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

July 27, 2012

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

Dear Scot Fitzgerald,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF120825

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 WSCF120825

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

Very truly yours,

Electronically signed by Joseph Hale

For Lab Manager, Dan T. Smith

WSCF Analytical Lab

(509) 373-4804

Attachments 4

CC: w/Attachments

File/LB

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages

Including cover page

WSCF SAF Number Cross Reference

Group # WSCF120825
Data Deliverable Date 08/09/12

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
W12-006	B2KW30	120825001	WATER	06/25/12	06/25/12
W12-007	B2L8R2	120825002	WATER	06/25/12	06/25/12
W12-006	B2KW27	120825003	WATER	06/25/12	06/25/12
W12-006	B2KW28	120825004	WATER	06/25/12	06/25/12
W12-006	B2KW29	120825005	WATER	06/25/12	06/25/12
W12-006	B2KW31	120825006	WATER	06/25/12	06/25/12
W12-006	B2KW32	120825007	WATER	06/25/12	06/25/12
W12-007	B2L9N3	120825008	WATER	06/25/12	06/25/12
W12-007	B2L9N4	120825009	WATER	06/25/12	06/25/12
W12-007	B2L9N2	120825010	WATER	06/25/12	06/25/12
I12-026	B2KWT0	120825011	WATER	06/25/12	06/25/12
S12-007	B2LDX5	120825012	WATER	06/25/12	06/25/12
S12-007	B2LPM3	120825013	WATER	06/25/12	06/25/12
W12-007	B2L8R1	120825014	WATER	06/25/12	06/25/12

ATTACHMENT 2

NARRATIVE

Consisting of 5 pages
Including cover page

Attachment 2
Narrative
WSCF120825

Introduction

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

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

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

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

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

Analytical Methodology for Requested Analyses

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

Inorganic Comments

Attachment 2
Narrative
WSCF120825

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.
- Sulfate – Matrix Spike and Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.
- All other applicable QC controls are within the established limits.

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

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

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

- All applicable QC controls are within the established limits.

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

- All applicable QC controls are within the established limits.

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

- All applicable QC controls are within the established limits.

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

- All applicable QC controls are within the established limits.

Organic Comments

Attachment 2
Narrative
WSCF120825

Semi-VOA – 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):

- Tributyl phosphate did not meet the MS and or MSD acceptance limits. Sample results for this analytes were "T" Flagged.
- Tributyl phosphate did not meet the LCS acceptance limits. Sample results for these analytes were "X" flagged.
- B2L8R1 (120825014) did not meet the acceptance limits for surrogate Phenol-d5. 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.

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):

- Trans-1,2-Dichloroethene – Matrix Spike Duplicate recovery did not meet established laboratory acceptance limits. Affected sample results in this batch were "T" flagged.
- 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 Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

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

Gross Alpha / Gross Beta:

- All applicable QC controls are within the established limits.

Strontium-89/90:

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

Tritium:

Attachment 2
Narrative
WSCF120825

- All applicable QC controls are within the established limits.

Technetium-99:

- The Matrix Spike recovery exceeded laboratory acceptance limits due to insufficient spike activity compared to the sample activity.
- All other applicable QC controls are within the established limits.

We certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this data package has been authorized by the Analytical Laboratory Manager (or designee) and the Client Services representative as verified by electronic signatures shown on the WSCF ANALYTICAL RESULTS REPORT.

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 75 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Scot Fitzgerald

Contract # MOA-FH-CHPRC-2008
Group # WSCF120825
Report Date July 27, 2012

Analytical: Electronically signed by Joseph Hale

Client Services: Electronically signed by Marisol Avila

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

Batch QC List

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
203698	203698	2	BLANK	77378	BLANK		Anions by Ion Chromatography (Water)
203698	203698	3	LCS	77379	LCS		Anions by Ion Chromatography (Water)
203698	203698	4	DUP	77380	B2KW30(120825001DUP	120825001	Anions by Ion Chromatography (Water)
203698	203698	5	MS	77381	B2KW30(120825001MS)	120825001	Anions by Ion Chromatography (Water)
203698	203698	6	MSD	77382	B2KW30(120825001MSD	120825001	Anions by Ion Chromatography (Water)
203698	203698	10	SAMPLE	120825001	B2KW30		Anions by Ion Chromatography (Water)
203698	203698	11	SAMPLE	120825002	B2L8R2		Anions by Ion Chromatography (Water)
203698	203698	12	SAMPLE	120825002	B2L8R2		Anions by Ion Chromatography (Water)
203854	203888	5	BLANK	77436	BLANK		ICP-6010 - All possible metals
203854	203888	7	LCS	77438	LCS		ICP-6010 - All possible metals
203854	203888	9	MS	77439	B2KW97(120820004MS)	120820004	ICP-6010 - All possible metals
203854	203888	10	MSD	77440	B2KW97(120820004MSD	120820004	ICP-6010 - All possible metals
203854	203888	22	SAMPLE	120825004	B2KW28		ICP-6010 - All possible metals
203854	203888	23	SAMPLE	120825007	B2KW32		ICP-6010 - All possible metals
203854	203888	24	SAMPLE	120825014	B2L8R1		ICP-6010 - All possible metals
204261	204870	4	BLANK	77853	BLANK		ICP-2008 MS All possible metal
204261	204870	5	LCS	77854	LCS		ICP-2008 MS All possible metal
204261	204870	7	MS	77855	B2KJM3(120822008MS)	120822008	ICP-2008 MS All possible metal
204261	204870	8	MSD	77856	B2KJM3(120822008MSD)	120822008	ICP-2008 MS All possible metal
204261	204870	17	SAMPLE	120825011	B2KWT0		ICP-2008 MS All possible metal
204261	204870	20	SAMPLE	120825012	B2LDX5		ICP-2008 MS All possible metal
204551	204552	1	BLANK	77945	BLANK		Total Organic Halides
204551	204552	2	LCS	77946	LCS		Total Organic Halides

Batch QC List

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
204551	204552	4	MS	77948	B2L9N3(120825008MS)	120825008	Total Organic Halides
204551	204552	5	MSD	77949	B2L9N3(120825008MSD)	120825008	Total Organic Halides
204551	204552	6	SAMPLE	120825008	B2L9N3		Total Organic Halides
204551	204552	7	SAMPLE	120825009	B2L9N4		Total Organic Halides
204551	204552	8	SAMPLE	120825010	B2L9N2		Total Organic Halides
204551	204552	9	SAMPLE	120825014	B2L8R1		Total Organic Halides

Batch QC List

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
203904	204161	1	BLANK	77599	BLANK		SW-846 8270D Semivolatiles
203904	204161	2	LCS	77600	LCS		SW-846 8270D Semivolatiles
203904	204161	3	MS	77601	B2L8R1(120825014MS)	120825014	SW-846 8270D Semivolatiles
203904	204161	4	MSD	77602	B2L8R1(120825014MSD)	120825014	SW-846 8270D Semivolatiles
203904	204161	5	SAMPLE	120825014	B2L8R1		SW-846 8270D Semivolatiles

Batch QC List

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
203750	203751	1	BLANK	77414	BLANK		SW-846 8260B Volatiles
203750	203751	2	LCS	77415	LCS		SW-846 8260B Volatiles
203750	203751	3	MS	77416	B2LHY5(120817014MS)	120817014	SW-846 8260B Volatiles
203750	203751	4	MSD	77417	B2LHY5(120817014MSD)	120817014	SW-846 8260B Volatiles
203750	203751	7	SAMPLE	120825011	B2KWT0		SW-846 8260B Volatiles
203750	203751	8	SAMPLE	120825013	B2LPM3		SW-846 8260B Volatiles

Batch QC List

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120825

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
203695	204080	1	BLANK	77360	BLANK		Gross Alpha/Gross Beta
203695	204080	2	LCS	77361	LCS		Gross Alpha/Gross Beta
203695	204080	3	DUP	77362	B2L0V9(120811006DUP)	120811006	Gross Alpha/Gross Beta
203695	204080	18	SAMPLE	120825012	B2LDX5		Gross Alpha/Gross Beta
203695	204080	19	SAMPLE	120825012	B2LDX5		Gross Alpha/Gross Beta
203882	204353	1	BLANK	77532	BLANK		Tritium by LSC
203882	204353	2	LCS	77533	LCS		Tritium by LSC
203882	204353	3	SAMPLE	120825006	B2KW31		Tritium by LSC
203882	204353	4	DUP	77534	B2KW31(120825006DUP	120825006	Tritium by LSC
203882	204353	5	MS	77535	B2KW31(120825006MS)	120825006	Tritium by LSC
203882	204353	6	SAMPLE	120825012	B2LDX5		Tritium by LSC
204055	204939	1	BLANK	77674	BLANK		Strontium 89/90 (GPC/GEA)
204055	204939	2	LCS	77675	LCS		Strontium 89/90 (GPC/GEA)
204055	204939	3	DUP	77676	B2KJJ9(120822010DUP)	120822010	Strontium 89/90 (GPC/GEA)
204055	204939	5	SAMPLE	120825011	B2KWT0		Strontium 89/90 (GPC/GEA)
204254	204549	1	BLANK	77827	BLANK		TC99 by Liquid Scintillation
204254	204549	2	LCS	77828	LCS		TC99 by Liquid Scintillation
204254	204549	3	SAMPLE	120825005	B2KW29		TC99 by Liquid Scintillation
204254	204549	4	DUP	77829	B2KW29(120825005DUP	120825005	TC99 by Liquid Scintillation
204254	204549	5	MS	77830	B2KW29(120825005MS)	120825005	TC99 by Liquid Scintillation

