				

TFL-12- 121

PRINTED ON 11/26/2012

A-6003-518 (REV 2)

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	PAGE 1 OF 2
F. M. Hall	EVANS, RT	373-7924	EVANS, RT	7C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.	AIR QUALITY	
288-TA, Post-Resin Tank B1, Valve V03-721B1	200W Pump & Treat Treatment Plant Water Sampling	F12-028			
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT	ORIGINAL
	HNF-N-585-662	N/A	303110ES10	GOVERNMENT VEHICLE	
SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.			
Waste Sampling & Characterization	N/A	N/A			
MATRIX*	POSSIBLE SAMPLE HAZARDS/ REMARKS	PRESERVATION	HCl or HNO3 to pH <2	Cool~4C	
D=Air DL=Drum Liquids DS=Drum Solids I=1 liquid O=Oil S=Soil Se=Sediment T=Tissue V=Vegetation W=Water WH=Water X=Other	**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.*	HOLDING TIME	<24 hours 14 Days	6 Months	6 Months
		TYPE OF CONTAINER	4G5*	G	No/gene:
		NO. OF CONTAINER(S)	3	1	1
		VOLUME	40mL	500mL	60mL
		SAMPLE ANALYSIS	SEE ITEM (1) SEE ITEM (2) SEE ITEM (3)	TRITIUM, UR-235, SC-137 by ICPMS	
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME		
B2N881	10 WATER	12-4-12	11:55		

CHAIN OF POSSESSION		SIGN/ PRINT NAMES				SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS			
F. M. Hall	12-4-12 /400	74-Fm-24, Room 3, 2 - 4-12 /400	12-4-12 /400				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
LABORATORY SECTION	RECEIVED BY	TITLE					
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DATE/TIME					
PRINTED ON 11/26/2012						A-6003-618 (REV 2)	

Chain of Custody

CH2Mhill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-028-380	PAGE 2 OF 2
COLLECTOR 	COMPANY CONTACT EVANS, RT 	TELEPHONE NO. 373-7324	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7C <input type="checkbox"/> AIR QUALITY <input checked="" type="checkbox"/> SAF NO. F12-028	DATA TURNAROUND 15 DAYS / 15 Days	
SAMPLING LOCATION 288-TA, Post-Resin Tank B1, Valve V03-Y21B1	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling	FIELD LOGBOOK NO. HNF-N- 585-662	ACTUAL SAMPLE DEPTH N/A	COA 303110E510	METHOD OF SHIPMENT GOVERNMENT VEHICLE BILL OF LADING/AIR BILL NO. N/A	
ICE CHEST NO.	OFFSITE PROPERTY NO. N/A				ORIGINAL	
SHIPPED TO Waste Sampling & Characterization						
SPECIAL INSTRUCTIONS ** The CACN for WSCF Analytical is 403315. L** The 200 Area S&BGRP Characterization and Monitoring Sampling and Analysis GKI applies to this S&F. (1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Chloroform, Methylene chloride, Trichloroethene, Vinyl chloride}; 8260_VOA_GCMS: CH 01 {Chlormethane}; 8260_VOA_GCMS: COMMON (Add-on) {cis-1,2-Dichloroethylene}; (2) 200.8_METALS_ICPMS: COMMON {Aluminum, Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Selenium}; 200.8_METALS_ICPMS: COMMON (Add-on) {Boron, Manganese, Nickel, Strontium, Uranium, Vanadium, Zinc}; 6010_METALS_ICP: COMMON {Iron}; (3) 300.0_ANIONS_IC: COMMON {COMMON (Add-on)}; 						

PRINTED ON 11/26/2012

A-6003-616 (REV 2)

TR-12- 121

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PROJECT COORDINATOR		F12-028-374		PAGE 1 OF 2	
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	EVANS, RT	PROJECT DESIGNATION	SAF NO.	PRICE CODE	7C	AIR QUALITY	DATA TURNAROUND	15 Days / 15 Days	
F. M. Hall	EVANS, RT	373-7524		200W Pump & Treat - Treatment Plant Water Sampling	F12-028						
SAMPLING LOCATION	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	N/A	COA	303110E510	METHOD OF SHIPMENT	GOVERNMENT VEHICLE	ORIGINAL			
ICE CHEST NO.	INT-N- 585-6/62	OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO.							
SHIPPED TO	Waste Sampling & Characterization	PRESERVATION	HCl or HNO3 to pH <2	Cool~4C	None	HNO3 to pH <2 (ULTRAEX)					
		HOLDING TIME	14 Days	6 Months	48 Hours	6 Months					
		TYPE OF CONTAINER	455*	G/P	P	G	N/A				
		NO. OF CONTAINER(S)	3	1	1	1					
		VOLUME	450mL	500mL	60mL	250mL	60mL				
		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	TRITIUM ELE SC COMMON	TC99 by ICNIS,					
		SAMPLE DATE	SAMPLE TIME								
SAMPLE NO.	MATRIX*	B2N875	1	12-41-12	1105						

