

0089831

PO Box 1000 S3-30
Richland, WA 99352
(509) 373-7005
(509) 372-0456

Memorandum

To: Michael Neely
CH2M-HILL PRC
PO Box 1600
Richland, WA 99352

Date: April 30, 2010

From: WSCF Laboratory
WSCF Analytical Chemistry

CC:

Subject: REVISED100019 - 239859 [Report ID: 100019]

Reference: (1) SOW, Mod 2, #36587, Release 3
(2) HNF-SD-CD-QAPP-017, Rev 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following information for sample delivery group WSCF100019

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

Electronically signed by Scot Fitzgerald
For Lab Manager

Attachments 4

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ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF100019
Data Deliverable Date 02/19/10

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F10-013	B22RY4	100019001	WATER	01/05/10	01/05/10

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Attachment 2
Narrative, Rev.1
WSCF100019

P&D Correction – Case Narrative Replaces The Prior Submittal in its Entirety

Introduction

One (1) S&GRP sample was received at the WSCF Laboratory on January 5, 2010. The sample was analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

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. Additionally, a copy of the completed P&D # WSCF100019 is included with this case narrative.

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, D, and J) 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.
- **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.

Analytical Methodology for Requested Analyses

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

Organic Comments

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

- In the Analyte column of the Method Blank Total 1,2-Dichloroethene is listed only as Total. The CAS number is correct.

All QC controls are within the established limits.

Attachment 2
Narrative, Rev.1
WSCF100019

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 2
Narrative, Rev.1
WSCF100019

Problem and Discrepancy Report

WSCF

SDG WSCF100019

1. The data package has the following issues:

- a) The case narrative states that the chains of custody were stamped "ICED" is not correct. Cooling preservation was required. Please correct case narrative statement and explain/document if there were any anomalies identified during sample receiving.

Resolution: *Provide correction.*

Lab Response: Case Narrative has been revised to state, "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.

Please correct the issues and resubmit the hard copy data package.

ATTACHMENT 3
ANALYTICAL RESULTS

Consisting of 11 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Michael Neely

Contract # MOA-FH-CHPRC-2008
Group # WSCF100019
Report Date April 30, 2010

Analytical: Electronically signed by Scot Fitzgerald

Client Services: Electronically signed by Richard Barker

All radiochemistry results are reported on an "as received" basis.

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

REVISED100019 -

Batch QC List

REVISION 1

Attention Michael Neely
Department Organic, Volatiles

Group #

WSCF100019

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
82385	82386	1	BLANK	21602	BLANK		SW-846 8260B Volatiles, separate prep
82385	82386	2	LCS	21603	LCS		SW-846 8260B Volatiles, separate prep
82385	82386	3	MS	21604	B233V1(100018001MS)	100018001	SW-846 8260B Volatiles, separate prep
82385	82386	4	MSD	21605	B233V1(100018001MSD)	100018001	SW-846 8260B Volatiles, separate prep
82385	82386	7	SAMPLE	100019001	B22RY4		SW-846 8260B Volatiles, separate prep

REVISED100019 -

Method Reference

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF100019

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

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

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

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF100019

Sample # 100019001
 SAF# F10-013
 Sample ID B22RY4

Matrix WATER
 Sampled 01/05/10
 Received 01/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8260 Prep										01/07/10
SW-846 8260B										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Styrene	100-42-5	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
cis-1,3-Dichloropropene	10061-01-5	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
trans-1,3-Dichloropropene	10061-02-6	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Dibromochloromethane	124-48-1	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Total 1,2-Dichloroethene	540-59-0	LA-523-455	U	<1		ug/L	1	1	5	01/07/10

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

B - Analyte was detected in both the BLANK and SAMPLE
 D - Analyte was reported at a secondary dilution factor.
 E - The calibration exceeds the calibration range (GC/MS).
 J - Analyte < lowest calibration but >= MDL.
 N - Presumptive compound based on MS Library search.

T - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.
 T - MS and/or MSD sample recovery outside control limits.

REVISED100019 -

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF100019

Sample # 100019001
 SAF# F10-013
 Sample ID B22RY4

Matrix WATER
 Sampled 01/05/10
 Received 01/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
2-Hexanone	591-78-6	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Bromomethane	74-83-9	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Chloromethane	74-87-3	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Chloroethane	75-00-3	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Carbon disulfide	75-15-0	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Bromoform	75-25-2	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Bromodichloromethane	75-27-4	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
1,2-Dichloropropane	78-87-5	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
1,1,2,2-Tetrachloroethane	79-34-5	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	01/07/10
Trichlorofluoromethane	75-69-4	LA-523-455	U	<1		ug/L	1	1	5	01/07/10

MDL = Minimum Detection
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 TP Err = Total Propagated
 DF = Dilution Factor
 + - Indicates more than nine qualifier

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 D - Analyte was reported at a secondary dilution factor.
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 J - Analyte < lowest calibration but >= MDL.
 N - Presumptive compound based on MS Library search.

T - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.
 T - MS and/or MSD sample recovery outside control limits.

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Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF100019

Sample # 100019001
 SAF# F10-013
 Sample ID B22RY4

Matrix WATER
 Sampled 01/05/10
 Received 01/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
n-Butylbenzene	104-51-8	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	01/07/10
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	01/07/10

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

B - Analyte was detected in both the BLANK and SAMPLE
 D - Analyte was reported at a secondary dilution factor.
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REVISED100019 -

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF100019

QC Batch 82385 Test SW-846 8260B Volatiles, separate prep
 Associated Samples 100019001

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #21602								
1,1-Dichloroethene	75-35-4	<1		ug/L					U	01/07/10
Trichloroethene	79-01-6	<1		ug/L					U	01/07/10
Benzene	71-43-2	<1		ug/L					U	01/07/10
Toluene	108-88-3	<1		ug/L					U	01/07/10
Chlorobenzene	108-90-7	<1		ug/L					U	01/07/10
1,1-Dichloroethane	75-34-3	<1		ug/L					U	01/07/10
Ethylbenzene	100-41-4	<1		ug/L					U	01/07/10
Styrene	100-42-5	<1		ug/L					U	01/07/10
cis-1,3-Dichloropropene	10061-01-5	<1		ug/L					U	01/07/10
trans-1,3-Dichloropropene	10061-02-6	<1		ug/L					U	01/07/10
1,2-Dichloroethane	107-06-2	<1		ug/L					U	01/07/10
Methyl isobutyl ketone	108-10-1	<1		ug/L					U	01/07/10
Dibromochloromethane	124-48-1	<1		ug/L					U	01/07/10
Tetrachloroethene	127-18-4	<1		ug/L					U	01/07/10
Total Xylenes	1330-20-7	<1		ug/L					U	01/07/10
Total 1,2-Dichloroethene	540-59-0	<1		ug/L					U	01/07/10
Carbon tetrachloride	56-23-5	<1		ug/L					U	01/07/10

REVISED100019 -

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF100019

Analyte	CAS #	Original Found	QC Found	Units	% RecovLimits	RPD	RPD Limit	RQ	Analyzed
2-Hexanone	591-78-6		<1	ug/L				U	01/07/10
Acetone	67-64-1		<1	ug/L				U	01/07/10
Chloroform	67-66-3		<1	ug/L				U	01/07/10
1,1,1-Trichloroethane	71-55-6		<1	ug/L				U	01/07/10
Bromomethane	74-83-9		<1	ug/L				U	01/07/10
Chloromethane	74-87-3		<1	ug/L				U	01/07/10
Chloroethane	75-00-3		<1	ug/L				U	01/07/10
Vinyl chloride	75-01-4		<1	ug/L				U	01/07/10
Methylene chloride	75-09-2		<1	ug/L				U	01/07/10
Carbon disulfide	75-15-0		<1	ug/L				U	01/07/10
Bromoform	75-25-2		<1	ug/L				U	01/07/10
Bromodichloromethane	75-27-4		<1	ug/L				U	01/07/10
1,2-Dichloropropane	78-87-5		<1	ug/L				U	01/07/10
Methyl ethyl ketone	78-93-3		<1	ug/L				U	01/07/10
1,1,2-Trichloroethane	79-00-5		<1	ug/L				U	01/07/10
1,1,2,2-Tetrachloroethane	79-34-5		<1	ug/L				U	01/07/10
1-Butanol	71-36-3		<100	ug/L				U	01/07/10
Trichlorofluoromethane	75-69-4		<1	ug/L				U	01/07/10
n-Butylbenzene	104-51-8		<1	ug/L				U	01/07/10
trans-1,2-Dichloroethene	156-60-5		<1	ug/L				U	01/07/10
cis-1,2-Dichloroethene	156-59-2		<1	ug/L				U	01/07/10
LCS									

QC Sample #21603

REVISED100019 -

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF100019

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,1-Dichloroethene	75-35-4		26	ug/L	105	75 - 125				01/07/10
Trichloroethene	79-01-6		26	ug/L	104.2	75 - 125				01/07/10
Benzene	71-43-2		27	ug/L	109.7	75 - 125				01/07/10
Toluene	108-88-3		28	ug/L	110.6	75 - 125				01/07/10
Chlorobenzene	108-90-7		28	ug/L	112.7	75 - 125				01/07/10
MS										
QC Sample #21604										
Original 100018001										
1,1-Dichloroethene	75-35-4		24	ug/L	97.2	75 - 125				01/07/10
Trichloroethene	79-01-6		25	ug/L	99.2	75 - 125				01/07/10
Benzene	71-43-2		26	ug/L	105	75 - 125				01/07/10
Toluene	108-88-3		27	ug/L	107.4	75 - 125				01/07/10
Chlorobenzene	108-90-7		27	ug/L	109.9	75 - 125				01/07/10
MSD										
QC Sample #21605										
Original 100018001										
Paired 21604										
1,1-Dichloroethene	75-35-4		23	ug/L	91.4	75 - 125	6.20	20		01/07/10
Trichloroethene	79-01-6		23	ug/L	90.8	75 - 125	8.80	20		01/07/10
Benzene	71-43-2		24	ug/L	97	75 - 125	7.90	20		01/07/10
Toluene	108-88-3		25	ug/L	98.6	75 - 125	8.50	20		01/07/10
Chlorobenzene	108-90-7		26	ug/L	102.6	75 - 125	6.90	20		01/07/10
SAMPLE										
Sample #100019001										
1,2-Dichloroethane-d4	17060-07-0				111.1	75 - 125				01/07/10
Toluene-d8	2037-26-5				102.5	75 - 125				01/07/10
4-Bromofluorobenzene	460-00-4				105.7	75 - 125				01/07/10

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF100019

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #21602								
1,2-Dichloroethane-d4	17060-07-0				106.9	75 - 125				01/07/10
Toluene-d8	2037-26-5				101.7	75 - 125				01/07/10
4-Bromofluorobenzene	460-00-4				105.3	75 - 125				01/07/10
LCS		QC Sample #21603								
1,2-Dichloroethane-d4	17060-07-0				109.7	75 - 125				01/07/10
Toluene-d8	2037-26-5				102.6	75 - 125				01/07/10
4-Bromofluorobenzene	460-00-4				106.9	75 - 125				01/07/10
MS		QC Sample #21604								
		Original 100018001								
1,2-Dichloroethane-d4	17060-07-0				109.9	75 - 125				01/07/10
Toluene-d8	2037-26-5				101.9	75 - 125				01/07/10
4-Bromofluorobenzene	460-00-4				105.9	75 - 125				01/07/10
MSD		QC Sample #21605								
		Original 100018001								
		Paired 21604								
1,2-Dichloroethane-d4	17060-07-0				108.4	75 - 125	1.40	20		01/07/10
Toluene-d8	2037-26-5				101.6	75 - 125	0.30	20		01/07/10
4-Bromofluorobenzene	460-00-4				106.6	75 - 125	0.70	20		01/07/10

REVISED100019 -

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 3 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 1000 S3-30
 Richland, WA 99352

ATTN: Michael Neely

Customer Code: CHPRC
 PO #: 401586
 Work Order #: 100019
 Profile #: F10-013-031
 Proj. Mgr.:
 Phone:

The following samples were received from you on: 1/5/2010 2:30:00 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		
100019001	B22RY4	WATER	1/5/2010 10:12	1/5/2010 14:30
		8260V-W		

Test Acronym Description

Test Acronym	Description
8260V-W	Volatiles by 8260B (W)

CH2MHILL Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

P10-013-031 PAGE 1 OF 1

COLLECTOR *Rosario Rust Flores Chabalera*
SAMPLING LOCATION *201*
OS&D (295-829-54); 1-126779
ICE CHEST NO.