Batch QC List

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120825

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
204168	204168	1	LCS	77803	LCS		Total Alkalinity as mg/L CaCO3 (Water)
204168	204168	2	DUP	77804	B2LCR3(120796007DUP)	120796007	Total Alkalinity as mg/L CaCO3 (Water)
204168	204168	10	SAMPLE	120825003	B2KW27		Total Alkalinity as mg/L CaCO3 (Water)
204168	204168	13	LCS	77805	LCS		Total Alkalinity as mg/L CaCO3 (Water)
204888	204888	2	BLANK	78141	BLANK		Total Organic Carbon
204888	204888	3	LCS	78142	LCS		Total Organic Carbon
204888	204888	4	MS	78143	B2LCR2(120796006MS)	120796006	Total Organic Carbon
204888	204888	5	MSD	78144	B2LCR2(120796006MSD)	120796006	Total Organic Carbon
204888	204888	13	SAMPLE	120825008	B2L9N3		Total Organic Carbon
204888	204888	14	SAMPLE	120825009	B2L9N4		Total Organic Carbon
204888	204888	15	SAMPLE	120825010	B2L9N2		Total Organic Carbon
205012	205012	2	BLANK	78538	BLANK		Total Organic Carbon
205012	205012	3	LCS	78539	LCS		Total Organic Carbon
205012	205012	17	MS	78543	B2L9M1(120829003MS)	120829003	Total Organic Carbon
205012	205012	18	MSD	78544	B2L9M1(120829003MSD)	120829003	Total Organic Carbon
205012	205012	22	SAMPLE	120825014	B2L8R1		Total Organic Carbon

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

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

LA-505-411	Elemental Analysis by ICP Atomic Emission Spectroscopy (ICP AES)		
	EPA SW-846	6010C	Inductively Coupled Plasma-Atomic Emmision Spectrometry
	HEIS	6010_METALS_ICP	Inductively Coupled Plasma-Atomic Emmision Spectrometry
LA-505-412	Determination of Trace Elements in Waters & Wastes by ICP Mass Spectrometry		
	EPA-600/R-94-111	200.8	Determination of Trace Elements in Waters and Waste by Inductively Coupled Plasma
	HEIS	200.8_METALS_ICPMS	Determination of Trace Elements in Waters and Waste by Inductively Coupled Plasma, Mass Spec.
LA-523-444	Total Organic Halides Based on SW-846 Method 9020B		
	EPA SW-846	9020B	Total Organic Halides (TOX)
	HEIS	9020_TOX	Total Organic Halides (TOX)
LA-533-410	Anion Analysis by Ion Chromatography		
	EPA-600/R-94-111	300.0	Determination of Inorganic Anions by Ion Chromatography
	HEIS	300.0_ANIONS_IC	Determination of Inorganic Anions by Ion Chromatography

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

Method Reference

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

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-523-456 Semivolatile Sample Analysis by SW-846 Method 8270D

EPA SW-846	8000B	Determinative Chromagraphic Separations
EPA SW-846	3510C	Separatory Funnel Liquid-Liquid Extraction
EPA SW-846	8270D	Semivolatile Organic Compounds by Gas
EPA SW-846	3545	Pressurized Fluid Extraction (PFE)
		Chromatography/Mass Spectrometry (GC/MS)
HEIS	8270_SVOA_GCMS	Semivolatile Organic Compounds by Gas
		Chromatography/Mass Spectrometry(GC/MS)

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

Method Reference

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

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

LA-523-455 Volatile Sample Analysis by SW-846 Method 8260B

EPA SW-846	8000B	Determinative Chromographic Separations
EPA SW-846	8260B	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)
HEIS	8260_VOA_GCMS	Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

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

Method Reference

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120825

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-220-406	Strontium-89 and 90 in Aqueous Samples by SR-SPEC Separation		
	HEIS	SRTOT_SEP_PRECIP_GPC	Strontium 89/90, by Sr-Spec Sep.
LA-508-421	Operation of the Tri-Carb Model 2500TR Liquid Scintillation Analyzer		
	HEIS	ALPHA_LSC	A/B Liquid Scintillation
	HEIS	BETA_LSC	A/B Liquid Scintillation
	HEIS	TC99_3MDSK_LSC	TC99 by Liquid Scintillation
	HEIS	TRITIUM_EIE_LSC	Tritium, by Eichrome ion exchange, LSC
LA-508-415	Operation Of The Protean 2-Inch Alpha/Beta Counting System For Gross Alpha/ Beta Samples		
	HEIS	ALPHA_GPC	Gross Alpha by GPC
	HEIS	BETA_GPC	Gross Beta by GPC
	HEIS	SRTOT_SEP_PRECIP_GPC	Strontium beta isotopic, GPC

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

Method Reference

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120825

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

LA-531-411	Alkalinity		
	SM	2320	Alkalinity
	HEIS	2320_ALKALINITY	Alkalinity
LA-344-406	Total Organic Carbon (TOC) Based on SW-846		
	EPA SW-846	9060	Total Organic Carbon
	HEIS	9060_TOC	Total Organic Carbon

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 # WSCF120825

Sample # 120825001
SAF# W12-006
Sample ID B2KW30

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										06/25/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.282		ug/mL	2	0.046	0.14	06/25/12
Chloride	16887-00-6	LA-533-410	D	12.2		ug/mL	2	0.12	0.81	06/25/12
Nitrite-N	NO2-N	LA-533-410	BD	0.0675		ug/mL	2	0.038	0.20	06/25/12
Nitrate-N	NO3-N	LA-533-410	D	6.08		ug/mL	2	0.038	0.20	06/25/12
Sulfate	14808-79-8	LA-533-410	DN	71.1		ug/mL	2	0.22	2.1	06/25/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825002
SAF# W12-007
Sample ID B2L8R2

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										06/25/12
Anions by Ion Chromatography (Water)										
Fluoride	16984-48-8	LA-533-410	D	0.283		ug/mL	2	0.046	0.14	06/25/12
Chloride	16887-00-6	LA-533-410	D	8.94		ug/mL	2	0.12	0.81	06/25/12
Nitrite-N	NO2-N	LA-533-410	BD	0.0466		ug/mL	2	0.038	0.20	06/25/12
Nitrate-N	NO3-N	LA-533-410	D	26.1		ug/mL	10	0.19	0.99	06/25/12
Sulfate	14808-79-8	LA-533-410	DN	20.4		ug/mL	2	0.22	2.1	06/25/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825004
SAF# W12-006
Sample ID B2KW28

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**06/27/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411		1180		ug/L	1	19	95	07/09/12
Magnesium	7439-95-4	LA-505-411		14900		ug/L	1	4.0	20	07/09/12
Manganese	7439-96-5	LA-505-411		36.0		ug/L	1	4.0	20	07/09/12
Nickel	7440-02-0	LA-505-411	B	6.30		ug/L	1	4.0	20	07/09/12
Potassium	7440-09-7	LA-505-411		4980		ug/L	1	76	380	07/09/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Sodium	7440-23-5	LA-505-411		32500		ug/L	1	10	50	07/09/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	07/09/12
Barium	7440-39-3	LA-505-411		63.4		ug/L	1	4.0	20	07/09/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Chromium	7440-47-3	LA-505-411		258		ug/L	1	5.0	25	07/09/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Vanadium	7440-62-2	LA-505-411		27.5		ug/L	1	5.0	25	07/09/12
Zinc	7440-66-6	LA-505-411	B	9.20		ug/L	1	5.0	25	07/09/12
Calcium	7440-70-2	LA-505-411		41600		ug/L	1	49	240	07/09/12
Strontium	7440-24-6	LA-505-411		177		ug/L	1	9.0	45	07/09/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825004
SAF# W12-006
Sample ID B2KW28

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825007
SAF# W12-006
Sample ID B2KW32

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**06/27/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	23.6		ug/L	1	19	95	07/09/12
Magnesium	7439-95-4	LA-505-411		14600		ug/L	1	4.0	20	07/09/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Potassium	7440-09-7	LA-505-411		5050		ug/L	1	76	380	07/09/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Sodium	7440-23-5	LA-505-411		33600		ug/L	1	10	50	07/09/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	07/09/12
Barium	7440-39-3	LA-505-411		53.1		ug/L	1	4.0	20	07/09/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Chromium	7440-47-3	LA-505-411		245		ug/L	1	5.0	25	07/09/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Vanadium	7440-62-2	LA-505-411		26.4		ug/L	1	5.0	25	07/09/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	07/09/12
Calcium	7440-70-2	LA-505-411		38800		ug/L	1	49	240	07/09/12
Strontium	7440-24-6	LA-505-411		165		ug/L	1	9.0	45	07/09/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825007
SAF# W12-006
Sample ID B2KW32

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825008
SAF# W12-007
Sample ID B2L9N3

Matrix WATER
Sampled 06/25/12
Received 06/25/12

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

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825009
SAF# W12-007
Sample ID B2L9N4

Matrix WATER
Sampled 06/25/12
Received 06/25/12

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

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825010
SAF# W12-007
Sample ID B2L9N2

Matrix WATER
Sampled 06/25/12
Received 06/25/12

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

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825011
SAF# I12-026
Sample ID B2KWT0

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										**07/09/12**
ICP-2008 MS All possible metal										
Uranium	7440-61-1	LA-505-412	D	1.62		ug/L	2	0.10	0.50	07/17/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825012
SAF# S12-007
Sample ID B2LDX5

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep (W)										**07/09/12**
ICP-2008 MS All possible metal										
Arsenic	7440-38-2	LA-505-412	D	9.01		ug/L	2	0.40	4.0	07/17/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825014
SAF# W12-007
Sample ID B2L8R1

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPAES Prep (W)										**06/27/12**
ICP-6010 - All possible metals										
Iron	7439-89-6	LA-505-411	B	45.7		ug/L	1	19	95	07/09/12
Magnesium	7439-95-4	LA-505-411		11600		ug/L	1	4.0	20	07/09/12
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Nickel	7440-02-0	LA-505-411	B	7.40		ug/L	1	4.0	20	07/09/12
Potassium	7440-09-7	LA-505-411		7610		ug/L	1	76	380	07/09/12
Silver	7440-22-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Sodium	7440-23-5	LA-505-411		29000		ug/L	1	10	50	07/09/12
Antimony	7440-36-0	LA-505-411	U	<36		ug/L	1	36	180	07/09/12
Barium	7440-39-3	LA-505-411		35.1		ug/L	1	4.0	20	07/09/12
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Chromium	7440-47-3	LA-505-411	B	12.1		ug/L	1	5.0	25	07/09/12
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Vanadium	7440-62-2	LA-505-411		29.2		ug/L	1	5.0	25	07/09/12
Zinc	7440-66-6	LA-505-411	U	<5.0		ug/L	1	5.0	25	07/09/12
Calcium	7440-70-2	LA-505-411		38600		ug/L	1	49	240	07/09/12
Strontium	7440-24-6	LA-505-411		198		ug/L	1	9.0	45	07/09/12