CHAIN OF POSSESSION		SIGN/PRINT NAMES			SPECIAL INSTRUCTIONS		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS			
F. M. Hall	12-41-12 1400	TA F12-028-374	12-41-12 1400				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME				
LABORATORY SECTION	RECEIVED BY	TITLE			DATE/TIME		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD				DATE/TIME		
PRINTED ON 11/26/2012							

Chain of Custody

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				F12-028-374	PAGE 2 OF 2
COLLECTOR F.M. Hall	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days
SAMPLING LOCATION 289-TA, Pre-Resin Tank B1, Valve V25-Y21B1	PROJECT DESIGNATION 200W Pump & Treat: Treatment Plant Water Sampling		SAF NO. F12-028	AIR QUALITY	
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA 303110ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	HNF-N. 585-6/62	N/A	BILL OF LADING/AIR BILL NO. N/A		
SPECIAL INSTRUCTIONS					
<p>** The CACN for WSCF Analytical is 403315. <input checked="" type="checkbox"/> The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKT applies to this SAF.</p> <p>(1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Chloroform, Methylene chloride, Trichloroethene, Vinyl chloride}; 8260_VOA_GCMS: CH 01 {Chloromethane}; B260_VOA_GCMS: COMMON (Add-on) {cis-1,2-Dichloroethylene};</p> <p>(2) 200_B_METALS_ICPMS: COMMON {Aluminum, Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Selenium}; 200_B_METALS_ICPMS: COMMON (Add-on) {Boron, Manganese, Nickel, Strontium, Uranium, Vanadium, Zinc}; 6010_METALS_ICP: COMMON {Iron};</p> <p>(3) 300_0_ANIONS_IC: COMMON {Add-on};</p>					

PRINTED ON 11/26/2012

A-5003-618 (REV 2)

12-121

Chain of Custody

CH2MHill Plateau Remediation Company		COMPANY CONTACT		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PROJECT COORDINATOR		PAGE 1 OF 2	
COLLECTOR F.M. Hall	<i>K. Hall</i>	EVANS, RT		TELEPHONE NO. 373-7924		EVANS, RT		DATA TURNAROUND 15 Days / 15 Days	
SAMPLING LOCATION		PROJECT DESIGNATION				SAF NO.	PRICE CODE	7C	
289-TA, Post Resin Tank A2, Valve V03-Y21A2		200W Pump & Treat - Treatment Plant Water Sampling				F12-028	AIR QUALITY	<input type="checkbox"/>	
ICE CHEST NO.		FIELD LOGBOOK NO. HNF-N- 5856/62		ACTUAL SAMPLE DEPTH N/A	COA	303101E510	METHOD OF SHIPMENT	ORIGINAL	
SHIPPED TO		OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		GOVERNMENT VEHICLE:			
Waste Sampling & Characterization		N/A		N/A		N/A			
MATRIX* Ai=Air Dl=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil Se=Sediment T=Tissue V=Vegetation W=Water Wi=Water X=Other	POSSIBLE SAMPLE HAZARDS/REMARKS		<p>** Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not relocatable per DOE Order 458.1.***</p> <p>HCl or HNO3 to pH <2</p> <p>HNO3 to pH <2</p> <p>6 Months</p> <p>6 Months</p> <p>None</p> <p>None</p> <p><2 (ULL/HZK)</p>						
	PRESERVATION	HOLDING TIME		COOL-4C		None			
	at 0°*	14 Days		48 Hours		None			
	TYPE OF CONTAINER	NO. OF CONTAINER(S)		G/P	P		None		
	40mL	3		1	1		None		
	VOLUME	40mL		500mL	500mL		None		
SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS		SEE ITEM (2) IN SPECIAL INSTRUCTIONS		SEE ITEM (3) IN SPECIAL INSTRUCTIONS			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	DATE/TIME	
B2NB72	12-WATER	12-4-12	10 45						