COMPANY CONTACT DYZEMAN, DL TELEPHONE NO. 373-2530
PROJECT COORDINATOR DYZEMAN, DL
PROJECT DESIGNATION AREA 200-LW-2.00 Characterization on Vadose Zone - QC Sampling ("K" Well)
FIELD LOGBOOK NO. HNF-N-5763-02/102
ACTUAL SAMPLE DEPTH N/A
OFFSITE PROPERTY NO. N/A

PRICE CODE 7N DATA TURNAROUND 45 Days / 45 Days
AIR QUALITY
METHOD OF SHIPMENT GOVERNMENT VEHICLE
BILL OF LADING / AIR BILL NO. N/A

SHIPPED TO Waste Sampling & Characterization *100019*

MATRIX* POSSIBLE SAMPLE HAZARDS/ REMARKS
Aqueous Contains Radioactive Materials at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)
SPECIAL HANDLING AND/OR STORAGE

Table with columns: PRESERVATION, TYPE OF CONTAINER, NO. OF CONTAINER(S), VOLUME, SAMPLE ANALYSIS. Includes handwritten 'N/A' and '4'.

Table with columns: SAMPLE NO., MATRIX*, SAMPLE DATE, SAMPLE TIME. Row 1: B22RY4, 001, WATER, 1/5/10, 1430.

CHAIN OF POSSESSION table with columns: RELINQUISHED BY/REMOVED FROM, DATE/TIME, RECEIVED BY/STORED IN, DATE/TIME. Includes handwritten signatures and dates.

SPECIAL INSTRUCTIONS
** The 200 Area S&CRP Characterization and Monitoring Sampling and Analysis GSI applies to this SAF.
(1)VCA - 82509 (TCL); VCA - 82508 (Asst-Dn) (n-Butylbenzene, Trichloroethylbenzene, 1-Butanol, cis-1,2-Dichloroethane, trans-1,2-Dichloroethylene)

ORIGINAL

LABORATORY SECTION RECEIVED BY, TITLE, DATE/TIME
FINAL SAMPLE DISPOSITION DISPOSAL METHOD, DISPOSED BY, DATE/TIME

1-126779-1, January 1993, 201107-2 of 97, 8/93
Page 2 of 2

PO Box 1000 S3-30
Richland, WA 99352
(509) 373-7005
(509) 372-0456

Memorandum

To: Michael Neely
CH2M-HILL PRC
PO Box 1600
Richland, WA 99352

Date: April 30, 2010

From: WSCF Laboratory
WSCF Analytical Chemistry

CC:

Subject: REVISED91060 - 239844 [Report ID: 91060]

Reference: (1) SOW, Mod 2, #36587, Release 3
(2) HNF-SD-CD-QAPP-017, Rev 9, Waste Sampling & Characterization Facility Quality Assurance Plan

This letter contains the following information for sample delivery group WSCF91060

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

Electronically signed by Scot Fitzgerald
For Lab Manager

Attachments 4

REVISED91060 -

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF91060
Data Deliverable Date 10/13/09

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
W09-009	B21LT6	91060001	WATER	09/13/09	09/13/09
W09-007	B210F3	91060002	WATER	09/13/09	09/13/09
W09-009	B21LV7	91060003	WATER	09/13/09	09/13/09
W09-009	B21LT7	91060004	WATER	09/13/09	09/13/09
W09-007	B210F4	91060005	WATER	09/13/09	09/13/09
W09-009	B21LV3	91060006	WATER	09/13/09	09/13/09
W09-009	B21LV4	91060007	WATER	09/13/09	09/13/09
W09-009	B21LV5	91060008	WATER	09/13/09	09/13/09
W09-009	B21LV6	91060009	WATER	09/13/09	09/13/09
W09-009	B21LV8	91060010	WATER	09/13/09	09/13/09
A09-009	B21H95	91060011	WATER	09/13/09	09/13/09
A09-009	B21H97	91060012	WATER	09/13/09	09/13/09
S09-008	B21N00	91060013	WATER	09/13/09	09/13/09
I09-054	B217Y7	91060014	WATER	09/13/09	09/13/09
I09-053	B217P6	91060015	WATER	09/13/09	09/13/09

ATTACHMENT 2

NARRATIVE

Consisting of 5 pages
Including cover page

Attachment 2
Narrative, Rev.1
WSCF91060

P&D Correction – Case Narrative Replaces The Prior Submittal in its Entirety

Introduction

Fifteen (15) groundwater samples were received at the WSCF Laboratory on September 13, 2009. 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), Modification No. 2 to Agreement 36587, Release 3, "FH WSCF ANALYTICAL SERVICES FOR GROUNDWATER."*

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. Additionally, a copy of the completed P&D # WSCF91060 is included with this case narrative.

It should be noted that the attached chain of custody was stamped "ICED" by the WSCF Laboratory Sample Custodian during sample receiving, indicating the presence of ice in the transport container.

The following generic data qualifiers (i.e., B, D, and J) 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 wetchem analyses), as appropriate.
- **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.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

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

All 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):

Attachment 2
Narrative, Rev.1
WSCF91060

- Batch QC analyzed on sample# B21JF8
 - Calcium, Magnesium and Sodium --exceeded spiking levels by a factor of 4. Spike recoveries are not valid. High check standard was analyzed to ensure linearity for those sample results that were greater than the calibration standard.

All other 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 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 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 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 QC controls are within the established limits.

Organic Comments

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

All 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 Neptunium, Technetium & Tritium and Matrix Spike Duplicate applies to Neptunium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

Attachment 2
Narrative, Rev.1
WSCF91060

- Gross Beta – The beta dup is flagged for poor RPD however, since the RPD is only slightly above the limit, and sample mass and duplicate mass are very close, this batch is to be accepted.
- Technetium-99 – Matrix spike is outside the established laboratory range due to insufficient added spike activity compared to the sample's activity.

All other 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 2
Narrative, Rev.1
WSCF91060

Problem and Discrepancy Report

WSCF

SDG WSCF91060

I. The data package has the following issues:

- a) Case narrative, page 5 of 87, Inorganic Comments, Anions -- Please delete case narrative statement "Include analytical notes if applicable" and include analytical notes as appropriate.

Resolution: *Provide correction.*

Lab Response: *Removed statement from narrative.*

- b) The Case narrative, page 7 of 87, Rad Chem Comments -- The comment that "All QC controls are within established limits is not correct. Please correct analytical note.

Resolution: *Provide correction.*

Lab Response: *The statement "All other QC controls are within the established limits." was added to the narrative.*

Please correct the issues and resubmit the hard copy data package.

ATTACHMENT 3
ANALYTICAL RESULTS

Consisting of 70 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 1600
Richland, WA 99352

Attention: Michael Neely

Contract # MOA-FH-CHPRC-2008
Group # WSCF91060
Report Date April 30, 2010

Analytical: Electronically signed by Scot Fitzgerald

Client Services: Electronically signed by Richard Barker

All radiochemistry results are reported on an "as received" basis.

This information is intended for the use of the addressee only. If the reader of this report is not the intended recipient or is not authorized by the recipient to receive the report, you are hereby notified that any dissemination, distribution or copying of this report is strictly prohibited. If you have received this report in error, please notify WSCF Laboratory immediately by telephone at (509) 373-7020 or (509) 531-8004. Information designation of this report is the responsibility of the customer.

REVISED91060 -

Batch QC List

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
63526	64078	1	BLANK	14758	BLANK		ICP-6010 - All possible metals
63526	64078	2	LCS	14759	LCS		ICP-6010 - All possible metals
63526	64078	8	MS	14760	B21JF8(91057007MS)	91057007	ICP-6010 - All possible metals
63526	64078	9	MSD	14761	B21JF8(91057007MSD)	91057007	ICP-6010 - All possible metals
63526	64078	15	SAMPLE	91060001	B21LT6		ICP-6010 - All possible metals
63526	64078	16	SAMPLE	91060002	B210F3		ICP-6010 - All possible metals
63526	64078	17	SAMPLE	91060003	B21LV7		ICP-6010 - All possible metals
63526	64078	18	SAMPLE	91060004	B21LT7		ICP-6010 - All possible metals
63526	64078	19	SAMPLE	91060005	B210F4		ICP-6010 - All possible metals
63526	64078	20	SAMPLE	91060010	B21LV8		ICP-6010 - All possible metals
63737	63737	2	BLANK	14779	BLANK		Anions by Ion Chromatography (Water)
63737	63737	3	LCS	14780	LCS		Anions by Ion Chromatography (Water)
63737	63737	4	DUP	14781	B21L92(91061014DUP)	91061014	Anions by Ion Chromatography (Water)
63737	63737	5	MS	14782	B21L92(91061014MS)	91061014	Anions by Ion Chromatography (Water)
63737	63737	6	MSD	14783	B21L92(91061014MSD)	91061014	Anions by Ion Chromatography (Water)
63737	63737	8	SAMPLE	91060015	B217P6		Anions by Ion Chromatography (Water)
63737	63737	9	SAMPLE	91060014	B217Y7		Anions by Ion Chromatography (Water)
63737	63737	10	SAMPLE	91060014	B217Y7		Anions by Ion Chromatography (Water)
63737	63737	11	SAMPLE	91060010	B21LV8		Anions by Ion Chromatography (Water)
63737	63737	12	SAMPLE	91060004	B21LT7		Anions by Ion Chromatography (Water)
63737	63737	15	SAMPLE	91060005	B210F4		Anions by Ion Chromatography (Water)
63737	63737	16	SAMPLE	91060005	B210F4		Anions by Ion Chromatography (Water)
63901	63902	1	BLANK	15165	BLANK		Total Organic Halides

REVISED91060 -

Batch QC List

REVISION 1

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
63901	63902	2	LCS	15166	LCS		Total Organic Halides
63901	63902	25	MS	15177	B21LV3(91060006MS)	91060006	Total Organic Halides
63901	63902	26	MSD	15178	B21LV3(91060006MSD)	91060006	Total Organic Halides
63901	63902	27	SAMPLE	91060006	B21LV3		Total Organic Halides
63901	63902	28	SAMPLE	91060007	B21LV4		Total Organic Halides
63901	63902	29	SAMPLE	91060008	B21LV5		Total Organic Halides
63901	63902	30	SAMPLE	91060009	B21LV6		Total Organic Halides
63904	63906	1	BLANK	15185	BLANK		Total Organic Halides
63904	63906	2	LCS	15186	LCS		Total Organic Halides
63904	63906	12	MS	15192	B21LK2(91045017MS)	91045017	Total Organic Halides
63904	63906	13	MSD	15193	B21LK2(91045017MSD)	91045017	Total Organic Halides
63904	63906	19	SAMPLE	91060004	B21LT7		Total Organic Halides
64569	64570	1	BLANK	15749	BLANK		ICP-2008 MS All possible metal
64569	64570	2	LCS	15750	LCS		ICP-2008 MS All possible metal
64569	64570	3	SAMPLE	91060011	B21H95		ICP-2008 MS All possible metal
64569	64570	4	SAMPLE	91060012	B21H97		ICP-2008 MS All possible metal
64569	64570	5	SAMPLE	91060015	B217P6		ICP-2008 MS All possible metal
64569	64570	17	MS	15751	B21N68(91099001MS)	91099001	ICP-2008 MS All possible metal
64569	64570	18	MSD	15752	B21N68(91099001MSD)	91099001	ICP-2008 MS All possible metal