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

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

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

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Sample # 120825014
SAF# W12-007
Sample ID B2L8R1

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	07/09/12
Preparation for TOX (W)										**06/26/12**
Total Organic Halides										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	06/26/12

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

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

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

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

Sample # 120825014
SAF# W12-007
Sample ID B2L8R1

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8270 (W) CLE										**06/28/12**
SW-846 8270D Semivolatiles										
4-Nitrophenol	100-02-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
1,4-Dichlorobenzene	106-46-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
Phenol	108-95-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
1,2,4-Trichlorobenzene	120-82-1	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
2,4-Dinitrotoluene	121-14-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
Pyrene	129-00-0	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
4-Chloro-3-methylphenol	59-50-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
n-Nitroso-di-n-propylamine	621-64-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
Acenaphthene	83-32-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
Pentachlorophenol	87-86-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
2-Chlorophenol	95-57-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
2,4-Dichlorophenol	120-83-2	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
2-Nitrophenol	88-75-5	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
Naphthalene	91-20-3	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
2-Methylphenol	95-48-7	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12

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 diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
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)

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

Sample # 120825014
SAF# W12-007
Sample ID B2L8R1

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
3 & 4 Methylphenol, Total	65794-96-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
Tributyl phosphate	126-73-8	LA-523-456	UTX	<0.9		ug/L	1	0.9	1	07/02/12
2-Picoline	109-06-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
Tris(2-chloroethyl)phosphate	115-96-8	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12
Benzothiazole	95-16-9	LA-523-456	U	<0.9		ug/L	1	0.9	1	07/02/12

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 diltution factor.
E - The calibration exceeds the calibration range (GC/MS).
J - Analyte < lowest calibration but >= MDL.
N - Presumed evidence based on MS library search(GC/MS only)

T - MS/MSD recovery outside control limits(GC/MS only).
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)

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

Sample # 120825011
SAF# I12-026
Sample ID B2KWT0

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for 8260B (W)										**06/26/12**
SW-846 8260B Volatiles										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Carbon tetrachloride	56-23-5	LA-523-455		91		ug/L	1	1	5	06/26/12
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Chloroform	67-66-3	LA-523-455	J	3.1		ug/L	1	1	5	06/26/12
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	06/26/12

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

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution 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 - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

Sample # 120825011
SAF# I12-026
Sample ID B2KWT0

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	06/26/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	06/26/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	UT	<1		ug/L	1	1	5	06/26/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	06/26/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	06/26/12

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

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution 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 - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

Sample # 120825013
SAF# S12-007
Sample ID B2LPM3

Matrix WATER
Sampled 06/25/12
Received 06/25/12

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

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

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution 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 - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

Sample # 120825013
SAF# S12-007
Sample ID B2LPM3

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	06/26/12
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	06/26/12
trans-1,2-Dichloroethene	156-60-5	LA-523-455	UT	<1		ug/L	1	1	5	06/26/12
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	06/26/12
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	06/26/12
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	06/26/12

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

B - Analyte was detected in both the BLANK and SAMPLE
D - Analyte was reported at a secondary diltution 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 - MS/MSD recovery outside control limits(GC/MS only).
U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
N - MS and/or MSD recovery outside control limits.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120825

Sample # 120825005
SAF# W12-006
Sample ID B2KW29

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TC99 by Liquid Scin. WATER/LIQUID PREP										**07/09/12**
TC99 by Liquid Scintillation										
Technetium-99	14133-76-7	LA-508-421		1.8E4	3600	pCi/L	1	6.5		07/09/12

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

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

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120825

Sample # 120825006
SAF# W12-006
Sample ID B2KW31

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Tritium by LSC EICHROM WA/LIQ PREP										**07/02/12**
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		1.8E4	3700	pCi/L	1	280		07/09/12

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

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

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120825

Sample # 120825011
SAF# I12-026
Sample ID B2KWT0

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Strontium 89/90 WATER/LIQUID PREP										**07/18/12**
Strontium 89/90 (GPC/GEA)										
Strontium-89_90	SR-RAD	LA-220-406		1.0	.64	pCi/L	1	0.93		07/24/12

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)

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120825

Sample # 120825012
SAF# S12-007
Sample ID B2LDX5

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Preparation for Alpha/Beta (Gross) (W)										**07/02/12**
Gross Alpha/Gross Beta										
Gross Alpha	12587-46-1	LA-508-415	U	0.55	1.2	pCi/L	1	2.1		07/11/12
Gross Beta	12587-47-2	LA-508-415		5.1	2.6	pCi/L	1	4.0		07/11/12
Tritium by LSC EICHROM WA/LIQ PREP										**07/02/12**
Tritium by LSC										
Tritium	10028-17-8	LA-508-421		1.1E4	2300	pCi/L	1	280		07/09/12

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

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

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120825

Sample # 120825003
SAF# W12-006
Sample ID B2KW27

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										07/02/12
Total Alkalinity as mg/L CaCO3 (Water)										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		87		mg/L	1	1	10	07/02/12

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

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

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120825

Sample # 120825008
SAF# W12-007
Sample ID B2L9N3

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										07/16/12
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	U	<0.10		mg/L	1	0.10	0.30	07/16/12

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

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

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120825

Sample # 120825009
SAF# W12-007
Sample ID B2L9N4

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										07/16/12
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	U	<0.10		mg/L	1	0.10	0.30	07/16/12

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

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

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120825

Sample # 120825010
SAF# W12-007
Sample ID B2L9N2

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										07/16/12
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	B	0.112		mg/L	1	0.10	0.30	07/16/12

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

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

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120825

Sample # 120825014
SAF# W12-007
Sample ID B2L8R1

Matrix WATER
Sampled 06/25/12
Received 06/25/12

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
										07/19/12
Total Organic Carbon										
Total Organic Carbon	TOC	LA-344-406	U	<0.10		mg/L	1	0.10	0.30	07/19/12

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

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

N - Spike Recovery is Outside Control Limits.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Analytical Batch 203698 (QC Batch: 203698) **Test** Anions by Ion Chromatography (Water)
Associated Samples 120825001, 120825002

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #77378**								
Fluoride	16984-48-8		<0.023	ug/mL						U	06/25/12
Chloride	16887-00-6		<0.058	ug/mL						U	06/25/12
Nitrite-N	NO2-N		<0.019	ug/mL						U	06/25/12
Nitrate-N	NO3-N		<0.019	ug/mL						U	06/25/12
Sulfate	14808-79-8		<0.11	ug/mL						U	06/25/12
LCS			**QC Sample #77379**								
Fluoride	16984-48-8		0.926	ug/mL	93.5	90 - 110					06/25/12
Chloride	16887-00-6		1.98	ug/mL	99.8	90 - 110					06/25/12
Nitrite-N	NO2-N		0.997	ug/mL	101.9	90 - 110					06/25/12
Nitrate-N	NO3-N		0.890	ug/mL	100.5	90 - 110					06/25/12
Sulfate	14808-79-8		3.95	ug/mL	100.6	90 - 110					06/25/12
DUP			**QC Sample #77380**								
			Original 120825001								
Fluoride	16984-48-8	0.282	0.292	ug/mL			3.50	20		D	06/25/12
Chloride	16887-00-6	12.2	12.1	ug/mL			0.80	20		D	06/25/12
Nitrite-N	NO2-N	0.0675	0.0391	ug/mL			53.30	20	*	BXD	06/25/12
Nitrate-N	NO3-N	6.08	6.06	ug/mL			0.30	20		D	06/25/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Sulfate	14808-79-8	71.1	70.7	ug/mL			0.60	20	D	06/25/12
MS			**QC Sample #77381**							
			Original 120825001							
Fluoride	16984-48-8	0.282	0.975	ug/mL	97.5	80 - 120			D	06/25/12
Chloride	16887-00-6	12.2	1.78	ug/mL	89	80 - 120			D	06/25/12
Nitrite-N	NO2-N	0.0675	0.976	ug/mL	98.8	80 - 120			D	06/25/12
Nitrate-N	NO3-N	6.08	0.804	ug/mL	89.9	80 - 120			D	06/25/12
Sulfate	14808-79-8	71.1	2.79	ug/mL	70.4	80 - 120			DN	06/25/12
MSD			**QC Sample #77382**							
			Original 120825001					**Paired 77381**		
Fluoride	16984-48-8	0.282	0.973	ug/mL	97.3	80 - 120	0.80	20	D	06/25/12
Chloride	16887-00-6	12.2	1.75	ug/mL	87.4	80 - 120	0.00	20	D	06/25/12
Nitrite-N	NO2-N	0.0675	0.945	ug/mL	95.7	80 - 120	2.90	20	D	06/25/12
Nitrate-N	NO3-N	6.08	0.802	ug/mL	89.7	80 - 120	0.00	20	D	06/25/12
Sulfate	14808-79-8	71.1	2.81	ug/mL	71	80 - 120	0.00	20	DN	06/25/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

Analytical Batch 203751 (QC Batch: 203750)
Associated Samples 120825011, 120825013