CHAIN OF POSSESSION		SIGN/PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN		SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS	
F.M. Hall	12-4-12 1400	TA Field 1, RT, Room 7, 12-4-12 1400			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN			
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN			
LABORATORY SECTION	RECEIVED BY		TITLE	DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DISPOSED BY	DATE/TIME	

Chain of Custody

CH2MHILL Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		
COLLECTOR F. M. Hall	<i>R. J. U. C.</i>	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT
SAMPLING LOCATION 289-TA, Post Resin Tank A2, Valve V03-Y21A2		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling		PRICE CODE 7C <input type="checkbox"/> AIR QUALITY F12-028
ICE CHEST NO.	HNF-N- 285-6/62	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH N/A	DATA TURNAROUND 15 Days / 15 Days SAF NO. F12-028
SHIPPED TO Waste Sampling & Characterization	N/A	OFFSITE PROPERTY NO.	COA 3031101E10	METHOD OF SHIPMENT GOVERNMENT VEHICLE ORIGINAL BILL OF LADING/AIR BILL NO. N/A

SPECIAL INSTRUCTIONS

** The CACN for WSCF Analytical is 403315. ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this S&G. The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this S&G. {Carbon tetrachloride, Chloroform, Methylene chloride, Trichloroethene, Vinyl chloride}; 8260_VOA_GCMS: CH 01 {Chloromethane}; (1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Chloroform, Methylene chloride, Trichloroethene, Vinyl chloride}; 8260_VOA_GCMS: COMMON (Add-on) {cis-1,2-Dichloroethylene}; (2) 200.8_METALS_ICPMS: COMMON {Aluminum, Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Selenium, Vanadium, Zinc}; 200.8_METALS_ICPMS: COMMON (Add-on) {Boron, Manganese, Nickel, Strontium, Uranium, Zinc}; 6010_METALS_ICP: COMMON {Iron}; (3) 300.0_ANIONS_IC: COMMON (Add-on); 300.0_ANIONS_IC: COMMON (Add-on);

PRINTED ON 11/26/2012

A 6003618 (REV 2)

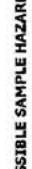
FF-6- 12- 121

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2MHill Plateau Remediation Company		COMPANY CONTACT		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		PROJECT COORDINATOR		F12-028-368		PAGE 1 OF 2	
COLLECTOR F.M. Hall 		EVANS, RT		TELEPHONE NO. 373-7921		EVANS, RT	SAFETY DATA SHEET NO. F12-028	PRICE CODE 7C	AIR QUALITY <input type="checkbox"/>	DATA TURNAROUND 15 Days / 15 days	
PROJECT DESIGNATION		FIELD LOGBOOK NO.		ACTUAL SAMPLE DEPTH		COA					
200W Pump & Treat - Treatment Plant Water-Sampling		HNT-N- 585-66-		N/A		303110ES10					
SAMPLING LOCATION 289-TA, Post Resin Tank A1, Valve V03-Y21A1		OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO.		GOVERNMENT VEHICLE		METHOD OF SHIPMENT		ORIGINAL	
ICE CHEST NO.		N/A		N/A		N/A					
Waste Sampling & Characterization											
MATRIX* A=Air Dl=Drum Liquids DS=Drums Solids L=Liquid O=Oil S=Sediment Se=Sediment T=Table V=Vegetation W=Water WT=Water X=Other		POSSIBLE SAMPLE HAZARDS/ REMARKS ** Contain's Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.**		PRESERVATION HCl or H2SO4 to pH 2		HNO3 to pH 2		Cool-4°C		None	
		HOLDING TIME 14 Days		20°C±5°C		6 Months		48 Hours		6 Months	
		TYPE OF CONTAINER aCs*		aCs*		G/P		P		G	
		NO. OF CONTAINER(S)		3		1		1		1	
		VOLUME 40mL		500mL		60mL		250mL		60mL	
		SAMPLE ANALYSIS SEE ITEM (1) IN SPECIAL INSTRUCTIONS		SEE ITEM (2) IN SPECIAL INSTRUCTIONS		SEE ITEM (3) IN SPECIAL INSTRUCTIONS		TRITIUM EEL 16.99 BY ICAMS, SC COMMON			
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME								
B2N869	13 WATER	12-14-12	10:30	✓	✓	✓	✓	✓	✓	✓	✓