REVISED91060 -

Batch QC List

REVISION 1

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF91060

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
63637	63638	1	BLANK	14774	BLANK		SW-846 8260B Volatiles, separate prep
63637	63638	2	LCS	14775	LCS		SW-846 8260B Volatiles, separate prep
63637	63638	3	MS	14776	B21K58(91057008MS)	91057008	SW-846 8260B Volatiles, separate prep
63637	63638	4	MSD	14777	B21K58(91057008MSD)	91057008	SW-846 8260B Volatiles, separate prep
63637	63638	10	SAMPLE	91060013	B21N00		SW-846 8260B Volatiles, separate prep
63637	63638	11	SAMPLE	91060015	B217P6		SW-846 8260B Volatiles, separate prep
63637	63638	12	SAMPLE	91060014	B217Y7		SW-846 8260B Volatiles, separate prep
63637	63638	13	SAMPLE	91060014	B217Y7		SW-846 8260B Volatiles, separate prep

REVISED91060 -

Batch QC List

Attention Michael Neely
 Department Radiochemistry

Group # WSCF91060

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
63739	63846	1	BLANK	14792	BLANK		Tritium by LSC
63739	63846	2	LCS	14793	LCS		Tritium by LSC
63739	63846	4	DUP	14794	B21JB6(91057006DUP)	91057006	Tritium by LSC
63739	63846	5	MS	14795	B21JB6(91057006MS)	91057006	Tritium by LSC
63739	63846	11	SAMPLE	91060005	B210F4		Tritium by LSC
63739	63846	12	SAMPLE	91060011	B21H95		Tritium by LSC
63739	63846	13	SAMPLE	91060012	B21H97		Tritium by LSC
63759	63844	1	BLANK	14888	BLANK		TC99 by Liquid Scintillation
63759	63844	2	LCS	14889	LCS		TC99 by Liquid Scintillation
63759	63844	3	SAMPLE	91060005	B210F4		TC99 by Liquid Scintillation
63759	63844	4	DUP	14890	B210F4(91060005DUP)	91060005	TC99 by Liquid Scintillation
63759	63844	5	MS	14891	B210F4(91060005MS)	91060005	TC99 by Liquid Scintillation
63759	63844	6	SAMPLE	91060011	B21H95		TC99 by Liquid Scintillation
63759	63844	7	SAMPLE	91060012	B21H97		TC99 by Liquid Scintillation
63759	63844	8	SAMPLE	91060015	B217P6		TC99 by Liquid Scintillation
63879	64866	1	BLANK	15111	BLANK		Gross Alpha/Gross Beta
63879	64866	2	LCS	15112	LCS		Gross Alpha/Gross Beta
63879	64866	5	DUP	15113	B21KC4(91058004DUP)	91058004	Gross Alpha/Gross Beta
63879	64866	10	SAMPLE	91060005	B210F4		Gross Alpha/Gross Beta
63879	64866	11	SAMPLE	91060005	B210F4		Gross Alpha/Gross Beta

REVISED91060 -

Batch QC List

Attention Michael Neely
 Department Wet Chemistry

Group # WSCF91060

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
63907	63907	2	BLANK	15202	BLANK		Total Organic Carbon
63907	63907	3	LCS	15203	LCS		Total Organic Carbon
63907	63907	4	MS	15204	B21LD4(91045016MS)	91045016	Total Organic Carbon
63907	63907	5	MSD	15205	B21LD4(91045016MSD)	91045016	Total Organic Carbon
63907	63907	12	SAMPLE	91060004	B21LT7		Total Organic Carbon
63907	63907	13	SAMPLE	91060006	B21LV3		Total Organic Carbon
63907	63907	14	SAMPLE	91060007	B21LV4		Total Organic Carbon
63907	63907	15	SAMPLE	91060008	B21LV5		Total Organic Carbon
63907	63907	17	MS	15207	B21LV6(91060009MS)	91060009	Total Organic Carbon
63907	63907	18	MSD	15208	B21LV6(91060009MSD)	91060009	Total Organic Carbon
63907	63907	19	SAMPLE	91060009	B21LV6		Total Organic Carbon
64045	64045	1	LCS	15414	LCS		Total Alkalinity as mg/L CaCO3 (Water)
64045	64045	2	DUP	15415	B21K16(91058016DUP)	91058016	Total Alkalinity as mg/L CaCO3 (Water)
64045	64045	4	SAMPLE	91060004	B21LT7		Total Alkalinity as mg/L CaCO3 (Water)
64045	64045	5	SAMPLE	91060005	B210F4		Total Alkalinity as mg/L CaCO3 (Water)
64045	64045	6	SAMPLE	91060010	B21LV8		Total Alkalinity as mg/L CaCO3 (Water)

Method Reference

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

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

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

Group # WSCF91060

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 Michael Neely
 Department Radiochemistry

Group # WSCF91060

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

LA-508-415	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
LA-508-421	HEIS	SRTOT_SEP_PRECIP_GPC	Strontium beta isotopic, GPC
	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

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 Michael Neely
 Department Wet Chemistry

Group # WSCF91060

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-344-406	Total Organic Carbon (TOC) Based on SW-846		
	EPA SW-846	9060	Total Organic Carbon
LA-531-411	HEIS	9060_TOC	Total Organic Carbon
	Alkalinity		
	EPA-600/4-79-020	310.1	Alkalinity
	HEIS	2320_ALKALINITY	Alkalinity

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

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060001
 SAF# W09-009
 Sample ID B21LT6

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										09/14/09
ICP-AES										
Iron	7439-89-6	LA-505-411	B	18.9		ug/L	1	18	90	09/23/09
Magnesium	7439-95-4	LA-505-411		12200		ug/L	1	16	80	09/23/09
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Potassium	7440-09-7	LA-505-411		4820		ug/L	1	55	280	09/23/09
Silver	7440-22-4	LA-505-411	U	<5.0		ug/L	1	5.0	25	09/23/09
Sodium	7440-23-5	LA-505-411		16600		ug/L	1	23	120	09/23/09
Antimony	7440-36-0	LA-505-411	U	<38		ug/L	1	38	190	09/23/09
Barium	7440-39-3	LA-505-411		73.4		ug/L	1	4.0	20	09/23/09
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Chromium	7440-47-3	LA-505-411	U	<13		ug/L	1	13	65	09/23/09
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Vanadium	7440-62-2	LA-505-411	B	30.2		ug/L	1	12	60	09/23/09
Zinc	7440-66-6	LA-505-411	B	6.50		ug/L	1	6.0	30	09/23/09
Calcium	7440-70-2	LA-505-411		35200		ug/L	1	39	200	09/23/09
Strontium	7440-24-6	LA-505-411		191		ug/L	1	4.0	20	09/23/09

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

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

U - Analyzed for but not detected above limiting criteria.
 X, Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060001
 SAF# W09-009
 Sample ID B21LT6

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

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	09/23/09

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

B - Analyte < the RDL 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.

REVISED91060 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060002
 SAF# W09-007
 Sample ID B210F3

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										09/14/09
ICP-AES										
Iron	7439-89-6	LA-505-411	U	<18		ug/L	1	18	90	09/23/09
Magnesium	7439-95-4	LA-505-411		24400		ug/L	1	16	80	09/23/09
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Potassium	7440-09-7	LA-505-411		6180		ug/L	1	55	280	09/23/09
Silver	7440-22-4	LA-505-411	U	<5.0		ug/L	1	5.0	25	09/23/09
Sodium	7440-23-5	LA-505-411		52800		ug/L	1	23	120	09/23/09
Antimony	7440-36-0	LA-505-411	U	<38		ug/L	1	38	190	09/23/09
Barium	7440-39-3	LA-505-411		71.1		ug/L	1	4.0	20	09/23/09
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Chromium	7440-47-3	LA-505-411		178		ug/L	1	13	65	09/23/09
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Vanadium	7440-62-2	LA-505-411	B	16.0		ug/L	1	12	60	09/23/09
Zinc	7440-66-6	LA-505-411	U	<6.0		ug/L	1	6.0	30	09/23/09
Calcium	7440-70-2	LA-505-411		76000		ug/L	1	39	200	09/23/09
Strontium	7440-24-6	LA-505-411		328		ug/L	1	4.0	20	09/23/09

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

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

U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060002
 SAF# W09-007
 Sample ID B210F3

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

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	09/23/09

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

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

U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060003
 SAF# W09-009
 Sample ID B21LV7

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										09/14/09
ICP-AES										
Iron	7439-89-6	LA-505-411	U	<18		ug/L	1	18	90	09/23/09
Magnesium	7439-95-4	LA-505-411		13000		ug/L	1	16	80	09/23/09
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Potassium	7440-09-7	LA-505-411		4100		ug/L	1	55	280	09/23/09
Silver	7440-22-4	LA-505-411	U	<5.0		ug/L	1	5.0	25	09/23/09
Sodium	7440-23-5	LA-505-411		10200		ug/L	1	23	120	09/23/09
Antimony	7440-36-0	LA-505-411	U	<38		ug/L	1	38	190	09/23/09
Barium	7440-39-3	LA-505-411		33.7		ug/L	1	4.0	20	09/23/09
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Chromium	7440-47-3	LA-505-411	U	<13		ug/L	1	13	65	09/23/09
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Vanadium	7440-62-2	LA-505-411	B	16.7		ug/L	1	12	60	09/23/09
Zinc	7440-66-6	LA-505-411	U	<6.0		ug/L	1	6.0	30	09/23/09
Calcium	7440-70-2	LA-505-411		42000		ug/L	1	39	200	09/23/09
Strontium	7440-24-6	LA-505-411		162		ug/L	1	4.0	20	09/23/09

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

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

U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060003
 SAF# W09-009
 Sample ID B21LV7

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

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	09/23/09

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

B - Analyte < the RDL 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.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060004
 SAF# W09-009
 Sample ID B21LT7

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										09/14/09
Anions by IC										
Fluoride	16984-48-8	LA-533-410	BD	0.204		ug/mL	2	0.060	0.40	09/14/09
Chloride	16887-00-6	LA-533-410	D	10.4		ug/mL	2	0.086	0.80	09/14/09
Nitrite-N	NO2-N	LA-533-410	UD	<0.036		ug/mL	2	0.036	0.20	09/14/09
Nitrate-N	NO3-N	LA-533-410	D	4.69		ug/mL	2	0.062	0.20	09/14/09
Sulfate	14808-79-8	LA-533-410	D	24.1		ug/mL	2	0.13	2.0	09/14/09
ICP Prep										09/14/09
ICP-AES										
Iron	7439-89-6	LA-505-411	B	44.7		ug/L	1	18	90	09/23/09
Magnesium	7439-95-4	LA-505-411		12200		ug/L	1	16	80	09/23/09
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Potassium	7440-09-7	LA-505-411		4800		ug/L	1	55	280	09/23/09
Silver	7440-22-4	LA-505-411	U	<5.0		ug/L	1	5.0	25	09/23/09
Sodium	7440-23-5	LA-505-411		16600		ug/L	1	23	120	09/23/09
Antimony	7440-36-0	LA-505-411	U	<38		ug/L	1	38	190	09/23/09
Barium	7440-39-3	LA-505-411		74.8		ug/L	1	4.0	20	09/23/09
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09

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

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

U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060004
 SAF# W09-009
 Sample ID B21LT7

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Chromium	7440-47-3	LA-505-411	U	<13		ug/L	1	13	65	09/23/09
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Vanadium	7440-62-2	LA-505-411	B	27.8		ug/L	1	12	60	09/23/09
Zinc	7440-66-6	LA-505-411	U	<6.0		ug/L	1	6.0	30	09/23/09
Calcium	7440-70-2	LA-505-411		34200		ug/L	1	39	200	09/23/09
Strontium	7440-24-6	LA-505-411		191		ug/L	1	4.0	20	09/23/09
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
TOX										09/14/09
TOX										
Total Organic Halides	59473-04-0	LA-523-444	U	<5.0		ug/L	1	5.0	15	09/14/09

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

B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary dilution factor.
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 X,Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060005
 SAF# W09-007
 Sample ID B210F4

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										09/14/09
Anions by IC										
Fluoride	16984-48-8	LA-533-410	D	1.19		ug/mL	2	0.060	0.40	09/14/09
Chloride	16887-00-6	LA-533-410	D	48.6		ug/mL	10	0.43	4.0	09/14/09
Nitrite-N	NO2-N	LA-533-410	UD	<0.036		ug/mL	2	0.036	0.20	09/14/09
Nitrate-N	NO3-N	LA-533-410	D	37.9		ug/mL	10	0.31	1.0	09/14/09
Sulfate	14808-79-8	LA-533-410	D	77.9		ug/mL	2	0.13	2.0	09/14/09
ICP Prep										09/14/09
ICP-AES										
Iron	7439-89-6	LA-505-411	U	<18		ug/L	1	18	90	09/23/09
Magnesium	7439-95-4	LA-505-411		24000		ug/L	1	16	80	09/23/09
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Potassium	7440-09-7	LA-505-411		6040		ug/L	1	55	280	09/23/09
Silver	7440-22-4	LA-505-411	U	<5.0		ug/L	1	5.0	25	09/23/09
Sodium	7440-23-5	LA-505-411		51300		ug/L	1	23	120	09/23/09
Antimony	7440-36-0	LA-505-411	U	<38		ug/L	1	38	190	09/23/09
Barium	7440-39-3	LA-505-411		70.3		ug/L	1	4.0	20	09/23/09
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09

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

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

U - Analyzed for but not detected above limiting criteria.
 X, Y or Z - See comment detail and/or narrative.