Test SW-846 8260B Volatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77414**						
1,1-Dichloroethene	75-35-4		<1	ug/L				U	06/26/12
Trichloroethene	79-01-6		<1	ug/L				U	06/26/12
Benzene	71-43-2		<1	ug/L				U	06/26/12
Toluene	108-88-3		<1	ug/L				U	06/26/12
Chlorobenzene	108-90-7		<1	ug/L				U	06/26/12
1,1-Dichloroethane	75-34-3		<1	ug/L				U	06/26/12
Ethylbenzene	100-41-4		<1	ug/L				U	06/26/12
1,2-Dichloroethane	107-06-2		<1	ug/L				U	06/26/12
Methyl isobutyl ketone	108-10-1		<1	ug/L				U	06/26/12
Tetrachloroethene	127-18-4		<1	ug/L				U	06/26/12
Total Xylenes	1330-20-7		<1	ug/L				U	06/26/12
Carbon tetrachloride	56-23-5		<1	ug/L				U	06/26/12
Acetone	67-64-1		<1	ug/L				U	06/26/12
Chloroform	67-66-3		<1	ug/L				U	06/26/12
1,1,1-Trichloroethane	71-55-6		<1	ug/L				U	06/26/12
Vinyl chloride	75-01-4		<1	ug/L				U	06/26/12
Methylene chloride	75-09-2		<1	ug/L				U	06/26/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Carbon disulfide	75-15-0		<1	ug/L					U	06/26/12
Methyl ethyl ketone	78-93-3		<1	ug/L					U	06/26/12
1,1,2-Trichloroethane	79-00-5		<1	ug/L					U	06/26/12
1-Butanol	71-36-3		<100	ug/L					U	06/26/12
Tetrahydrofuran	109-99-9		<2	ug/L					U	06/26/12
trans-1,2-Dichloroethene	156-60-5		<1	ug/L					U	06/26/12
cis-1,2-Dichloroethene	156-59-2		<1	ug/L					U	06/26/12
Propionitrile	107-12-0		<2	ug/L					U	06/26/12
1,4-Dichlorobenzene	106-46-7		<1	ug/L					U	06/26/12
LCS			**QC Sample #77415**							
1,1-Dichloroethene	75-35-4		22	ug/L	86.4	75 - 125				06/26/12
Trichloroethene	79-01-6		20	ug/L	81.5	75 - 125				06/26/12
Benzene	71-43-2		24	ug/L	96.2	75 - 125				06/26/12
Toluene	108-88-3		24	ug/L	95	75 - 125				06/26/12
Chlorobenzene	108-90-7		24	ug/L	94.2	75 - 125				06/26/12
1,1-Dichloroethane	75-34-3		21	ug/L	85.1	75 - 125				06/26/12
Ethylbenzene	100-41-4		23	ug/L	92.6	75 - 125				06/26/12
1,2-Dichloroethane	107-06-2		22	ug/L	88.3	75 - 125				06/26/12
1,1,1-Trichloroethane	71-55-6		22	ug/L	86.1	75 - 125				06/26/12
Carbon disulfide	75-15-0		21	ug/L	84.6	75 - 125				06/26/12
1,1,2-Trichloroethane	79-00-5		23	ug/L	92	75 - 125				06/26/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
trans-1,2-Dichloroethene	156-60-5		22	ug/L	89.6	75 - 125				06/26/12
cis-1,2-Dichloroethene	156-59-2		23	ug/L	90.1	75 - 125				06/26/12
MS			**QC Sample #77416**							
			Original 120817014							
1,1-Dichloroethene	75-35-4		24	ug/L	96.1	75 - 125				06/26/12
Trichloroethene	79-01-6		22	ug/L	88.3	75 - 125				06/26/12
Benzene	71-43-2		25	ug/L	98.2	75 - 125				06/26/12
Toluene	108-88-3		24	ug/L	97.3	75 - 125				06/26/12
Chlorobenzene	108-90-7		24	ug/L	96.1	75 - 125				06/26/12
1,1-Dichloroethane	75-34-3		21	ug/L	83.5	75 - 125				06/26/12
Ethylbenzene	100-41-4		24	ug/L	94.6	75 - 125				06/26/12
1,2-Dichloroethane	107-06-2		24	ug/L	95.1	75 - 125				06/26/12
1,1,1-Trichloroethane	71-55-6		24	ug/L	97.2	75 - 125				06/26/12
Carbon disulfide	75-15-0		24	ug/L	96.5	75 - 125				06/26/12
1,1,2-Trichloroethane	79-00-5		24	ug/L	96.3	75 - 125				06/26/12
trans-1,2-Dichloroethene	156-60-5		19	ug/L	75.6	75 - 125				06/26/12
cis-1,2-Dichloroethene	156-59-2		23	ug/L	90.7	75 - 125				06/26/12
MSD			**QC Sample #77417**							
			Original 120817014						**Paired 77416**	
1,1-Dichloroethene	75-35-4		23	ug/L	93.4	75 - 125	4.20	20		06/26/12
Trichloroethene	79-01-6		22	ug/L	87.5	75 - 125	0.00	20		06/26/12
Benzene	71-43-2		24	ug/L	95.8	75 - 125	0.00	20		06/26/12
Toluene	108-88-3		24	ug/L	94.3	75 - 125	0.00	20		06/26/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chlorobenzene	108-90-7		24	ug/L	95.8	75 - 125	0.00	20		06/26/12
1,1-Dichloroethane	75-34-3		21	ug/L	83.5	75 - 125	0.00	20		06/26/12
Ethylbenzene	100-41-4		24	ug/L	95	75 - 125	0.00	20		06/26/12
1,2-Dichloroethane	107-06-2		24	ug/L	95.4	75 - 125	0.00	20		06/26/12
1,1,1-Trichloroethane	71-55-6		24	ug/L	95	75 - 125	0.00	20		06/26/12
Carbon disulfide	75-15-0		24	ug/L	95.7	75 - 125	0.00	20		06/26/12
1,1,2-Trichloroethane	79-00-5		24	ug/L	98	75 - 125	0.00	20		06/26/12
trans-1,2-Dichloroethene	156-60-5		17	ug/L	69	75 - 125	11.10	20	T	06/26/12
cis-1,2-Dichloroethene	156-59-2		23	ug/L	91.1	75 - 125	0.00	20		06/26/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Analytical Batch 203888 (QC Batch: 203854)
Associated Samples 120825004, 120825007, 120825014

Test ICP-6010 - All possible metals

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77436**						
Iron	7439-89-6		<19	ug/L				U	07/09/12
Magnesium	7439-95-4		<4.0	ug/L				U	07/09/12
Manganese	7439-96-5		<4.0	ug/L				U	07/09/12
Nickel	7440-02-0		<4.0	ug/L				U	07/09/12
Potassium	7440-09-7		<76	ug/L				U	07/09/12
Silver	7440-22-4		<4.0	ug/L				U	07/09/12
Sodium	7440-23-5		13.6	ug/L				B	07/09/12
Antimony	7440-36-0		<36	ug/L				U	07/09/12
Barium	7440-39-3		<4.0	ug/L				U	07/09/12
Cadmium	7440-43-9		<4.0	ug/L				U	07/09/12
Chromium	7440-47-3		<5.0	ug/L				U	07/09/12
Cobalt	7440-48-4		<4.0	ug/L				U	07/09/12
Copper	7440-50-8		<4.0	ug/L				U	07/09/12
Vanadium	7440-62-2		<5.0	ug/L				U	07/09/12
Zinc	7440-66-6		<5.0	ug/L				U	07/09/12
Calcium	7440-70-2		<49	ug/L				U	07/09/12
Strontium	7440-24-6		<9.0	ug/L				U	07/09/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Beryllium	7440-41-7		<4.0	ug/L					U	07/09/12
LCS			**QC Sample #77438**							
Iron	7439-89-6		1060	ug/L	106.4	80 - 120				07/09/12
Magnesium	7439-95-4		11000	ug/L	109.8	80 - 120				07/09/12
Manganese	7439-96-5		1070	ug/L	107.3	80 - 120				07/09/12
Nickel	7440-02-0		1070	ug/L	106.6	80 - 120				07/09/12
Potassium	7440-09-7		11500	ug/L	115.4	80 - 120				07/09/12
Silver	7440-22-4		1040	ug/L	103.8	80 - 120				07/09/12
Sodium	7440-23-5		11600	ug/L	115.8	80 - 120				07/09/12
Antimony	7440-36-0		1070	ug/L	107	80 - 120				07/09/12
Barium	7440-39-3		1070	ug/L	107.3	80 - 120				07/09/12
Cadmium	7440-43-9		1080	ug/L	108	80 - 120				07/09/12
Chromium	7440-47-3		1070	ug/L	106.9	80 - 120				07/09/12
Cobalt	7440-48-4		1060	ug/L	106.2	80 - 120				07/09/12
Copper	7440-50-8		1080	ug/L	108.2	80 - 120				07/09/12
Vanadium	7440-62-2		1060	ug/L	105.8	80 - 120				07/09/12
Zinc	7440-66-6		1110	ug/L	110.6	80 - 120				07/09/12
Calcium	7440-70-2		21600	ug/L	107.9	80 - 120				07/09/12
Strontium	7440-24-6		1040	ug/L	104.3	80 - 120				07/09/12
Beryllium	7440-41-7		1100	ug/L	109.7	80 - 120				07/09/12
MS			**QC Sample #77439**							
			Original 120820004							
Iron	7439-89-6		1110	ug/L	111	75 - 125				07/09/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Magnesium	7439-95-4		8110	ug/L	81.1	75 - 125				07/09/12
Manganese	7439-96-5		1040	ug/L	103.5	75 - 125				07/09/12
Nickel	7440-02-0		1000	ug/L	100.4	75 - 125				07/09/12
Potassium	7440-09-7		10500	ug/L	105.2	75 - 125				07/09/12
Silver	7440-22-4		1020	ug/L	101.8	75 - 125				07/09/12
Sodium	7440-23-5		8720	ug/L	87.2	75 - 125				07/09/12
Antimony	7440-36-0		1060	ug/L	105.7	75 - 125				07/09/12
Barium	7440-39-3		1030	ug/L	103	75 - 125				07/09/12
Cadmium	7440-43-9		1060	ug/L	105.7	75 - 125				07/09/12
Chromium	7440-47-3		976	ug/L	97.6	75 - 125				07/09/12
Cobalt	7440-48-4		1000	ug/L	100.3	75 - 125				07/09/12
Copper	7440-50-8		1050	ug/L	105	75 - 125				07/09/12
Vanadium	7440-62-2		1020	ug/L	102.5	75 - 125				07/09/12
Zinc	7440-66-6		1080	ug/L	107.9	75 - 125				07/09/12
Calcium	7440-70-2		14500	ug/L	72.3	75 - 125			X	07/09/12
Strontium	7440-24-6		982	ug/L	98.2	75 - 125				07/09/12
Beryllium	7440-41-7		1080	ug/L	107.6	75 - 125				07/09/12
MSD			**QC Sample #77440**							
			Original 120820004					**Paired 77439**		
Iron	7439-89-6		1040	ug/L	104	75 - 125	6.10	20		07/09/12
Magnesium	7439-95-4		8980	ug/L	89.8	75 - 125	2.20	20		07/09/12
Manganese	7439-96-5		1040	ug/L	104	75 - 125	0.00	20		07/09/12
Nickel	7440-02-0		999	ug/L	99.9	75 - 125	0.10	20		07/09/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7		10500	ug/L	105	75 - 125	0.60	20		07/09/12
Silver	7440-22-4		1020	ug/L	101.9	75 - 125	0.00	20		07/09/12
Sodium	7440-23-5		9020	ug/L	90.2	75 - 125	0.50	20		07/09/12
Antimony	7440-36-0		1060	ug/L	106.2	75 - 125	0.00	20		07/09/12
Barium	7440-39-3		1030	ug/L	103.3	75 - 125	0.00	20		07/09/12
Cadmium	7440-43-9		1060	ug/L	105.7	75 - 125	0.00	20		07/09/12
Chromium	7440-47-3		1010	ug/L	101.4	75 - 125	2.00	20		07/09/12
Cobalt	7440-48-4		1000	ug/L	100.2	75 - 125	0.00	20		07/09/12
Copper	7440-50-8		1050	ug/L	104.6	75 - 125	0.00	20		07/09/12
Vanadium	7440-62-2		1030	ug/L	103	75 - 125	0.00	20		07/09/12
Zinc	7440-66-6		1080	ug/L	107.7	75 - 125	0.00	20		07/09/12
Calcium	7440-70-2		18100	ug/L	90.3	75 - 125	2.70	20	X	07/09/12
Strontium	7440-24-6		1000	ug/L	100.1	75 - 125	1.50	20		07/09/12
Beryllium	7440-41-7		1070	ug/L	107.3	75 - 125	0.90	20		07/09/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120825