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM F.M. Hall 	DATE/TIME 12-14-12 1400	RECEIVED BY/STORED IN <i>TA F12-21 en Chemin J</i>	DATE/TIME 12-14-12 1400	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY	TITLE		DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD	DISPOSED BY		DATE/TIME	

Chain of Custody

CH2Mhill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
COLLECTOR <i>F. M. Hall</i>	<i>F. M. Hall</i>	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7724	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7C
SAMPLING LOCATION 289-TA, Post Resin Tank A1, Valve V03-Y21A1		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling		SAF NO. F12-028	AIR QUALITY <input type="checkbox"/>
ICE CHEST NO.		FIELD LOGBOOK NO. HNF-N- <i>585-C/62</i>	ACTUAL SAMPLE DEPTH <i>N/A</i>	COA 303110ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE
SHIPPED TO Waste Sampling & Characterization		OFF-SITE PROPERTY NO. N/A		BILL OF LADING/AIR BILL NO. N/A	ORIGINAL

SPECIAL INSTRUCTIONS

** The CACN for WSCF Analytical is 403315. ** The 200 Area S&KGRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
 (1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Chloroform, Methylene chloride, Trichloroethene, Vinyl chloride}; 8260_VOA_GCMS: CH 01 {Chloromethane};
 8260_VOA_GCMS: COMMON (Add-on) {cis-1,2-Dichloroethylene};
 (2) 200.8_METALS_ICPMS: COMMON {Aluminum, Barium, Cadmium, Chromium, Cobalt, Lead, Molybdenum, Selenium}; 200.8_METALS_ICPMS: COMMON (Add-on) {Boron, Manganese, Nickel, Strontium, Uranium, Vanadium, Zinc}; 6010_METALS_ICP: COMMON {Iron};
 (3) 300.0_ANIONS_IC: COMMON {Add-on}; 300.0_ANIONS_IC: COMMON (Add-on);

PRINTED ON 11/26/2012

A 6003 618 (REV 2)

TPA-12-121

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	PAGE 1 OF 2
F.M. Hall	EVANS, RT	373-7924	EVANS, RT	7C	DATA TURNAROUND 15 Days / 15 days
SAMPLING LOCATION	PROJECT DESIGNATION		SAF NO.	AIR QUALITY	
289-TA, Pre-Resin Tank A1, Valve V25-Y21A1	200W Pump & Treat - Treatment Plant Water Sampling		FL2-028		
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	COA	METHOD OF SHIPMENT	
HINT-N- 55 -6/62		N/A	303110E510	GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO	OFFSITE PROPERTY NO.	BILL OF LADING/AIR BILL NO.			
Waste Sampling & Characterization	N/A	N/A			
POSSIBLE SAMPLE HAZARDS/REMARKS		PRESERVATION			
Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/JATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.		HOLDING TIME	HCl or H ₂ SO ₄ to pH <2	Cold <4°C	None
		14 Days	6 Months	48 Hours	HNO ₃ to pH <2 (ULTREX)
		TYPE OF CONTAINER	G/P	P	
		NO. OF CONTAINER(S)	3	1	1
		VOLUME	40mL	50mL	60mL
		SAMPLE ANALYSIS	SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS
		SAMPLE DATE	SAMPLE TIME		
SAMPLE NO.	MATRIX*				
B2N865	14 WATER	/ 2 - 4 - 12 / 0 57 -			

CHAIN OF POSSESSION		SIGN/PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS	
F.M. Hall	12-4-12 14:00	TA FL2-028, Lab. Z	12-4-12 14:00		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY		TITLE		
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD		DISPOSED BY		
PRINTED ON 11/26/2012					

Chain of Custody

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		
COLLECTOR P.M. Hall <i>K. Hall</i>	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7324	PROJECT COORDINATOR EVANS, RT	PAGE 2 OF 2
SAMPLING LOCATION 289-TA, Pre-Resin Tank A1, Valve V25-Y21A1	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling		PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days
ICE CHEST NO.	FIELD LOGBOOK NO.	ACTUAL SAMPLE DEPTH	AIR QUALITY <input type="checkbox"/>	
	HNF-N- 585-6 - <i>6c</i>	COA	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A	BILL OF LADING/AIR BILL NO. N/A		