REVISED91060 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060005
 SAF# W09-007
 Sample ID B210F4

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Chromium	7440-47-3	LA-505-411		181		ug/L	1	13	65	09/23/09
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Vanadium	7440-62-2	LA-505-411	B	17.9		ug/L	1	12	60	09/23/09
Zinc	7440-66-6	LA-505-411	U	<6.0		ug/L	1	6.0	30	09/23/09
Calcium	7440-70-2	LA-505-411		73200		ug/L	1	39	200	09/23/09
Strontium	7440-24-6	LA-505-411		320		ug/L	1	4.0	20	09/23/09
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09

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

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

U - Analyzed for but not detected above limiting criteria.
 X, Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060006
 SAF# W09-009
 Sample ID B21LV3

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TOX										09/14/09
TOX										
Total Organic Halides	59473-04-0	LA-523-444		27.9		ug/L	1	5.0	15	09/14/09

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

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

U - Analyzed for but not detected above limiting criteria.
 X, Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060007
 SAF# W09-009
 Sample ID B21LV4

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TOX										09/14/09
TOX										
Total Organic Halides	59473-04-0	LA-523-444		27.5		ug/L	1	5.0	15	09/14/09

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

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

U - Analyzed for but not detected above limiting criteria.
 X, Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060008
 SAF# W09-009
 Sample ID B21LV5

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TOX										09/14/09
TOX										
Total Organic Halides	59473-04-0	LA-523-444		27.6		ug/L	1	5.0	15	09/14/09

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

B - Analyte < the RDL 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.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060009
 SAF# W09-009
 Sample ID B21LV6

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TOX										09/14/09
TOX										
Total Organic Halides	59473-04-0	LA-523-444		27.7		ug/L	1	5.0	15	09/14/09

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

B - Analyte < the RDL 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.

REVISED91060 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060010
 SAF# W09-009
 Sample ID B21LV8

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										09/14/09
Anions by IC										
Fluoride	16984-48-8	LA-533-410	BD	0.201		ug/mL	2	0.060	0.40	09/14/09
Chloride	16887-00-6	LA-533-410	D	18.8		ug/mL	2	0.086	0.80	09/14/09
Nitrite-N	NO2-N	LA-533-410	UD	<0.036		ug/mL	2	0.036	0.20	09/14/09
Nitrate-N	NO3-N	LA-533-410	D	5.89		ug/mL	2	0.062	0.20	09/14/09
Sulfate	14808-79-8	LA-533-410	D	34.1		ug/mL	2	0.13	2.0	09/14/09
ICP Prep										09/14/09
ICP-AES										
Iron	7439-89-6	LA-505-411	B	82.2		ug/L	1	18	90	09/23/09
Magnesium	7439-95-4	LA-505-411		13000		ug/L	1	16	80	09/23/09
Manganese	7439-96-5	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Potassium	7440-09-7	LA-505-411		4100		ug/L	1	55	280	09/23/09
Silver	7440-22-4	LA-505-411	U	<5.0		ug/L	1	5.0	25	09/23/09
Sodium	7440-23-5	LA-505-411		10400		ug/L	1	23	120	09/23/09
Antimony	7440-36-0	LA-505-411	U	<38		ug/L	1	38	190	09/23/09
Barium	7440-39-3	LA-505-411		34.3		ug/L	1	4.0	20	09/23/09
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09

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

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

U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060010
 SAF# W09-009
 Sample ID B21LV8

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Chromium	7440-47-3	LA-505-411	U	<13		ug/L	1	13	65	09/23/09
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09
Vanadium	7440-62-2	LA-505-411	B	22.2		ug/L	1	12	60	09/23/09
Zinc	7440-66-6	LA-505-411	U	<6.0		ug/L	1	6.0	30	09/23/09
Calcium	7440-70-2	LA-505-411		42300		ug/L	1	39	200	09/23/09
Strontium	7440-24-6	LA-505-411		162		ug/L	1	4.0	20	09/23/09
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	09/23/09

MDL = Minimum Detection
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REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060011
 SAF# A09-009
 Sample ID B21H95

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep										09/29/09
ICP-MS										
Uranium	7440-61-1	LA-505-412		0.905		ug/L	1	0.050	0.20	09/29/09

MDL = Minimum Detection
 RQ = Result Qualifier
 TP Err = Total Propagated
 DF = Dilution Factor
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B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary dilution factor.
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 N - MS and/or MSD recovery outside control limits.

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

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060012
 SAF# A09-009
 Sample ID B21H97

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICPMS Prep										09/29/09
ICP-MS										
Uranium	7440-61-1	LA-505-412		0.715		ug/L	1	0.050	0.20	09/29/09

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

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

U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060014
 SAF# I09-054
 Sample ID B217Y7

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										09/14/09
Anions by IC										
Fluoride	16984-48-8	LA-533-410	BD	0.187		ug/mL	2	0.060	0.40	09/14/09
Chloride	16887-00-6	LA-533-410	D	53.4		ug/mL	10	0.43	4.0	09/14/09
Nitrite-N	NO2-N	LA-533-410	UD	<0.036		ug/mL	2	0.036	0.20	09/14/09
Nitrate-N	NO3-N	LA-533-410	D	15.0		ug/mL	10	0.31	1.0	09/14/09
Sulfate	14808-79-8	LA-533-410	D	54.5		ug/mL	2	0.13	2.0	09/14/09

MDL = Minimum Detection
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 TP Err = Total Propagated
 DF = Dilution Factor
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 N - MS and/or MSD recovery outside control limits.

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

REVISED91060 -

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Sample # 91060015
 SAF# I09-053
 Sample ID B217P6

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										09/14/09
Anions by IC										
Fluoride	16984-48-8	LA-533-410	BD	0.195		ug/mL	2	0.060	0.40	09/14/09
Chloride	16887-00-6	LA-533-410	D	35.6		ug/mL	2	0.086	0.80	09/14/09
Nitrite-N	NO2-N	LA-533-410	UD	<0.036		ug/mL	2	0.036	0.20	09/14/09
Nitrate-N	NO3-N	LA-533-410	D	2.38		ug/mL	2	0.062	0.20	09/14/09
Sulfate	14808-79-8	LA-533-410	D	52.9		ug/mL	2	0.13	2.0	09/14/09
ICPMS Prep										09/29/09
ICP-MS										
Uranium	7440-61-1	LA-505-412		0.912		ug/L	1	0.050	0.20	09/29/09

MDL = Minimum Detection
 RQ = Result Qualifier
 TP Err = Total Propagated
 DF = Dilution Factor
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B - Analyte < the RDL but >= the IDL/MDL. (Inorganic)
 C - Analyte was found in the Associated Blank. (Inorganic)
 D - Analyte was reported at a secondary dilution factor.
 E - Analyte is an estimate, see comment section.
 N - MS and/or MSD recovery outside control limits.

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REVISED91060 -

WSCF Analytical Results Report

REVISION 1

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF91060

Sample # 91060013
 SAF# S09-008
 Sample ID B21N00

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8260 Prep										09/14/09
SW-846 8260B										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Carbon tetrachloride	56-23-5	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Chloroform	67-66-3	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Methylene chloride	75-09-2	LA-523-455	J	3.9		ug/L	1	1	5	09/15/09

MDL = Minimum Detection
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B - Analyte was detected in both the BLANK and SAMPLE
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 U - Analyzed for but not detected above limiting criteria.
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REVISED91060 -

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF91060

Sample # 91060013
 SAF# S09-008
 Sample ID B21N00

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

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	09/15/09
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	09/15/09
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	09/15/09
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	09/15/09
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	09/15/09

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REVISED91060 -

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF91060

Sample # 91060014
 SAF# I09-054
 Sample ID B217Y7

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8260 Prep										09/14/09
SW-846 8260B										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Carbon tetrachloride	56-23-5	LA-523-455		530		ug/L	1	10	50	09/16/09
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Chloroform	67-66-3	LA-523-455		5.1		ug/L	1	1	5	09/15/09
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	09/15/09

MDL = Minimum Detection
 RQ = Result Qualifier
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B - Analyte was detected in both the BLANK and SAMPLE
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 U - Analyzed for but not detected above limiting criteria.
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REVISED91060 -

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF91060

Sample # 91060014
 SAF# I09-054
 Sample ID B217Y7

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

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	09/15/09
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	09/15/09
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	09/15/09
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	09/15/09
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	09/15/09

MDL = Minimum Detection
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 DF = Dilution Factor
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REVISED91060 -

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF91060

Sample # 91060015
 SAF# I09-053
 Sample ID B217P6

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
8260 Prep										09/14/09
SW-846 8260B										
1,1-Dichloroethene	75-35-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Trichloroethene	79-01-6	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Benzene	71-43-2	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Toluene	108-88-3	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Chlorobenzene	108-90-7	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1,1-Dichloroethane	75-34-3	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Ethylbenzene	100-41-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1,2-Dichloroethane	107-06-2	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Methyl isobutyl ketone	108-10-1	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Tetrachloroethene	127-18-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Total Xylenes	1330-20-7	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Carbon tetrachloride	56-23-5	LA-523-455		100		ug/L	1	1	5	09/15/09
Acetone	67-64-1	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Chloroform	67-66-3	LA-523-455	J	3.4		ug/L	1	1	5	09/15/09
1,1,1-Trichloroethane	71-55-6	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Vinyl chloride	75-01-4	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Methylene chloride	75-09-2	LA-523-455	U	<1		ug/L	1	1	5	09/15/09

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REVISED91060 -

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF91060

Sample # 91060015
 SAF# I09-053
 Sample ID B217P6

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

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	09/15/09
Methyl ethyl ketone	78-93-3	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1,1,2-Trichloroethane	79-00-5	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
1-Butanol	71-36-3	LA-523-455	U	<100		ug/L	1	100	500	09/15/09
Tetrahydrofuran	109-99-9	LA-523-455	U	<2		ug/L	1	2	10	09/15/09
trans-1,2-Dichloroethene	156-60-5	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
cis-1,2-Dichloroethene	156-59-2	LA-523-455	U	<1		ug/L	1	1	5	09/15/09
Propionitrile	107-12-0	LA-523-455	U	<2		ug/L	1	2	10	09/15/09
1,4-Dichlorobenzene	106-46-7	LA-523-455	U	<1		ug/L	1	1	5	09/15/09

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

B - Analyte was detected in both the BLANK and SAMPLE
 D - Analyte was reported at a secondary dilution factor.
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 J - Analyte < lowest calibration but >= MDL.
 N - Presumptive compound based on MS Library search.