Analytical Batch 204080 (QC Batch: 203695) **Test** Gross Alpha/Gross Beta
Associated Samples 120825012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77360**							
Gross Alpha	12587-46-1		0.50	pCi/L					U	07/11/12
Gross Beta	12587-47-2		-1.4	pCi/L					U	07/11/12
LCS			**QC Sample #77361**							
Gross Alpha	12587-46-1		64	pCi/L	107.4	80 - 120				07/11/12
Gross Beta	12587-47-2		260	pCi/L	99.5	80 - 120				07/11/12
DUP			**QC Sample #77362**							
			Original 120811006							
Gross Alpha	12587-46-1		11	pCi/L			8.70	20		07/11/12
Gross Beta	12587-47-2		15	pCi/L			6.50	20		07/11/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

Analytical Batch 204161 (QC Batch: 203904)
Associated Samples 120825014

Test SW-846 8270D Semivolatiles

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77599**						
4-Nitrophenol	100-02-7		<1	ug/L				U	07/02/12
2,4-Dinitrotoluene	121-14-2		<1	ug/L				U	07/02/12
Phenol	108-95-2		<1	ug/L				U	07/02/12
1,4-Dichlorobenzene	106-46-7		<1	ug/L				U	07/02/12
1,2,4-Trichlorobenzene	120-82-1		<1	ug/L				U	07/02/12
Pyrene	129-00-0		<1	ug/L				U	07/02/12
4-Chloro-3-methylphenol	59-50-7		<1	ug/L				U	07/02/12
n-Nitroso-di-n-propylamine	621-64-7		<1	ug/L				U	07/02/12
Acenaphthene	83-32-9		<1	ug/L				U	07/02/12
Pentachlorophenol	87-86-5		<1	ug/L				U	07/02/12
2-Chlorophenol	95-57-8		<1	ug/L				U	07/02/12
Bis-(2-Ethylhexyl)phthalate	117-81-7		<1	ug/L				U	07/02/12
2,4-Dichlorophenol	120-83-2		<1	ug/L				U	07/02/12
2-Nitrophenol	88-75-5		<1	ug/L				U	07/02/12
Naphthalene	91-20-3		<1	ug/L				U	07/02/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
2-Methylphenol	95-48-7		<1	ug/L					U	07/02/12
3 & 4 Methylphenol, Total	65794-96-9		<1	ug/L					U	07/02/12
Tributyl phosphate	126-73-8		<1	ug/L					UX	07/02/12
LCS			**QC Sample #77600**							
4-Nitrophenol	100-02-7		8.3	ug/L	27.7	0 - 88				07/02/12
1,2,4-Trichlorobenzene	120-82-1		19	ug/L	64.9	50 - 105				07/02/12
Phenol	108-95-2		14	ug/L	45.9	18 - 89				07/02/12
1,4-Dichlorobenzene	106-46-7		14	ug/L	68.3	47 - 115				07/02/12
2,4-Dinitrotoluene	121-14-2		22	ug/L	74.2	59 - 110				07/02/12
Pyrene	129-00-0		31	ug/L	104.3	64 - 116				07/02/12
4-Chloro-3-methylphenol	59-50-7		22	ug/L	71.9	62 - 109				07/02/12
n-Nitroso-di-n-propylamine	621-64-7		24	ug/L	80.8	61 - 110				07/02/12
Acenaphthene	83-32-9		22	ug/L	74	59 - 113				07/02/12
Pentachlorophenol	87-86-5		18	ug/L	60.8	17 - 125				07/02/12
2-Chlorophenol	95-57-8		20	ug/L	67.7	55 - 109				07/02/12
2-Methylphenol	95-48-7		22	ug/L	71.8	59 - 107				07/02/12
2-Nitrophenol	88-75-5		20	ug/L	66.8	48 - 113				07/02/12
2,4-Dichlorophenol	120-83-2		20	ug/L	68.2	52 - 110				07/02/12
Naphthalene	91-20-3		22	ug/L	71.8	55 - 110				07/02/12
Benzothiazole	95-16-9		24	ug/L	78.8	61 - 113				07/02/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Tributyl phosphate	126-73-8		15	ug/L	50.3	65 - 108			X	07/02/12
Tris(2-chloroethyl)phosphate	115-96-8		22	ug/L	71.8	60 - 117				07/02/12
Bis-(2-Ethylhexyl)phthalate	117-81-7		23	ug/L	78	64 - 133				07/02/12
2-Picoline	109-06-8		22	ug/L	73.8	59 - 102				07/02/12
MS			**QC Sample #77601**							
			Original 120825014							
4-Nitrophenol	100-02-7	<0.9	6.3	ug/L	22.3	15 - 57				07/02/12
1,2,4-Trichlorobenzene	120-82-1	<0.9	18	ug/L	65.4	51 - 104				07/02/12
Phenol	108-95-2	<0.9	9.6	ug/L	33.9	24 - 65				07/02/12
1,4-Dichlorobenzene	106-46-7	<0.9	13	ug/L	67.4	52 - 114				07/02/12
2,4-Dinitrotoluene	121-14-2	<0.9	21	ug/L	73.7	57 - 112				07/02/12
Pyrene	129-00-0	<0.9	27	ug/L	95.9	58 - 119				07/02/12
4-Chloro-3-methylphenol	59-50-7	<0.9	20	ug/L	71	56 - 115				07/02/12
n-Nitroso-di-n-propylamine	621-64-7	<0.9	23	ug/L	79.7	60 - 112				07/02/12
Acenaphthene	83-32-9	<0.9	21	ug/L	75.7	60 - 113				07/02/12
Pentachlorophenol	87-86-5	<0.9	17	ug/L	59.3	32 - 127				07/02/12
2-Chlorophenol	95-57-8	<0.9	18	ug/L	64.7	52 - 113				07/02/12
2-Methylphenol	95-48-7	<0.9	19	ug/L	65.6	46 - 114				07/02/12
2-Nitrophenol	88-75-5	<0.9	19	ug/L	66.6	51 - 114				07/02/12
2,4-Dichlorophenol	120-83-2	<0.9	19	ug/L	65.5	50 - 114				07/02/12
Naphthalene	91-20-3	<0.9	20	ug/L	71.2	57 - 110				07/02/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Benzothiazole	95-16-9	<0.9	22	ug/L	78.2	59 - 114				07/02/12
Tributyl phosphate	126-73-8	<0.9	13	ug/L	46.2	59 - 113			TX	07/02/12
Tris(2-chloroethyl)phosphate	115-96-8	<0.9	19	ug/L	68.1	58 - 118				07/02/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	<0.9	20	ug/L	69.7	64 - 134				07/02/12
2-Picoline	109-06-8	<0.9	20	ug/L	70.7	50 - 104				07/02/12
MSD			**QC Sample #77602**							
			Original 120825014					**Paired 77601**		
4-Nitrophenol	100-02-7	<0.9	6.6	ug/L	23.3	15 - 57	4.70	20		07/02/12
1,2,4-Trichlorobenzene	120-82-1	<0.9	18	ug/L	63.6	51 - 104	0.00	20		07/02/12
Phenol	108-95-2	<0.9	10	ug/L	35.3	24 - 65	4.10	20		07/02/12
1,4-Dichlorobenzene	106-46-7	<0.9	13	ug/L	67.7	52 - 114	0.00	20		07/02/12
2,4-Dinitrotoluene	121-14-2	<0.9	22	ug/L	78.8	57 - 112	4.70	20		07/02/12
Pyrene	129-00-0	<0.9	27	ug/L	96.5	58 - 119	0.00	20		07/02/12
4-Chloro-3-methylphenol	59-50-7	<0.9	20	ug/L	70.3	56 - 115	0.00	20		07/02/12
n-Nitroso-di-n-propylamine	621-64-7	<0.9	23	ug/L	81.9	60 - 112	0.00	20		07/02/12
Acenaphthene	83-32-9	<0.9	22	ug/L	76.7	60 - 113	4.70	20		07/02/12
Pentachlorophenol	87-86-5	<0.9	18	ug/L	64.5	32 - 127	5.70	20		07/02/12
2-Chlorophenol	95-57-8	<0.9	19	ug/L	66.2	52 - 113	5.40	20		07/02/12
2-Methylphenol	95-48-7	<0.9	19	ug/L	68.1	46 - 114	0.00	20		07/02/12
2-Nitrophenol	88-75-5	<0.9	19	ug/L	65.6	51 - 114	0.00	20		07/02/12
2,4-Dichlorophenol	120-83-2	<0.9	19	ug/L	65.5	50 - 114	0.00	20		07/02/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Naphthalene	91-20-3	<0.9	20	ug/L	70.4	57 - 110	0.00	20		07/02/12
Benzothiazole	95-16-9	<0.9	22	ug/L	78.1	59 - 114	0.00	20		07/02/12
Tributyl phosphate	126-73-8	<0.9	14	ug/L	49.7	59 - 113	7.40	20	TX	07/02/12
Tris(2-chloroethyl)phosphate	115-96-8	<0.9	20	ug/L	72	58 - 118	5.10	20		07/02/12
Bis-(2-Ethylhexyl)phthalate	117-81-7	<0.9	21	ug/L	73.4	64 - 134	4.90	20		07/02/12
2-Picoline	109-06-8	<0.9	21	ug/L	74.4	50 - 104	4.90	20		07/02/12