SPECIAL INSTRUCTIONS

** The CACN for WSCF Analytical is 403315. ** The 200 Area S&G/RP Characterization and Monitoring Sampling and Analysis GKI applies to this S&F.
 (1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Chloroform, Methylene chloride, Trichloroethene, Vinyl chloride}; 8260_VOA_GCMS: CH 01 {Chloromethane};
 (2) 200.8_METALS_ICPMS: COMMON {Aluminum, Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Selenium}; 200.8_METALS_ICPMS: COMMON
 (Add-on) {Boron, Manganese, Nickel, Strontium, Uranium, Vanadium, Zinc}; 6010_METALS_ICP: COMMON {Iron};
 (3) 300.0_ANIONS_IC: COMMON {Add-on}; 300.0_ANIONS_IC: COMMON (Add-on);

PRINTED ON 11/26/2012

A 6003 618 (REV 2)

12-121

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				PAGE 1 OF 2	
COLLECTOR F. M. Hall	<i>F. M. Hall</i>	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 313-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE SAF NO. F12-028	DATA TURNAROUND 15 days / 15 Days	
SAMPLING LOCATION 285-TA, Post Resin Tank B2, Valve W03-Y2102		PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling		AIR QUALITY <input type="checkbox"/>			
ICE CHEST NO.		FIELD LOGBOOK NO. HNF-N- 585-6	ACTUAL SAMPLE DEPTH N/A	METHOD OF SHIPMENT COA		GOVERNMENT VEHICLE	
OFFSITE PROPERTY NO.		BILL OF LADING/AIR BILL NO. N/A		ORIGINAL			
Waste Sampling & Characterization		PRESERVATION N/A	HCl or HNO3 to pH <2 14 Days	Cool-4C 6 Months	HNO3 to pH <2 (ULTRAEX) 6 Months	HNO3 to pH <2 (ULTRAEX)	
SHIPPED TO		HOLDING TIME	48 Hours	48 Hours	None	None	
POSSIBLE SAMPLE HAZARDS/ REMARKS		TYPE OF CONTAINER	G/F/P	P	G	Neigene	
MATRIX* *Air Dl=Drum Liquids DS=Drum Sack L=Liquid O=Oil Se=sediment T=Tissue V=Vugwater W=Water Wt=Water X=Other		NO. OF CONTAINER(S)	3	1	1	1	
SPECIAL HANDLING AND/OR STORAGE		VOLUME	40mL	50mL	60mL	250mL	
SAMPLE ANALYSIS		SEE ITEM (1) IN SPECIAL INSTRUCTIONS	SEE ITEM (2) IN SPECIAL INSTRUCTIONS	SEE ITEM (3) IN SPECIAL INSTRUCTIONS	TITRIM. IDE. L SC: COMMON,	TC-9 by ICM5,	
SAMPLE NO. B2N884	MATRIX*	SAMPLE DATE /2-4-12	SAMPLE TIME 11:36				

CHAIN OF POSSESSION		SIGN/ PRINT NAMES		SPECIAL INSTRUCTIONS SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM <i>F. M. Hall</i>	DATE/TIME 12-4-12 / 1400	RECEIVED BY/STORED IN <i>TA FINAZIN, J.</i>	DATE/TIME 12-4-12 / 1400		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME		
LABORATORY SECTION	RECEIVED BY			DATE/TIME	
FINAL SAMPLE DISPOSITION	DISPOSAL METHOD			DATE/TIME	
PRINTED ON 11/26/2012					

Chain of Custody

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-028-383	PAGE 2 OF 2
COLLECTOR F. M. Hall <i>K. Hall</i>	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7924	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7C	DATA TURNAROUND 15 Days / 15 Days	
SAMPLING LOCATION 289-TA, Post Resin Tank B2, Valve V03-Y21B2	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling	SAF NO. F12 028	AIR QUALITY <input type="checkbox"/>	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL	
TIC CHEST NO.	FIELD LOGBOOK NO. HNF-N 585- <i>662</i>	ACTUAL SAMPLE DEPTH N/A	COA 303110E510	BILL OF LADING/AIR BILL NO. N/A		
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A					
SPECIAL INSTRUCTIONS ** The CACN for WSCF Analytical is 403315. <input checked="" type="checkbox"/> ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAE. (1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Chloroform, Methylene chloride, Trichloroethene, Vinyl chloride}; 8260_VOA_GCMS: CH 01 {Chloromethane}; 8260_VOA_GCMS: COMMON {cis-1,2-Dichloroethylene}; (2) 200.8_METALS_ICPMS: COMMON {Aluminum, Arsenic, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Selenium}; 200.8_METALS_ICPMS: COMMON (Add-on) {Boron, Manganese, Nickel, Strontium, Uranium, Vanadium, Zinc}; 6010_METALS_ICP: COMMON {Iron}; (3) 300.0_ANIONS_IC: COMMON (Add-on);						