T - MS and/or MSD sample recovery outside control limits.
 U - Analyzed for but not detected above limiting criteria.
 X,Y or Z - See comment detail and/or narrative.
 T - MS and/or MSD sample recovery outside control limits.

REVISED91060 -

Attention Michael Neely
 Department Radiochemistry

Group # WSCF91060

Sample # 91060005
 SAF# W09-007
 Sample ID B210F4

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										10/01/09
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415	U	0.92	1.7	pCi/L	1	3.0		10/06/09
Gross Beta	12587-47-2	LA-508-415		2000	200	pCi/L	1	6.1		10/06/09
H3 EICHROM										09/15/09
TRI-CARB LSC										
Tritium	10028-17-8	LA-508-421		3.4E5	67000	pCi/L	1	250		09/29/09
Tc-99										09/15/09
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421		3700	740	pCi/L	1	8.9		09/21/09

MDL = Minimum Detection
 RQ = Result Qualifier
 TP Err = Total Propagated
 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.

REVISED91060 -

Attention Michael Neely
 Department Radiochemistry

Group # WSCF91060

Sample # 91060011
 SAF# A09-009
 Sample ID B21H95

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
H3 EICHROM										09/15/09
TRI-CARB LSC										
Tritium	10028-17-8	LA-508-421	U	-160	140	pCi/L	1	250		09/29/09
Tc-99										09/15/09
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	-8.1	5.4	pCi/L	1	8.9		09/21/09

MDL = Minimum Detection
 RQ = Result Qualifier
 TP Err = Total Propagated
 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.

REVISED91060 -

Attention Michael Neely
 Department Radiochemistry

Group # WSCF91060

Sample # 91060012
 SAF# A09-009
 Sample ID B21H97

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
H3 EICHROM										09/15/09
TRI-CARB LSC										
Tritium	10028-17-8	LA-508-421	U	11	160	pCi/L	1	250		09/29/09
Tc-99										09/15/09
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	0.70	5.4	pCi/L	1	8.9		09/21/09

MDL = Minimum Detection
 RQ = Result Qualifier
 TP Err = Total Propagated
 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.

REVISED91060 -

Attention Michael Neely
 Department Radiochemistry

Group # WSCF91060

Sample # 91060015
 SAF# 109-053
 Sample ID B217P6

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Tc-99										09/15/09
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	-5.8	5.4	pCi/L	1	8.9		09/21/09

MDL = Minimum Detection
 RQ = Result Qualifier
 TP Err = Total Propagated
 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.

REVISED91060 -

Attention Michael Neely
 Department Wet Chemistry

Group # WSCF91060

Sample # 91060004
 SAF# W09-009
 Sample ID B21LT7

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										09/21/09
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		130		mg/L	1	1	10	09/21/09
TOC										09/18/09
TOC										
Total Organic Carbon	TOC	LA-344-406	U	<0.30		mg/L	1	0.30	1.0	09/18/09

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

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

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Wet Chemistry

Group # WSCF91060

Sample # 91060005
 SAF# W09-007
 Sample ID B210F4

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										09/21/09
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		120		mg/L	1	1	10	09/21/09

MDL = Minimum Detection
 RQ = Result Qualifier
 TP Err = Total Propagated
 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.

REVISED91060 -

Attention Michael Neely
 Department Wet Chemistry

Group # WSCF91060

Sample # 91060006
 SAF# W09-009
 Sample ID B21LV3

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TOC										09/18/09
Total Organic Carbon	TOC	LA-344-406	B	0.486		mg/L	1	0.30	1.0	09/18/09

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

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

N - Spike Recovery is Outside Control Limits.
 X,Y or Z - See comment detail and/or narrative.

REVISED91060 -

Attention Michael Neely
 Department Wet Chemistry

Group # WSCF91060

Sample # 91060007
 SAF# W09-009
 Sample ID B21LV4

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TOC										09/18/09
Total Organic Carbon	TOC	LA-344-406	B	0.481		mg/L	1	0.30	1.0	09/18/09

MDL = Minimum Detection
 RQ = Result Qualifier
 TP Err = Total Propagated
 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.

REVISED91060 -

Attention Michael Neely
 Department Wet Chemistry

Group # WSCF91060

Sample # 91060008
 SAF# W09-009
 Sample ID B21LV5

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TOC										09/18/09
Total Organic Carbon	TOC	LA-344-406	B	0.517		mg/L	1	0.30	1.0	09/18/09

MDL = Minimum Detection
 RQ = Result Qualifier
 TP Err = Total Propagated
 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.

REVISED91060 -

Attention Michael Neely
 Department Wet Chemistry

Group # WSCF91060

Sample # 91060009
 SAF# W09-009
 Sample ID B21LV6

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
TOC										09/18/09
Total Organic Carbon	TOC	LA-344-406	B	0.410		mg/L	1	0.30	1.0	09/18/09

MDL = Minimum Detection
 RQ = Result Qualifier
 TP Err = Total Propagated
 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.

REVISED91060 -

Attention Michael Neely
 Department Wet Chemistry

Group # WSCF91060

Sample # 91060010
 SAF# W09-009
 Sample ID B21LV8

Matrix WATER
 Sampled 09/13/09
 Received 09/13/09

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										09/21/09
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		110		mg/L	1	1	10	09/21/09

MDL = Minimum Detection
 RQ = Result Qualifier
 TP Err = Total Propagated
 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.

REVISED91060 -

Quality Control Report

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

QC Batch 63526 Test ICP-6010 - All possible metals
 Associated Samples 91060001, 91060002, 91060003, 91060004, 91060005, 91060010

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #14758								
Iron	7439-89-6	<18		ug/L					U	09/23/09
Magnesium	7439-95-4	<16		ug/L					U	09/23/09
Manganese	7439-96-5	<4.0		ug/L					U	09/23/09
Nickel	7440-02-0	<4.0		ug/L					U	09/23/09
Potassium	7440-09-7	<55		ug/L					U	09/23/09
Silver	7440-22-4	<5.0		ug/L					U	09/23/09
Sodium	7440-23-5	<23		ug/L					U	09/23/09
Antimony	7440-36-0	<38		ug/L					U	09/23/09
Barium	7440-39-3	<4.0		ug/L					U	09/23/09
Cadmium	7440-43-9	<4.0		ug/L					U	09/23/09
Chromium	7440-47-3	<13		ug/L					U	09/23/09
Cobalt	7440-48-4	<4.0		ug/L					U	09/23/09
Copper	7440-50-8	<4.0		ug/L					U	09/23/09
Vanadium	7440-62-2	<12		ug/L					U	09/23/09
Zinc	7440-66-6	<6.0		ug/L					U	09/23/09
Calcium	7440-70-2	<39		ug/L					U	09/23/09
Strontium	7440-24-6	<4.0		ug/L					U	09/23/09
Beryllium	7440-41-7	<4.0		ug/L					U	09/23/09

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Quality Control Report

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS		QC Sample #14759								
Iron	7439-89-6	994	994	ug/L	99.4	80 - 120				09/23/09
Magnesium	7439-95-4	964	964	ug/L	96.4	80 - 120				09/23/09
Manganese	7439-96-5	1000	1000	ug/L	100.5	80 - 120				09/23/09
Nickel	7440-02-0	991	991	ug/L	99.1	80 - 120				09/23/09
Potassium	7440-09-7	9920	9920	ug/L	99.2	80 - 120				09/23/09
Silver	7440-22-4	977	977	ug/L	97.7	80 - 120				09/23/09
Sodium	7440-23-5	1060	1060	ug/L	105.8	80 - 120				09/23/09
Antimony	7440-36-0	970	970	ug/L	97	80 - 120				09/23/09
Barium	7440-39-3	479	479	ug/L	95.8	80 - 120				09/23/09
Cadmium	7440-43-9	982	982	ug/L	98.2	80 - 120				09/23/09
Chromium	7440-47-3	1020	1020	ug/L	101.7	80 - 120				09/23/09
Cobalt	7440-48-4	986	986	ug/L	98.6	80 - 120				09/23/09
Copper	7440-50-8	995	995	ug/L	99.5	80 - 120				09/23/09
Vanadium	7440-62-2	974	974	ug/L	97.4	80 - 120				09/23/09
Zinc	7440-66-6	997	997	ug/L	99.7	80 - 120				09/23/09
Calcium	7440-70-2	1020	1020	ug/L	102.2	80 - 120				09/23/09
Strontium	7440-24-6	510	510	ug/L	102	80 - 120				09/23/09
Beryllium	7440-41-7	528	528	ug/L	105.7	80 - 120				09/23/09
MS		QC Sample #14760								
		Original 91057007								
Iron	7439-89-6	974	974	ug/L	97.4	75 - 125				09/23/09
Magnesium	7439-95-4	1000	1000	ug/L	100	75 - 125			1X	09/23/09
Manganese	7439-96-5	986	986	ug/L	98.6	75 - 125				09/23/09

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Quality Control Report

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Nickel	7440-02-0		965	ug/L	96.5	75 - 125				09/23/09
Potassium	7440-09-7		9860	ug/L	98.6	75 - 125				09/23/09
Silver	7440-22-4		964	ug/L	96.4	75 - 125				09/23/09
Sodium	7440-23-5		1020	ug/L	101.5	75 - 125			2X	09/23/09
Antimony	7440-36-0		970	ug/L	97	75 - 125				09/23/09
Barium	7440-39-3		477	ug/L	95.4	75 - 125				09/23/09
Cadmium	7440-43-9		976	ug/L	97.6	75 - 125				09/23/09
Chromium	7440-47-3		994	ug/L	99.4	75 - 125				09/23/09
Cobalt	7440-48-4		955	ug/L	95.5	75 - 125				09/23/09
Copper	7440-50-8		979	ug/L	97.9	75 - 125				09/23/09
Vanadium	7440-62-2		972	ug/L	97.2	75 - 125				09/23/09
Zinc	7440-66-6		986	ug/L	98.6	75 - 125				09/23/09
Calcium	7440-70-2		1140	ug/L	114	75 - 125			3X	09/23/09
Strontium	7440-24-6		510	ug/L	101.9	75 - 125				09/23/09
Beryllium	7440-41-7		518	ug/L	103.6	75 - 125				09/23/09
MSD			QC Sample #14761							
			Original	91057007					Paired	14760
Iron	7439-89-6		925	ug/L	92.5	75 - 125	5.20	20		09/23/09
Magnesium	7439-95-4		630	ug/L	63	75 - 125	45.40	20	* 1X	09/23/09
Manganese	7439-96-5		938	ug/L	93.8	75 - 125	5.00	20		09/23/09
Nickel	7440-02-0		916	ug/L	91.6	75 - 125	5.20	20		09/23/09
Potassium	7440-09-7		9490	ug/L	94.9	75 - 125	3.80	20		09/23/09
Silver	7440-22-4		947	ug/L	94.7	75 - 125	1.80	20		09/23/09
Sodium	7440-23-5		806	ug/L	80.6	75 - 125	23.00	20	* 2X	09/23/09
Antimony	7440-36-0		918	ug/L	91.8	75 - 125	5.50	20		09/23/09

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Quality Control Report

REVISION 1

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Analyte	CAS #	Original Found	QC Found	Units	% RecovLimits	RPD	RPD Limit	RQ	Analyzed
Barium	7440-39-3		457	ug/L	91.3 75 - 125	4.40	20		09/23/09
Cadmium	7440-43-9		934	ug/L	93.4 75 - 125	4.40	20		09/23/09
Chromium	7440-47-3		954	ug/L	95.4 75 - 125	4.10	20		09/23/09
Cobalt	7440-48-4		908	ug/L	90.8 75 - 125	5.00	20		09/23/09
Copper	7440-50-8		930	ug/L	93 75 - 125	5.10	20		09/23/09
Vanadium	7440-62-2		935	ug/L	93.5 75 - 125	3.90	20		09/23/09
Zinc	7440-66-6		938	ug/L	93.8 75 - 125	5.00	20		09/23/09
Calcium	7440-70-2		-700	ug/L	-70 75 - 125	836.40	20	* 3X	09/23/09
Strontium	7440-24-6		477	ug/L	95.5 75 - 125	6.50	20		09/23/09
Beryllium	7440-41-7		492	ug/L	98.5 75 - 125	5.00	20		09/23/09