* - QC result out of range

n/a - Not Applicable

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120825

Analytical Batch 204168 (QC Batch: 204168) **Test** Total Alkalinity as mg/L CaCO3 (Water)
Associated Samples 120825003

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
LCS			**QC Sample #77803**								
Total Alkalinity as CaCO3	ALKALINITY		98	mg/L	98.4	80 - 120					07/02/12
DUP			**QC Sample #77804**								
			Original 120796007								
Total Alkalinity as CaCO3	ALKALINITY		<1	mg/L			199.30	20	*	U	07/02/12
LCS			**QC Sample #77805**								
Total Alkalinity as CaCO3	ALKALINITY		98	mg/L	97.5	80 - 120					07/02/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120825

Analytical Batch 204353 (QC Batch: 203882) **Test** Tritium by LSC
Associated Samples 120825006, 120825012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77532**							
Tritium	10028-17-8		-54	pCi/L					U	07/09/12
LCS			**QC Sample #77533**							
Tritium	10028-17-8		3000	pCi/L	95.5	80 - 120				07/09/12
DUP			**QC Sample #77534**							
			Original 120825006							
Tritium	10028-17-8	1.8E4	2.0E4	pCi/L			10.50	20		07/09/12
MS			**QC Sample #77535**							
			Original 120825006							
Tritium	10028-17-8	1.8E4	19000	pCi/L	89.1	75 - 125				07/09/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120825

Analytical Batch 204549 (QC Batch: 204254) **Test** TC99 by Liquid Scintillation
Associated Samples 120825005

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77827**							
Technetium-99	14133-76-7		0.30	pCi/L					U	07/09/12
LCS			**QC Sample #77828**							
Technetium-99	14133-76-7		220	pCi/L	100.6	80 - 120				07/09/12
DUP			**QC Sample #77829**							
			Original 120825005							
Technetium-99	14133-76-7	1.8E4	1.8E4	pCi/L			0.00	20		07/09/12
MS			**QC Sample #77830**							
			Original 120825005							
Technetium-99	14133-76-7	1.8E4	1500	pCi/L	174.4	75 - 125			X	07/09/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Analytical Batch 204552 (QC Batch: 204551) **Test** Total Organic Halides
Associated Samples 120825008, 120825009, 120825010, 120825014

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77945**							
Total Organic Halides	59473-04-0		<5.0	ug/L					U	06/26/12
LCS			**QC Sample #77946**							
Total Organic Halides	59473-04-0		403	mg/L	100.9	80 - 120				06/26/12
MS			**QC Sample #77948**							
			Original 120825008							
Total Organic Halides	59473-04-0	<5.0	39.0	ug/L	97.6	75 - 125				06/26/12
MSD			**QC Sample #77949**							
			Original 120825008					**Paired**	**77948**	
Total Organic Halides	59473-04-0	<5.0	37.0	ug/L	92.5	75 - 125	5.30	20		06/26/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF120825

Analytical Batch 204870 (QC Batch: 204261) **Test** ICP-2008 MS All possible metal
Associated Samples 120825011, 120825012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #77853**							
Uranium	7440-61-1		<0.050	ug/L					U	07/17/12
Arsenic	7440-38-2		<0.20	ug/L					U	07/17/12
LCS			**QC Sample #77854**							
Uranium	7440-61-1		39.0	ug/L	97.4	85 - 115				07/17/12
Arsenic	7440-38-2		37.8	ug/L	94.4	85 - 115				07/17/12
MS			**QC Sample #77855**							
			Original 120822008							
Uranium	7440-61-1		38.6	ug/L	96.5	70 - 130				07/17/12
Arsenic	7440-38-2		36.2	ug/L	90.5	70 - 130				07/17/12
MSD			**QC Sample #77856**							
			Original 120822008					**Paired 77855**		
Uranium	7440-61-1		42.1	ug/L	105.3	70 - 130	7.10	20		07/17/12
Arsenic	7440-38-2		38.7	ug/L	96.7	70 - 130	6.20	20		07/17/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120825

Analytical Batch 204888 (QC Batch: 204888) **Test** Total Organic Carbon
Associated Samples 120825008, 120825009, 120825010

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #78141**							
Total Organic Carbon	TOC		<0.045	mg/L					U	07/16/12
LCS			**QC Sample #78142**							
Total Organic Carbon	TOC		2.12	mg/L	106	80 - 120				07/16/12
MS			**QC Sample #78143**							
			Original 120796006							
Total Organic Carbon	TOC		2.01	mg/L	100.5	75 - 125				07/16/12
MSD			**QC Sample #78144**							
			Original 120796006					**Paired**	**78143**	
Total Organic Carbon	TOC		2.03	mg/L	101.4	75 - 125	1.00	20		07/16/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120825

Analytical Batch 204939 (QC Batch: 204055) **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 120825011

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #77674**								
Strontium-89_90	SR-RAD		0.31	pCi/L						U	07/24/12
LCS			**QC Sample #77675**								
Strontium-89_90	SR-RAD		91	pCi/L	101.1	80 - 120					07/24/12
DUP			**QC Sample #77676**								
			Original 120822010								
Strontium-89_90	SR-RAD		3.0	pCi/L			48.10	20	*	X	07/24/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF120825

Analytical Batch 205012 (QC Batch: 205012) **Test** Total Organic Carbon
Associated Samples 120825014

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #78538**							
Total Organic Carbon	TOC		<0.045	mg/L					U	07/19/12
LCS			**QC Sample #78539**							
Total Organic Carbon	TOC		2.10	mg/L	105	80 - 120				07/19/12
MS			**QC Sample #78543**							
			Original 120829003							
Total Organic Carbon	TOC		2.24	mg/L	112	75 - 125				07/19/12
MSD			**QC Sample #78544**							
			Original 120829003					**Paired**	**78543**	
Total Organic Carbon	TOC		2.16	mg/L	108	75 - 125	3.60	20		07/19/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

Analytical Batch 203751 (QC Batch: 203750) **Test** SW-846 8260B Volatiles
Associated Samples 120825011, 120825013

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #120825011**							
1,2-Dichloroethane-d4	17060-07-0				99.9	75 - 125				06/26/12
Toluene-d8	2037-26-5				98.8	75 - 125				06/26/12
4-Bromofluorobenzene	460-00-4				97.8	75 - 125				06/26/12
SAMPLE			**Sample #120825013**							
1,2-Dichloroethane-d4	17060-07-0				100.9	75 - 125				06/26/12
Toluene-d8	2037-26-5				100	75 - 125				06/26/12
4-Bromofluorobenzene	460-00-4				98.1	75 - 125				06/26/12
BLANK			**QC Sample #77414**							
1,2-Dichloroethane-d4	17060-07-0				89.4	75 - 125				06/26/12
Toluene-d8	2037-26-5				99.5	75 - 125				06/26/12
4-Bromofluorobenzene	460-00-4				95.1	75 - 125				06/26/12
LCS			**QC Sample #77415**							
1,2-Dichloroethane-d4	17060-07-0				89	75 - 125				06/26/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Toluene-d8	2037-26-5				102.2	75 - 125				06/26/12
4-Bromofluorobenzene	460-00-4				96.2	75 - 125				06/26/12
MS			**QC Sample #77416**							
			Original 120817014							
4-Bromofluorobenzene	460-00-4				103.5	75 - 125				06/26/12
1,2-Dichloroethane-d4	17060-07-0				95.4	75 - 125				06/26/12
Toluene-d8	2037-26-5				104.1	75 - 125				06/26/12
MSD			**QC Sample #77417**							
			Original 120817014					**Paired**	**77416**	
4-Bromofluorobenzene	460-00-4				104.6	75 - 125	n/a			06/26/12
1,2-Dichloroethane-d4	17060-07-0				95.3	75 - 125	n/a			06/26/12
Toluene-d8	2037-26-5				101.8	75 - 125	n/a			06/26/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

Analytical Batch 204161 (QC Batch: 203904) **Test** SW-846 8270D Semivolatiles
Associated Samples 120825014

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #120825014**							
2-Fluorophenol	367-12-4				52.3	44 - 135				07/02/12
Phenol-d5	4165-62-2				35.3	41 - 136			X	07/02/12
Nitrobenzene-d5	4165-60-0				96.1	53 - 129				07/02/12
2-Methylnaphthalene-d10	7297-45-2				84	50 - 140				07/02/12
2-Fluorobiphenyl	321-60-8				87.3	36 - 141				07/02/12
2,4,6-Tribromophenol	118-79-6				46.6	17 - 142				07/02/12
Fluoranthene-d10	93951-69-0				84.8	50 - 140				07/02/12
Terphenyl-d14	98904-43-9				114.4	61 - 142				07/02/12
BLANK			**QC Sample #77599**							
2-Fluorophenol	367-12-4				62.6	44 - 135				07/02/12
Phenol-d5	4165-62-2				48.7	41 - 136				07/02/12
Nitrobenzene-d5	4165-60-0				105.4	53 - 129				07/02/12
2-Methylnaphthalene-d10	7297-45-2				91.1	50 - 140				07/02/12
2-Fluorobiphenyl	321-60-8				96.6	36 - 141				07/02/12
2,4,6-Tribromophenol	118-79-6				54.2	17 - 142				07/02/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Fluoranthene-d10	93951-69-0				89	50 - 140				07/02/12
Terphenyl-d14	98904-43-9				118.5	61 - 142				07/02/12
LCS			**QC Sample #77600**							
2-Fluorophenol	367-12-4			ug/L	61.7	34 - 103				07/02/12
Phenol-d5	4165-62-2			ug/L	51.8	10 - 93				07/02/12
Nitrobenzene-d5	4165-60-0			ug/L	100.8	49 - 133				07/02/12
2,4,6-Tribromophenol	118-79-6			ug/L	68.4	33 - 134				07/02/12
2-Fluorobiphenyl	321-60-8			ug/L	84.4	48 - 132				07/02/12
Terphenyl-d14	98904-43-9			ug/L	125.1	56 - 138				07/02/12
2-Methylnaphthalene-d10	7297-45-2			ug/L	82	60 - 135				07/02/12
Fluoranthene-d10	93951-69-0			ug/L	89.1	62 - 139				07/02/12
MS			**QC Sample #77601**							
			Original 120825014							
2-Fluorophenol	367-12-4			ug/L	50.2	34 - 103				07/02/12
Phenol-d5	4165-62-2			ug/L	36.8	10 - 93				07/02/12
Nitrobenzene-d5	4165-60-0			ug/L	96.3	49 - 133				07/02/12
2,4,6-Tribromophenol	118-79-6			ug/L	65.1	33 - 134				07/02/12
2-Fluorobiphenyl	321-60-8			ug/L	87.1	48 - 132				07/02/12
Terphenyl-d14	98904-43-9			ug/L	111	56 - 138				07/02/12
2-Methylnaphthalene-d10	7297-45-2			ug/L	84.5	60 - 135				07/02/12
Fluoranthene-d10	93951-69-0			ug/L	88	62 - 139				07/02/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Organic, Semivolatiles