TR-IL-12- 121

PRINTED ON 11/26/2012

A 6003-518 (REV 2)

Sample Receipt

DECEMBER 19, 2012

Chain of Custody

CH2M Hill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			PAGE 1 OF 2	
COLLECTOR	COMPANY CONTACT	TELEPHONE NO.	PROJECT COORDINATOR	PRICE CODE	7C	DATA TURNAROUND
F. M. Hall	K. Hall	EVANS, RT 373-7924	EVANS, RT SAF NO. F12-028	AIR QUALITY	<input type="checkbox"/>	.15 Days / 15 days
SAMPLING LOCATION	PROJECT DESIGNATION	200W Pump & Treat - Treatment Plant Water Sampling	ACTUAL SAMPLE DEPTH	METHOD OF SHIPMENT	ORIGINAL	
289-T, Influent Tank, Valve V05-Y30	FIELD LOGBOOK NO.	HINF-N-5855-662	N/A	COA	GOVERNMENT VEHICLE	
ICE CHEST NO.	OFFSITE PROPERTY NO.	N/A	BILL OF LADING/AIR BILL NO.	N/A		
Waste Sampling & Characterization						
POSSIBLE SAMPLE HAZARDS/REMARKS						
MATRIX* A=Air DL=Drum Liquids DS=Drum Solids L=Liquid O=Oil S=Soil SE=Sediment T=Tissue V=Vegetation W=Water WF=Water X=Other		**Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR/ATA Dangerous Goods Regulations but are not releasable per DOE Order 458.1.*+				
SPECIAL HANDLING AND/OR STORAGE						
SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME			
B2N857	16 WATER	12-4-12	5:30C			

CHAIN OF POSSESSION		SIGN / PRINT NAMES		SPECIAL INSTRUCTIONS	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	SEE PAGE 2 FOR ALL SPECIAL INSTRUCTIONS
F. M. Hall	12-4-12, 1400	TA 12-4-12, 1400		12-4-12, 1400	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN		DATE/TIME	
LABORATORY SECTION	RECEIVED BY	DATE/TIME	TITLE	DISPOSED BY	DATE/TIME
FINAL SAMPLE DISPOSITION					
PRINTED ON 11/26/2012					

Chain of Custody

CH2MHill Plateau Remediation Company		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			F12-028-356	PAGE 2 OF 2
COLLECTOR F. M. Hall	COMPANY CONTACT EVANS, RT	TELEPHONE NO. 373-7974	PROJECT COORDINATOR EVANS, RT	PRICE CODE 7C	DATA TURNAROUND 15 Days 15 Days	
SAMPLING LOCATION 286-T, Treated Tank, Valve V05-Y30	PROJECT DESIGNATION 200W Pump & Treat - Treatment Plant Water Sampling		SAF NO. F12-028	AIR QUALITY <input type="checkbox"/>		
ICE CHEST NO.	FIELD LOGBOOK NO. HNF-N- 585-62	ACTUAL SAMPLE DEPTH N/A	COA 303110ES10	METHOD OF SHIPMENT GOVERNMENT VEHICLE	ORIGINAL	
SHIPPED TO Waste Sampling & Characterization	OFFSITE PROPERTY NO. N/A			BILL OF LADING/AIR BILL NO. N/A		
SPECIAL INSTRUCTIONS						
** The CACN for WSCF Analytical is 403315. <input checked="" type="checkbox"/> ** The 200 Area S&G/RP Characterization and Monitoring Sampling and Analysis GKI applies to this S&F. 8260_VOA_GCMS: CH 01 {Chloromethane}; (1) 8260_VOA_GCMS: COMMON {Carbon tetrachloride, Chloroform, Methylene chloride, Trichloroethene, Vinyl chloride}; 8260_VOA_GCMS: COMMON (Add-on) {cis-1,2-Dichloroethylene}; (2) 200.8_METALS_ICPMS: COMMON {Aluminum, Barium, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Selenium, Vanadium, Zinc}; (3) 200.8_METALS_ICP: COMMON {Iron}; (3) 300.0_ANIONS_IC: COMMON (Add-on); (3) 300.0_ANIONS_IC: COMMON (Add-on);						

PRINTED ON 11/26/2012

A 6003 61B (REV 2)

TRL-12- 121