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF91060

QC Batch 63637 Test SW-846 8260B Volatiles, separate prep
 Associated Samples 91060013, 91060014, 91060015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #14774								
1,1-Dichloroethene	75-35-4	<1		ug/L					U	09/14/09
Trichloroethene	79-01-6	<1		ug/L					U	09/14/09
Benzene	71-43-2	<1		ug/L					U	09/14/09
Toluene	108-88-3	<1		ug/L					U	09/14/09
Chlorobenzene	108-90-7	<1		ug/L					U	09/14/09
1,1-Dichloroethane	75-34-3	<1		ug/L					U	09/14/09
Ethylbenzene	100-41-4	<1		ug/L					U	09/14/09
1,2-Dichloroethane	107-06-2	<1		ug/L					U	09/14/09
Methyl isobutyl ketone	108-10-1	<1		ug/L					U	09/14/09
Tetrachloroethene	127-18-4	<1		ug/L					U	09/14/09
Total Xylenes	1330-20-7	<1		ug/L					U	09/14/09
Carbon tetrachloride	56-23-5	<1		ug/L					U	09/14/09
Acetone	67-64-1	<1		ug/L					U	09/14/09
Chloroform	67-66-3	<1		ug/L					U	09/14/09
1,1,1-Trichloroethane	71-55-6	<1		ug/L					U	09/14/09
Vinyl chloride	75-01-4	<1		ug/L					U	09/14/09
Methylene chloride	75-09-2	<1		ug/L					U	09/14/09
Carbon disulfide	75-15-0	<1		ug/L					U	09/14/09
Methyl ethyl ketone	78-93-3	<1		ug/L					U	09/14/09

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Quality Control Report

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF91060

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
1,1,2-Trichloroethane	79-00-5		<1	ug/L					U	09/14/09
1-Butanol	71-36-3		<100	ug/L					U	09/14/09
Tetrahydrofuran	109-99-9		<2	ug/L					U	09/14/09
trans-1,2-Dichloroethene	156-60-5		<1	ug/L					U	09/14/09
cis-1,2-Dichloroethene	156-59-2		<1	ug/L					U	09/14/09
Propionitrile	107-12-0		<2	ug/L					U	09/14/09
1,4-Dichlorobenzene	106-46-7		<1	ug/L					U	09/14/09
LCS			QC Sample #14775							
1,1-Dichloroethene	75-35-4		20	ug/L	78.4	75 - 125				09/14/09
Trichloroethene	79-01-6		20	ug/L	80.2	75 - 125				09/14/09
Benzene	71-43-2		23	ug/L	91.1	75 - 125				09/14/09
Toluene	108-88-3		23	ug/L	91.7	75 - 125				09/14/09
Chlorobenzene	108-90-7		24	ug/L	96	75 - 125				09/14/09
MS			QC Sample #14776							
			Original 91057008							
1,1-Dichloroethene	75-35-4		20	ug/L	80.2	75 - 125				09/14/09
Trichloroethene	79-01-6		20	ug/L	81.5	75 - 125				09/14/09
Benzene	71-43-2		22	ug/L	87.1	75 - 125				09/14/09
Toluene	108-88-3		22	ug/L	86.2	75 - 125				09/14/09
Chlorobenzene	108-90-7		23	ug/L	91	75 - 125				09/14/09
MSD			QC Sample #14777							
			Original 91057008							
			Paired 14776							
1,1-Dichloroethene	75-35-4		19	ug/L	75.4	75 - 125	6.20	20		09/15/09
Trichloroethene	79-01-6		20	ug/L	78.8	75 - 125	3.40	20		09/15/09

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Quality Control Report

REVISION 1

Attention Michael Neely
Department Organic, Volatiles

Group # WSCF91060

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Benzene	71-43-2		21	ug/L	85	75 - 125	2.40	20		09/15/09
Toluene	108-88-3		21	ug/L	84.3	75 - 125	2.20	20		09/15/09
Chlorobenzene	108-90-7		22	ug/L	89.2	75 - 125	2.00	20		09/15/09

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

QC Batch 63737 Test Anions by Ion Chromatography (Water)
 Associated Samples 91060004, 91060005, 91060010, 91060014, 91060015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #14779								
Fluoride	16984-48-8		<0.030	ug/mL					U	09/14/09
Chloride	16887-00-6		<0.043	ug/mL					U	09/14/09
Nitrite-N	NO2-N		<0.018	ug/mL					U	09/14/09
Nitrate-N	NO3-N		<0.031	ug/mL					U	09/14/09
Sulfate	14808-79-8		<0.066	ug/mL					U	09/14/09
LCS		QC Sample #14780								
Fluoride	16984-48-8		0.943	ug/mL	94.3	90 - 110				09/14/09
Chloride	16887-00-6		1.99	ug/mL	102	90 - 110				09/14/09
Nitrite-N	NO2-N		1.01	ug/mL	103	90 - 110				09/14/09
Nitrate-N	NO3-N		0.899	ug/mL	102	90 - 110				09/14/09
Sulfate	14808-79-8		4.00	ug/mL	102	90 - 110				09/14/09
DUP		QC Sample #14781								
		Original 91061014								
Fluoride	16984-48-8		<0.060	ug/mL			0.00	20	UD	09/14/09
Chloride	16887-00-6		<0.086	ug/mL			0.00	20	UD	09/14/09
Nitrite-N	NO2-N		<0.036	ug/mL			0.00	20	UD	09/14/09
Nitrate-N	NO3-N		<0.062	ug/mL			0.00	20	UD	09/14/09
Sulfate	14808-79-8		<0.13	ug/mL			0.00	20	UD	09/14/09

REVISED91060 -

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
MS		QC Sample #14782								
		Original 91061014								
Fluoride	16984-48-8		0.898	ug/mL	88.9	80 - 120			D	09/14/09
Chloride	16887-00-6		2.01	ug/mL	102.1	80 - 120			D	09/14/09
Nitrite-N	NO2-N		0.977	ug/mL	98.8	80 - 120			D	09/14/09
Nitrate-N	NO3-N		0.903	ug/mL	101.4	80 - 120			D	09/14/09
Sulfate	14808-79-8		3.97	ug/mL	100.2	80 - 120			D	09/14/09
MSD		QC Sample #14783								
		Original 91061014								
		Paired 14782								
Fluoride	16984-48-8		0.900	ug/mL	89.1	80 - 120	0.20	20	D	09/14/09
Chloride	16887-00-6		2.00	ug/mL	101.5	80 - 120	0.60	20	D	09/14/09
Nitrite-N	NO2-N		0.979	ug/mL	99	80 - 120	0.20	20	D	09/14/09
Nitrate-N	NO3-N		0.947	ug/mL	106.4	80 - 120	4.80	20	D	09/14/09
Sulfate	14808-79-8		3.91	ug/mL	98.8	80 - 120	1.40	20	D	09/14/09

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

QC Batch 63901 Test Total Organic Halides
 Associated Samples 91060006, 91060007, 91060008, 91060009

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			QC Sample #15165							
Total Organic Halides LCS	59473-04-0		<5.0	ug/L					U	09/14/09
			QC Sample #15166							
Total Organic Halides MS	59473-04-0		391	mg/L	97.8	80 - 120				09/14/09
			QC Sample #15177							
			Original 91060006							
Total Organic Halides MSD	59473-04-0	27.9	41.6	ug/L	103.9	75 - 125				09/14/09
			QC Sample #15178							
			Original 91060006							
Total Organic Halides	59473-04-0	27.9	41.2	ug/L	103	75 - 125	0.90	20	Paired 15177	09/14/09

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

QC Batch 63904 Test Total Organic Halides
 Associated Samples 91060004

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			QC Sample #15185							
Total Organic Halides LCS	59473-04-0		<5.0	ug/L					U	09/14/09
			QC Sample #15186							
Total Organic Halides MS	59473-04-0		404	mg/L	101	80 - 120				09/14/09
			QC Sample #15192 Original 91045017							
Total Organic Halides MSD	59473-04-0		39.2	ug/L	97.9	75 - 125				09/14/09
			QC Sample #15193 Original 91045017						Paired 15192	
Total Organic Halides	59473-04-0		39.3	ug/L	98.2	75 - 125	0.30	20		09/14/09

REVISED91060 -

Quality Control Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF91060

QC Batch 63907 Test Total Organic Carbon
Associated Samples 91060004, 91060006, 91060007, 91060008, 91060009

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
			QC Sample #15202							
Total Organic Carbon LCS	TOC		<0.045	mg/L					U	09/18/09
			QC Sample #15203							
Total Organic Carbon MS	TOC		2.01	mg/L	100.4	80 - 120				09/18/09
			QC Sample #15204 Original 91045016							
Total Organic Carbon MSD	TOC		2.14	mg/L	107.2	75 - 125				09/18/09
			QC Sample #15205 Original 91045016							
Total Organic Carbon MS	TOC		2.09	mg/L	104.3	75 - 125	2.70	20	Paired 15204	09/18/09
			QC Sample #15207 Original 91060009							
Total Organic Carbon MSD	TOC	0.410	2.08	mg/L	104.1	75 - 125				09/18/09
			QC Sample #15208 Original 91060009							
Total Organic Carbon	TOC	0.410	2.08	mg/L	104	75 - 125	0.10	20	Paired 15207	09/18/09

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Wet Chemistry

Group # WSCF91060

QC Batch 64045 Test Total Alkalinity as mg/L CaCO3 (Water)
 Associated Samples 91060004, 91060005, 91060010

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS		QC Sample #15414								
Total Alkalinity as CaCO3	ALKALINITY		73	mg/L	102.8	80 - 120				09/21/09
DUP		QC Sample #15415								
		Original 91058016								
Total Alkalinity as CaCO3	ALKALINITY		130	mg/L			0.00	20		09/21/09

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Inorganic

Group # WSCF91060

QC Batch 64569 Test ICP-2008 MS All possible metal
 Associated Samples 91060011, 91060012, 91060015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK										
			QC Sample #15749							
Uranium	7440-61-1		<0.050	ug/L					U	09/29/09
LCS			QC Sample #15750							
Uranium	7440-61-1		43.1	ug/L	107.8	85 - 115				09/29/09
MS			QC Sample #15751							
			Original 91099001							
Uranium	7440-61-1		41.2	ug/L	103	70 - 130				09/29/09
MSD			QC Sample #15752							
			Original 91099001							
										Paired 15751
Uranium	7440-61-1		41.9	ug/L	104.6	70 - 130	1.50	20		09/29/09

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Radiochemistry

Group # WSCF91060

QC Batch 63739 Test Tritium by LSC
 Associated Samples 91060005, 91060011, 91060012

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			QC Sample #14792							
Tritium LCS	10028-17-8		-160	pCi/L					U	09/29/09
			QC Sample #14793							
Tritium DUP	10028-17-8		2600	pCi/L	87.7	80 - 120				09/29/09
			QC Sample #14794							
			Original 91057006							
Tritium MS	10028-17-8		9900	pCi/L			2.00	-20 - 20		09/29/09
			QC Sample #14795							
			Original 91057006							
Tritium	10028-17-8		22000	pCi/L	94.5	75 - 125				09/29/09

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Radiochemistry

Group # WSCF91060

QC Batch 63879 Test Gross Alpha/Gross Beta
 Associated Samples 91060005

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #15111								
Gross Alpha	12587-46-1		0.60	pCi/L					U	10/06/09
Gross Beta	12587-47-2		0.24	pCi/L					U	10/06/09
LCS		QC Sample #15112								
Gross Alpha	12587-46-1		56	pCi/L	90.3	80 - 120				10/06/09
Gross Beta	12587-47-2		230	pCi/L	107.1	80 - 120				10/06/09
DUP		QC Sample #15113								
		Original 91058004								
Gross Alpha	12587-46-1		3.7	pCi/L			7.80	-20 - 20		10/06/09
Gross Beta	12587-47-2		150	pCi/L			22.20	-20 - 20	* X1	10/06/09