Group # WSCF120825

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MSD			**QC Sample #77602**							
			Original 120825014					**Paired 77601**		
2-Fluorophenol	367-12-4			ug/L	51.7	34 - 103	n/a			07/02/12
Phenol-d5	4165-62-2			ug/L	37.6	10 - 93	n/a			07/02/12
Nitrobenzene-d5	4165-60-0			ug/L	93.6	49 - 133	n/a			07/02/12
2,4,6-Tribromophenol	118-79-6			ug/L	71.9	33 - 134	n/a			07/02/12
2-Fluorobiphenyl	321-60-8			ug/L	85.3	48 - 132	n/a			07/02/12
Terphenyl-d14	98904-43-9			ug/L	112.3	56 - 138	n/a			07/02/12
2-Methylnaphthalene-d10	7297-45-2			ug/L	78.9	60 - 135	n/a			07/02/12
Fluoranthene-d10	93951-69-0			ug/L	91	62 - 139	n/a			07/02/12

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

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF120825

Analytical Batch 204939 (QC Batch: 204055) **Test** Strontium 89/90 (GPC/GEA)
Associated Samples 120825011

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #120825011**							
Strontium Nitrate	10042-76-9			mg/sample	84.3	25 - 105				07/24/12
BLANK			**QC Sample #77674**							
Strontium Nitrate	10042-76-9			mg/sample	81	25 - 105				07/24/12
LCS			**QC Sample #77675**							
Strontium Nitrate	10042-76-9			mg/sample	86.8	25 - 105				07/24/12
DUP			**QC Sample #77676**							
			Original 120822010							
Strontium Nitrate	10042-76-9			mg/sample	60.3	25 - 105	n/a			07/24/12

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

Tentatively Identified Peak Report

Attention Scot Fitzgerald
Department Organic, Volatiles

Group # WSCF120825

Peak Name		CAS #	RT	RQ	Result	Units
120825011	**B2KWT0**					
Unknown		UNKNOWN-01	9.1697		.5	ug/L
Unknown		UNKNOWN-02	10.330		.36	ug/L
120825013	**B2LPM3**					
Unknown		UNKNOWN-01	3.9963		7.8	ug/L
Unknown		UNKNOWN-02	5.7422		11	ug/L
Unknown		UNKNOWN-03	6.5364		2.8	ug/L
Unknown		UNKNOWN-04	8.9639		2.7	ug/L

Analytical Comment Report

Attention: Scot Fitzgerald

Group # WSCF120825

120825014 **B2L8R1**

Department Organic, Semivolatiles

Analyte Phenol-d5 - SW-846 8270D Semivolatiles
[1] Surrogate recovery outside of established laboratory control limits.

Analyte Tributyl phosphate - SW-846 8270D Semivolatiles
[1] LCS recovery outside established laboratoy limit

Quality Control Comments

Department Inorganic

77380 B2KW30(120825001DUP)

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.

77439 B2KW97(120820004MS)

Analyte Calcium - ICP-6010 - All possible metals
[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

77440 B2KW97(120820004MSD)

Analyte Calcium - ICP-6010 - All possible metals
[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.

Analytical Comment Report

Attention: Scot Fitzgerald

Group # WSCF120825

Quality Control Comments

Department Organic, Semivolatiles

77599 BLANK for HBN 203904 [ORGP/195

Analyte Tributyl phosphate - SW-846 8270D Semivolatiles

[1] LCS recovery outside established laboratoy limit

77600 LCS for HBN 203904 [ORGP/1958]

Analyte Tributyl phosphate - SW-846 8270D Semivolatiles

[1] LCS recovery outside established laboratoy limit

77601 B2L8R1(120825014MS)

Analyte Tributyl phosphate - SW-846 8270D Semivolatiles

[1] LCS recovery outside established laboratoy limit

77602 B2L8R1(120825014MSD)

Analyte Tributyl phosphate - SW-846 8270D Semivolatiles

[1] LCS recovery outside established laboratoy limit

Analytical Comment Report

Attention: Scot Fitzgerald

Group # WSCF120825

Quality Control Comments

Department Radiochemistry

77676 B2KJJ9(120822010DUP)

Analyte Strontium-89_90 - Strontium 89/90 (GPC/GEA)

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

77830 B2KW29(120825005MS)

Analyte Technetium-99 - TC99 by Liquid Scintillation

[1] Matrix spike control limits do not apply when the added spike is <25% of the activity of the sample.

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 10 pages
Including cover page

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

ACKNOWLEDGEMENT OF SAMPLES RECEIVED

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

ATTN: Scot Fitzgerald

Customer Code: CHPRC
PO #: 401647
Work Order #: 120825
Profile #: W12-006-161
Proj. Mgr.:
Phone:

The following samples were received from you on 6/25/2012 12:53:00 PM. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
		Tests scheduled		
120825001	B2KW30	WATER	6/25/2012 09:06	6/25/2012 12:53
		IC-W		
120825002	B2L8R2	WATER	6/25/2012 10:44	6/25/2012 12:53
		IC-W		
120825003	B2KW27	WATER	6/25/2012 09:06	6/25/2012 12:53
		ALK-W		
120825004	B2KW28	WATER	6/25/2012 09:06	6/25/2012 12:53
		6010-W		
120825005	B2KW29	WATER	6/25/2012 09:06	6/25/2012 12:53
		TC99-W		
120825006	B2KW31	WATER	6/25/2012 09:06	6/25/2012 12:53
		H3-COL-W		
120825007	B2KW32	WATER	6/25/2012 09:06	6/25/2012 12:53
		6010-W		
120825008	B2L9N3	WATER	6/25/2012 10:44	6/25/2012 12:53
		TOC-W; TOX-W		
120825009	B2L9N4	WATER	6/25/2012 10:44	6/25/2012 12:53
		TOC-W; TOX-W		
120825010	B2L9N2	WATER	6/25/2012 10:44	6/25/2012 12:53
		TOC-W; TOX-W		
120825011	B2KWT0	WATER	6/25/2012 09:06	6/25/2012 12:53

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

		2008-W; 8260V-W; SR89/90-W		
120825012	B2LDX5	WATER	6/25/2012 10:44	6/25/2012 12:53
		2008-W; GAB-AO-W; GAB-BO-W; H3-COL-W		
120825013	B2LPM3	WATER	6/25/2012 09:06	6/25/2012 12:53
		8260V-W		
120825014	B2L8R1	WATER	6/25/2012 10:44	6/25/2012 12:53
		6010-W; 8270SV-W; TOC-W; TOX-W		

Test Acronym Description

Test Acronym	Description
2008-W	ICP-MS (W)
6010-W	ICP-AES (W)
8260V-W	Volatiles by 8260B (W)
8270SV-W	Semivolatiles by 8270D (W)
ALK-W	Total Alkalinity (W)
GAB-AO-W	Gross Alpha/Beta (A only)(W)
GAB-BO-W	Gross Alpha/Beta (B only)(W)
H3-COL-W	Tritium by EICHROM Column (W)
IC-W	Anions by IC (W)
SR89/90-W	Strontium 89/90 (GPC) (W)
TC99-W	Technetium-99 (W)
TOC-W	Total Organic Carbon (W)
TOX-W	Total Organic Halides (W)

CH2MHill Plateau Remediation Company	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # W12-006-161 Page 1 of 1

Collector	Juan Aguilar	Contact/Requester	Karen Waters-Husted	Telephone No.	376-4650
SAF No.	W12-006	Sampling Origin	Hanford Site	Purchase Order/Charge Code	300071ES20
Project Title	RCRA, JUNE 2012	Logbook No.	HNF-N-506 50 / 30	Ice Chest No.	N/A
Shipped To (Lab)	Waste Sampling & Characterization	Method of Shipment	GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.	N/A
Protocol	RCRA	Priority:	45 Days	Offsite Property No.	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOL Order 5400 5 (1990/1993)

120825

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

Site Wide Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2KW30	N	W	6-25-12	0906	1x500-mL P	300.0_ANIONS_IC: List-1 (5)	48 Hours	Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Juan Aguilar			JUN 25 2012 1253	C Johnson			JUN 25 2012 1253
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

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A-6004-842 (REV 2)

Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# **W12-007-116**

Page 1 of 1

Collector	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650	
SAF No. W12-007	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title RCRA, JULY 2012	**Logbook No.** HNF-N-506 SD / 30	**Ice Chest No.** N/A	
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.** N/A	
Protocol RCRA	**Priority:** 45 Days	**Offsite Property No.** N/A	

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

SPECIAL INSTRUCTIONS **Hold Time**
Site Wide Generator Knowledge Information Form applies.
Use CACN for all analytical work at WSCF is 401047.
FY11 and FY12 samples cannot be in the same SDG.

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2L8R2	N	W	6-25-12	1044	1x500-mL P	300.0_ANIONS_IC_List-1 (6)	48 Hours	Cool-4C

	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Relinquished By	Juan Rodriguez		JUN 25 2012 1853	C Johnson			JUN 25 2012 1853
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By			Date/Time

Matrix *

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

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Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # W12-006-160

Page 1 of 1

Collector: Juan Aguilar	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650	
SAF No.: W12-006	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071ES20	
Project Title: RCRA, JUNE 2012	Logbook No.: HNF-N-506 50 / 30	Ice Chest No.: N/A	
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.: N/A	
Protocol: RCRA	Priority: 45 Days	Offsite Property No.: N/A	

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

SPECIAL INSTRUCTIONS: Site Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647

Hold Time: Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2KW27	N	W	6-25-12	0906	1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B2KW28	N	W	6-25-12	0906	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2KW29	N	W	6-25-12	0906	1x1-L G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B2KW31	N	W	6-25-12	0906	1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B2KW32	Y	W	6-25-12	0906	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Juan Aguilar	Juan Aguilar		JUN 25 2012 1513	C Johnson	C Johnson		JUN 25 2012 1513
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

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

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

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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **112-026-031**

Page 1 of 1

Collector	[redacted]	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	112-026	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	2UP1, JUNE 2012	**Logbook No.**	HNF-N-506 50 / 30	**Ice Chest No.**	N/A
Shipped To (Lab)	Waste Sampling & Characterization	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	SURV	**Priority:**	45 Days	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1950/1993)

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

200 Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.
FY11 and FY12 samples cannot be in the same SDG.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2KWT0	N	W	6-25-12	0906	1x500-mL G/P	200.8_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
B2KWT0	N	W	6-25-12	0906	3x40-mL aGs*	8260_VOA_GCMS: List 2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool-4C
B2KWT0	N	W	6-25-12	0906	1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
[redacted]			JUN 25 2012 1253	C Johnson			JUN 25 2012 1253
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

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Chain of Custody

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C.# **S12-007-211**

Page 1 of 1

Collector Juan Aguilar	**Contact/Requester** Karen Waters-Husted	**Telephone No.** 376-4650	
SAF No. S12-007	**Sampling Origin** Hanford Site	**Purchase Order/Charge Code** 300071ES20	
Project Title SURV, JULY 2012	**Logbook No.** HNF-N-506-50 / 30	**Ice Chest No.** N/A	
Shipped To (Lab) Waste Sampling & Characterization	**Method of Shipment** GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.** N/A	
Protocol CERCLA	**Priority:** 45 Days	**Offsite Property No.** N/A	

POSSIBLE SAMPLE HAZARDS/REMARKS

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

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

Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2LDX5	N	W	6-25-12	1044	1x500-mL G/P	200.8_METALS_ICPMS: Arsenic (1)	6 Months	HNO3 to pH <2
B2LDX5	N	W	6-25-12	1044	1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B2LDX5	N	W	6-25-12	1044	1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None

Relinquished By Juan Aguilar	Print	Sign	Date/Time JUN 25 2012 1253	Received By	Print	Sign
Relinquished By			Date/Time	Received By		Date/Time JUN 25 2012 1253
Relinquished By			Date/Time	Received By		Date/Time
Relinquished By			Date/Time	Received By		Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time

Matrix *

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

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CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # **S12-007-311**

Page 1 of 1

Collector	Joan Aguilar	**Contact/Requester**	Karen Waters-Husted	**Telephone No.**	376-4650
SAF No.	S12-007	**Sampling Origin**	Hanford Site	**Purchase Order/Charge Code**	300071ES20
Project Title	SURV, JULY 2012	**Logbook No.**	HNF-N-506 50 / 30	**Ice Chest No.**	N/A
Shipped To (Lab)	Waste Sampling & Characterization	**Method of Shipment**	GOVERNMENT VEHICLE	**Bill of Lading/Air Bill No.**	N/A
Protocol	CERCLA	**Priority:**	**45 Days**	**Offsite Property No.**	N/A

POSSIBLE SAMPLE HAZARDS/REMARKS

** ** Contains Radioactive Material at concentations that are not regulated for transportation per 49 CRF but are not releasable per DOE Order 5400 5 (1990/1993)

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

Site-Wide Generator Knowledge Information Form applies. The CACN for all analytical work at WSCF is 401647.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2LPM3	N	W	JUN 25 2012	0906	3x40-mL aGs*	8260_VOA_GCMS: List-2 (25)	14 Days	HCl or H2SO4 to pH <2/Cool~4C
B2LPM3	N	W	JUN 25 2012	0906	1x20-mL P	Activity Scan	6 Months	None

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
Joan Aguilar			JUN 25 2012 1253	C Johnson			JUN 25 2012 1253
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

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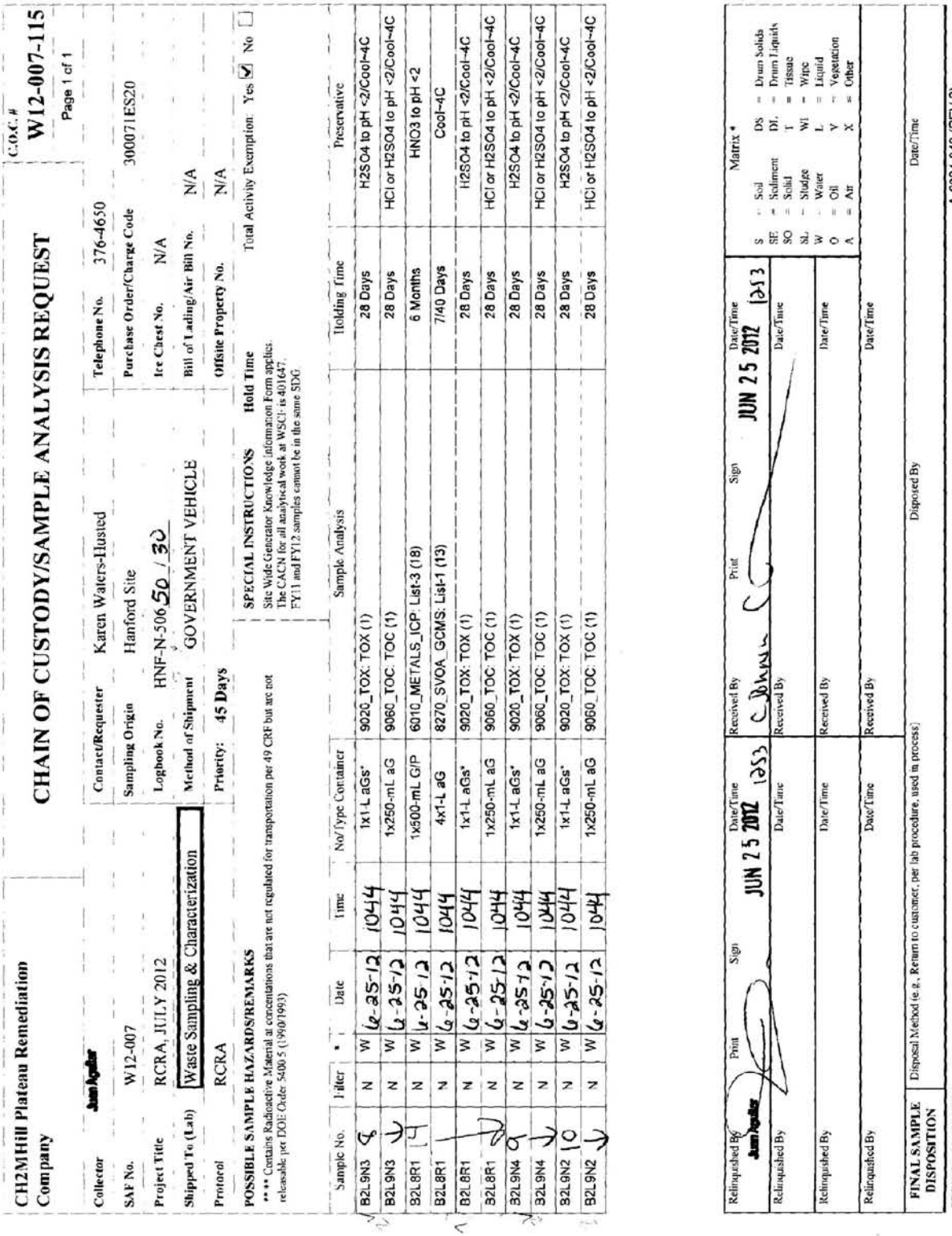
Chain of Custody



CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

COC # W12-007-115

Page 1 of 1

Collector: Juan Aguilar	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-4650			
SAF No.: W12-007	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300071ES20			
Project Title: RCRA, JULY 2012	Logbook No.: HNF-N-506 50 / 30	Ice Chest No.: N/A			
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: GOVERNMENT VEHICLE	Bill of Lading/Air Bill No.: N/A			
Protocol: RCRA	Priority: 45 Days	Offsite Property No.: N/A			

POSSIBLE SAMPLE HAZARDS/REMARKS

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

SPECIAL INSTRUCTIONS

Site Wide Geocator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401647.
FY11 and FY12 samples cannot be in the same SDG

Hold Time Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B2L9N3	N	W	6-25-12	1044	1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9N3	N	W	6-25-12	1044	1x250-mL aG	9060_TOC: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L8R1	N	W	6-25-12	1044	1x500-mL G/P	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B2L8R1	N	W	6-25-12	1044	4x1-L aG	8270_SVOA_GCMS: List-1 (13)	7/40 Days	Cool-4C
B2L8R1	N	W	6-25-12	1044	1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L8R1	N	W	6-25-12	1044	1x250-mL aG	9060_TOC: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9N4	N	W	6-25-12	1044	1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9N4	N	W	6-25-12	1044	1x250-mL aG	9060_TOC: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C
B2L9N2	N	W	6-25-12	1044	1x1-L aGs*	9020_TOX: TOX (1)	28 Days	H2SO4 to pH <2/Cool-4C
B2L9N2	N	W	6-25-12	1044	1x250-mL aG	9060_TOC: TOC (1)	28 Days	HCl or H2SO4 to pH <2/Cool-4C

Relinquished By: Juan Aguilar	Print	Sign	Date/Time: JUN 25 2012 1353	Received By: C Johnson	Print	Sign
Relinquished By			Date/Time	Received By		Date/Time: JUN 25 2012 1353
Relinquished By			Date/Time	Received By		Date/Time
Relinquished By			Date/Time	Received By		Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method (e.g., Return to customer, per lab procedure, used in process)			Disposed By		Date/Time

Matrix *

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

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