Quality Control Report

REVISION 1

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF91060

QC Batch 63637 Test SW-846 8260B Volatiles, separate prep
 Associated Samples 91060013, 91060014, 91060015

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK		QC Sample #14774								
1,2-Dichloroethane-d4	17060-07-0				89.2	75 - 125				09/14/09
Toluene-d8	2037-26-5				100.5	75 - 125				09/14/09
4-Bromofluorobenzene	460-00-4				97.9	75 - 125				09/14/09
LCS		QC Sample #14775								
1,2-Dichloroethane-d4	17060-07-0				88.7	75 - 125				09/14/09
Toluene-d8	2037-26-5				100.4	75 - 125				09/14/09
4-Bromofluorobenzene	460-00-4				96.6	75 - 125				09/14/09
MS		QC Sample #14776								
		Original 91057008								
1,2-Dichloroethane-d4	17060-07-0				87	75 - 125				09/14/09
Toluene-d8	2037-26-5				97.8	75 - 125				09/14/09
4-Bromofluorobenzene	460-00-4				97.8	75 - 125				09/14/09
MSD		QC Sample #14777								
		Original 91057008								
		Paired 14776								
1,2-Dichloroethane-d4	17060-07-0				82.8	75 - 125	4.90	20		09/15/09
Toluene-d8	2037-26-5				96.9	75 - 125	0.90	20		09/15/09

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Quality Control Report

REVISION 1

Attention Michael Neely
 Department Organic, Volatiles

Group # WSCF91060

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
4-Bromofluorobenzene SAMPLE	460-00-4				95.6	75 - 125	2.30	20		09/15/09
Sample #91060013										
1,2-Dichloroethane-d4	17060-07-0				86.9	75 - 125				09/15/09
Toluene-d8	2037-26-5				98.5	75 - 125				09/15/09
4-Bromofluorobenzene SAMPLE	460-00-4				96.2	75 - 125				09/15/09
Sample #91060014										
1,2-Dichloroethane-d4	17060-07-0				89.1	75 - 125				09/15/09
Toluene-d8	2037-26-5				98.4	75 - 125				09/15/09
4-Bromofluorobenzene SAMPLE	460-00-4				97.5	75 - 125				09/15/09
Sample #91060015										
1,2-Dichloroethane-d4	17060-07-0				87.9	75 - 125				09/15/09
Toluene-d8	2037-26-5				98.2	75 - 125				09/15/09
4-Bromofluorobenzene	460-00-4				95	75 - 125				09/15/09

Attention: Michael Neely

Group #

WSCF91060

91060001 **B21LT6**

ICP-AES: High/Check standard used to ensure linearity
 due to sample results exceeding the calibration standard
 for the following elements: magnesium, sodium, and calcium.

91060002 **B210F3**

ICP-AES: High/Check standard used to ensure linearity
 due to sample results exceeding the calibration standard
 for the following elements: magnesium, sodium, and calcium.

91060003 **B21LV7**

ICP-AES: High/Check standard used to ensure linearity
 due to sample results exceeding the calibration standard
 for the following elements: magnesium, sodium, and calcium.

91060004 **B21LT7**

ICP-AES: High/Check standard used to ensure linearity
 due to sample results exceeding the calibration standard
 for the following elements: magnesium, sodium, and calcium.

91060005 **B210F4**

ICP-AES: High/Check standard used to ensure linearity
 due to sample results exceeding the calibration standard
 for the following elements: magnesium, sodium, and calcium.

91060010 **B21LV8**

ICP-AES: High/Check standard used to ensure linearity
 due to sample results exceeding the calibration standard
 for the following elements: magnesium, sodium, and calcium.

Quality Control Comments

Department Inorganic

14760

B21JF8(91057007MS)

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

Analyte Magnesium - ICP-6010 - All possible metals

Attention: Michael Neely

Group #

WSCF91060

Quality Control Comments

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

Analyte Sodium - ICP-6010 - All possible metals

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

14761

B21JF8(91057007MSD)

Analyte Calcium - ICP-6010 - All possible metals

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

Analyte Magnesium - ICP-6010 - All possible metals

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

Analyte Sodium - ICP-6010 - All possible metals

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

Attention: Michael Neely

Group # WSCF91060

Quality Control Comments

Department Radiochemistry

14891 B210F4(91060005MS)

Analyte Technetium-99 - TC99 by Liquid Scintillation

[1] Matrix Spike is outside the established laboratory range due to insufficient added spike activity compared to the sample's activity.

15113 B21KC4(91058004DUP)

Analyte Gross Beta - Gross Alpha/Gross Beta

[1] The beta dup is flagged for poor RPD however, since the RPD is only slightly above the limit, and the sample mass and duplicate mass are very close, this batch is to be accepted. LMK

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 11 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 1000 S3-30
 Richland, WA 99352

ATTN: Michael Neely

Customer Code: CHPRC

PO #: 400637

Work Order #: 91060

Profile #: W09-009-164

Proj. Mgr.:

Phone:

The following samples were received from you on 9/13/2009 1:20:00 PM. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
		Tests scheduled		
91060001	B21LT6	WATER 6010-W	9/13/2009 11:57	9/13/2009 13:20
91060002	B210F3	WATER 6010-W	9/13/2009 12:49	9/13/2009 13:20
91060003	B21LV7	WATER 6010-W	9/13/2009 10:52	9/13/2009 13:20
91060004	B21LT7	WATER 6010-W; ALK-W; IC-W; TOC-W; TOX-W	9/13/2009 11:57	9/13/2009 13:20
91060005	B210F4	WATER 6010-W; ALK-W; GAB-AC-W; GAB-BO-W; H3-COL-W; IC-W; TC98-W	9/13/2009 12:49	9/13/2009 13:20
91060006	B21LV3	WATER TOC-W; TOX-W	9/13/2009 10:52	9/13/2009 13:20
91060007	B21LV4	WATER TOC-W; TOX-W	9/13/2009 10:52	9/13/2009 13:20
91060008	B21LV5	WATER TOC-W; TOX-W	9/13/2009 10:52	9/13/2009 13:20
91060009	B21LV6	WATER TOC-W; TOX-W	9/13/2009 10:52	9/13/2009 13:20
91060010	B21LV8	WATER 6010-W; ALK-W; IC-W	9/13/2009 10:52	9/13/2009 13:20
91060011	B21H95	WATER	9/13/2009 11:57	9/13/2009 13:20

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

2008-W; H3-COL-W; TC99-W

91060012	B21H97	WATER	9/13/2009 10:52	9/13/2009 13:20
2008-W; H3-COL-W; TC99-W				
91060013	B21N00	WATER	9/13/2009 08:55	9/13/2009 13:20
8260V-W				
91060014	B217Y7	WATER	9/13/2009 09:44	9/13/2009 13:20
8260V-W; IC-W				
91060015	B217P6	WATER	9/13/2009 08:55	9/13/2009 13:20
2008-W; 8260V-W; IC-W; TC99-W				

Test Acronym Description

Test Acronym	Description
2008-W	ICP-MS (W)
6010-W	ICP-AES (W)
8260V-W	Volatiles by 8260B (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)
TC99-W	Technetium-99 (W)
TOC-W	Total Organic Carbon (W)
TOX-W	Total Organic Halides (W)

CHPRC **CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST** C.O.C.# **W09-009-164**
 Page 1 of 1

Collector: **JP Herick** Contact/Requester: **Doug Widmer** Telephone No: **MSH FAX**
 SAF No: **CHPRC** Sampling Origin: **Hamford Site** Purchase Order/Charge Code:
 Project Title: **RCSA SEPTEMBER 2009** **HNE-N-506-23161** Ice Chest No: **2455-111** Temp:
 Shipped In/Label: **Waste Sampling & Characterization** Method of Shipment: **Cost Vehicle** Bill of Lading/Air Bill No:
 Protocol: **RCSA** Priority: **30 Days PRIORITY** Offsite Project No:

POSSIBLE SAMPLE HAZARDS/REMARKS: **91060** SPECIAL INSTRUCTIONS: **Hold Time** Total Activity Enumeration: Yes No
 ** ** Contains Radioactive Material at concentrations that are not acceptable for storage in an open 40 CFR but are not releasable per DOE Order 5400.5 (1999-1992)

Sample No	Lab ID	W	Date	Time	No/Type/Container	Sample Analysis	Holding Time	Preservative
B2:LT7 (F)	681	W	9-13-09	1157	1x500-mL G/P	6010_METALS_JCP-List-3 (18)	6 Months	HNO3 to pH <2
B2:LT7	684	W			1x1000-mL a/Gs*	9020_TOX_TOX (1)	28 Days	H2SO4 to pH <2 Cool-4C
B2:LT7		W			1x250-mL a/Gs*	9060_TOX_TOX (1)	28 Days	HCl or H2SO4 to pH <2 Cool-4C
B2:LT7		W			1x500-mL G/P	6010_METALS_JCP-List-3 (18)	6 Months	HNO3 to pH <2
B2:LT7		W			1x250-mL G/P	2320_ALKALINITY_Alkalinity (1)	14 Days	Cool-4C
B2:LT7		W			1x500-mL P	3010_ANIONS_IC-List-1 (5)	28 Days/48 Hours	Cool-4C

ICED

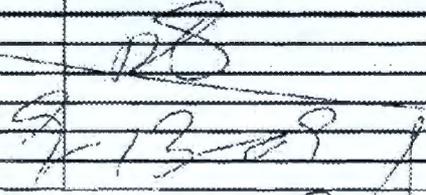
Prepared By: **JP Herick** Date/Time: **SEP 13 2009** Received By: **[Signature]** Date/Time: **SEP 13 2009**
 Released By: **[Signature]** Date/Time: Received By: **[Signature]** Date/Time:
 Released By: Date/Time: Received By: Date/Time:
 Released By: Date/Time: Received By: Date/Time:

FINAL SAMPLE DISPOSITION: **Shipped (check box) Return to collector, per lab processing, total in process** Disposed By: **[Signature]** Date/Time:

Reopened: September 14, 2009 11:59:40 AM
 Page 9 of 13

CHPRC
 WSCF91060

Chain of Custody

CHPRC		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C.# W09-007-90		
Collector: JP Henick CHPRC		Contact/Requester: Dana Walker		Telephone No.: 476-2858		MSIN FAX		
SAF No.: W09-007		Sample Origin:		Purchase Order/Charge Code:		Page 1 of 1		
Project Title: SCRA JULY 2009		HIVE-N-508-33161		Ice Custody: 2425/111		Temp.		
Shipped To/Label: Went Senobar & Chas. Herring		Method of Shipment: Car, Vehicle		BIB of Loading/Air Bill No.:		CDD# Printer No.:		
Protocol: HUCO		Priority: 30 Days PRIORITY						
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Contact Radioactive Material at concentration that are not regulated by transportation per 49 CFR, but are not releasable per DOE Order 5400.5 (1990-1995)				SPECIAL INSTRUCTIONS Hold Time: Total Activity Measurement: Yes <input type="checkbox"/> No <input type="checkbox"/> All LSC except RSCC: match all samples submitted under A, G, L, N, and W 99 SAF (this one is 212) and to standard SOG plus any of 14 other SOG's. Batch 28 (19) samples submitted into SOG 99, July 2009 and 17 of samples come to in the same SOG.				
Sample No.	Lab #	#	Date	Time	No/Type Container	Sample Analysis	Hold Time	Preservative
B21CF3 (F)	003	W	9-13-09	1247	1x500-ml, GP	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B21CF4	005	W			1x250-ml, GP	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool-4C
B21CF4		W			1x500-ml, GP	6010_METALS_ICP: List-3 (18)	6 Months	HNO3 to pH <2
B21CF4		W			1x500-ml, P	300_G_ANIONS_IC: List-1 (5)	26 Days/48 Hours	Cool-4C
B21CF4		W			1x500-ml, GP	A: PHABETA_GPC: Alpha discrete + Beta (2) ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B21CF4		W			1x250-ml, G	TRITIUM_EE_LSC: Tritium (1)	6 Months	None
B21CF4		W			1x1000-ml, GP	TC99_3MDSK_LSC: TC-99 (3)	6 Months	HCl to pH <2
								
Released By: JP Henick CHPRC		Date/Time: SEP 13 2009		Received By: <i>[Signature]</i>		Date/Time: SEP 13 2009		S - Soil G - Gas LI - Liquid NO - None SL - Soluble W - Water O - Oil A - Ash
Relinquished By:		Date/Time:		Received By:		Date/Time:		DG - Dross Solid TR - Dross Liquid F - Fibers WI - Wax L - Lumps V - Volatiles C - Other
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 container, per lab procedure, used in process)				Disposed By:		Date/Time:

Revised September 18, 2008 11:50:00 AM
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April 30, 2010 21:04:05

3004.1.1084.3
Report ID: 91060
Group # WSCF91060

Chain of Custody

CHPRC		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C.# W09-009-168	
Collector: JP Herrick CHPRC		Contact/Instructor: Dana Wilkie		Telephone No. MSN FAX 509-327-7858		Page 1 of 1	
NAF No. 3092-009		Sampling Origin HNF-N-506 23161		Purchase Order/Charge Code		Temp.	
Project File RCHA-SEP130001-2009		Method of Shipment Truck Vehicle		Ice Check No. 23161-11		Bill of Lading/Air Bill No.	
Pretest SCBA		Priority: 30 Days PRIORITY		OnSite Property No.			
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Corrosive/Reactive Material at concentrations that are regulated for transportation per 49 CFR but are not releasable per DGR, Order 5490-1 (1993/1995)				SPECIAL INSTRUCTIONS Hold Time Site Wide Hazmat Knowledge Information from 9/10/09		Total Activity Exemption Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No	Lab ID	Date	Time	Net/Type Container	Sample Analysis	Holding Time	Preservative
B21LV3	006	9-13-09	1052	1x1000-ml. aGs*	9020_TOX TOX (1)	28 Days	H2SO4 to pH <2 Cool-4C
B21LV3	↓	W		1x250-ml. aGs*	8380_TOX TOC (1)	28 Days	HCl or H2SO4 to pH <2 Cool-4C
B21LV4	007	W		1x1000-ml. aGs*	9020_TOX TOX (1)	28 Days	H2SO4 to pH <2 Cool-4C
B21LV4	↓	W		1x250-ml. aGs*	8380_TOX TOC (1)	28 Days	HCl or H2SO4 to pH <2 Cool-4C
B21LV5	008	W		1x1000-ml. aGs*	9020_TOX TOX (1)	28 Days	H2SO4 to pH <2 Cool-4C
B21LV5	↓	W		1x250-ml. aGs*	8380_TOX TOC (1)	28 Days	HCl or H2SO4 to pH <2 Cool-4C
B21LV6	009	W		1x1000-ml. aGs*	9020_TOX TOX (1)	28 Days	H2SO4 to pH <2 Cool-4C
B21LV6	↓	W		1x250-ml. aGs*	8380_TOX TOC (1)	28 Days	HCl or H2SO4 to pH <2 Cool-4C
B21LV7 (P)	003	W		1x500-ml. G/P	6310_METALS_ICP List-1 (1B)	6 Months	HNO3 to pH <2
B21LV8	010	W		1x500-ml. G/P	6310_METALS_ICP List-3 (1B)	6 Months	HNO3 to pH <2
B21LV8	↓	W		1x250-ml. G/P	2320_ALKALINITY Alkalinity (1)	14 Days	Cool-4C
B21LV8	↓	W		1x500-ml. P	2000_ANIONS_IC List-1 (5)	28 Days/48 Hours	Cool-4C
ICED							
Requested By JP Herrick CHPRC		Date/Time SEP 13 2009		Received By <i>[Signature]</i>		Date/Time SEP 13 2009	
Requested By		Date/Time		Received By		Date/Time	
Requested By		Date/Time		Received By		Date/Time	
Requested By		Date/Time		Received By		Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Date/Time	

Received by: *[Signature]*
 Date/Time: **SEP 13 2009**
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Chain of Custody

CHPRC		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C.# A09-009-2	
Collector JP Hentox CHPRC		Contact/Receiver Dana Wilson		Telephone No. 509-325-2824		MSIN FAX	
SAC No. A09-009		Sampling Origin Hunted Site		Purchase Order/Charge Code			
Project Title ELWAMU, WA, SEPTEMBER 2009		INE N-506-2314		Ice Chest No. New 511		Temp.	
Shipped To (Lab) Urease Sampling & Characterization		Method of Shipment Road Vehicle		Bill of Lading/Air Bill No.			
Protocol Chlor		Priority: 30 Days PRIORITY		Offsite Precip No.			
POSSIBLE SAMPLE HAZARDS/REMARKS ** ** Certain Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not allowed per DCH Order 3833 (1/20/1995)				SPECIAL INSTRUCTIONS 200 Area Operator Knowledge Information Form attached		Hold Time Total Activity Exception: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No.	Lab ID	Date	Time	Nr/Type Container	Sample Analysis	Holding Time	Preservative
821H95	011	9/13/09	1157	1x500 mL GP	200.8_METALS_KCPMS: Uranium (1)	6 Months	HNO3 to pH <2
821H95	↓	↓	↓	1x1000 mL GP	TC98_3MOSK_LSC: To-Be (1)	6 Months	HCl to pH <2
821H95	↓	↓	↓	1x250 mL G	TITANIUM_EIE_LSC: Titum (1)	6 Months	None
Requested by JP Hentox CHPRC		Date/Time SEP 13 2009		Received by <i>V. Carter</i>		Date/Time SEP 13 2009	
Requested by		Date/Time		Received by		Date/Time	
Requested by		Date/Time		Received by		Date/Time	
Requested by		Date/Time		Received by		Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)		Disposed By		Date/Time	

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 Date/Time: 9/13/09 11:57 AM
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Chain of Custody

CHPRC		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # A09-009-4		
Page 1 of 1		Telephone No. MSN FAX 509-375-2333		Purchase Order/Charge Code		Ice Chest No. Temp. WWS-11		
Collector JP Harrick CHPRC		Contact/Requester Data Mining		Sampling Origin Harrick		Method of Shipment Over Vehicle		
SAF No. A09-009		Project Title LAWMA/PA, SEPTEMBER 2009		Shipment Label Waste Sampling at Harrick station		Priority: 30 Days PRIORITY		
Possible Sample Hazards/Remarks *** Contain Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 4108.5 (10/97/1097)		SPECIAL INSTRUCTIONS DO Area Generator Knowledge Information Form applies.		Hold Time		Total Activity Exemptible: Yes No N/A		
Sample No.	Lab ID	+	Day	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
321H97	412	W	9-13-09	1052	1x500 mL GFP	205 B_METALS_ICPMS, Uranium (1)	6 Months	HNO3 to pH <2
321H97		W			1x1000 mL GFP	TC60_BMDSK_LSC To-99 (1)	6 Months	HCl to pH <2
321H97		W			1x250 mL G	TRITIUM_EIE_LSC Tritium (1)	6 Months	None
<i>[Large handwritten signature and "ICED" stamp]</i>								
Requested By: JP Harrick CHPRC		Date/Time: SEP 13 2009		Received By: <i>[Signature]</i>		Date/Time: SEP 13 2009		Matrix *
Relinquished By:		Date/Time:		Received By:		Date/Time:		S - Soil ES - From Refit SF - Sediment ES - From Linn SW - Solid T - Tissue SL - Sludge W - Waste W - Water L - Linn D - Dred V - Vegetation A - Air X - Other
Relinquished By:		Date/Time:		Received By:		Date/Time:		
FINAL SAMPLE DISPOSITION		Disposition Method (e.g., Return to customer, per lab procedure, or all in process)				Disposition By:		Date/Time:

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Chain of Custody

CHPRC		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # S09-008-184	
Collector JF Henick CHPRC		Center/Requester Chon Widor		Telephone No. 508 736 2855		MSIN FAX	
SAF No. 506078		Sampling Origin Huntford Site		Purchase Order/Charge Code			
Project Title SERV ALIGNMENT 2009		Method of Shipment Cool Vehicle		Ice Chest No. 2015-111		Items	
Signed To/ Lab Waste Signature & Commissioner		Priority: 30 Days PRIORITY		Offsite Property No.			
Protocol SERV		POSSIBLE SAMPLE HAZARDS/REMARKS ** Coolant, Radioactive Material or concentrations that are not regulated for transportation per 49 CFR has not been determined per DOT Order 5490.5 (1996) (2007)		SPECIAL INSTRUCTIONS Site-Wide Contamination Knowledge before and/or from applics.		Hold Time Total Activity Exemption Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Sample No.	Lab ID	* Disc	Time	Site/Type/Container	Sample Analysis	Hold Time	Preservative
B21800	013	W	7-13-09	CPSS 1x20-ml. P	Activity Scan	6 Months	None
B21800	013	W	7-13-09	CPSS 4x40-ml. MSA*	B260_VOA_GGMS List-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool-4C
<i>9-13-09</i>							
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Collector JF Henick CHPRC		Date/Time SEP 13 2009		Received By <i>Victor B...</i>		Date/Time SEP 13 2009	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
Relinquished By		Date/Time		Received By		Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Return to customer, per lab procedure, used in process)				Disposal By	
						Date/Time	

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CHPRC		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C.# 109-054-8	
Collector: JP Merrick CHPRC		Contact/Requester Doug Wilkins		Telephone No. MSIN FAX 509-376-2858		Page 1 of 1	
NAF No. 302-051		Sampling Origin Hazard Site		Purchase Order/Charge Code			
Project Title 2721 AUGUST 2009		WINF-N-508-23161		Inc Charge No. 9-111		Time	
Shipped To / Lab Waste Sampling & Characterization		Method of Shipment Truck Vehicle		Bill of Lading/Air Bill No.			
Protocol EPCRA		Priority: 30 Days PRIORITY		Offsite Priority No.			
POSSIBLE SAMPLE HAZARD/REMARKS ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order 5400.1 (1981/1993)				SPECIAL INSTRUCTIONS Hold Time 200 Area Generate Knowledge Information Form applied		Total Activity Location: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Arsen Filtered per FWS Direction							
Sample No.	Lab ID	Date	Time	Mat'l Type Container	Sample Analysis	Hold Time	Preservative
B21777	014	7-13-09	0700	4x42-ml. a34*	8262_VOA_30CM3 List-2 (28)	14 Days	HCl @ H2SO4 to pH <2 Cool-4C
B21777	↓	7-13-09	0700	1x500-ml P	300.0_ANIONS_IC List-1 (5)	28 Days/48 Hours	Cool-4C
<i>DS</i>							
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Released By: JP Merrick CHPRC		Date/Time: SEP 13 2009 1320		Received By: Victor Sims		Date/Time: SEP 13 2009 1325	
Reimposed By:		Date/Time:		Received By:		Date/Time:	
Reimposed By:		Date/Time:		Received By:		Date/Time:	
Reimposed By:		Date/Time:		Received By:		Date/Time:	
FINAL SAMPLE DISPOSITION		Disposal Method (e.g., Retain in container, per lab procedure, used in process):				Disposed By:	

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Group # WSCF91060

Chain of Custody

CHPRC		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				C.O.C. # 109-053-42	
Collector: JP Herick CHPRC		Contact/Requester: Dana Wukie		Reference No.: MSIS FAX 509-374-2800		Page 1 of 1	
NAF No.: 109-051		Sampling Origin: Harford Site		Purchase Order/Charge Code			
Project Title: 2009 AIRTEL 2009		HNF-N-506-23161		Ice Chest No.: 2005-111		Temp.	
Shipped To (Lab):		Method of Shipment: Govt Vehicle		Bill of Lading/Air Bill No.		Offsite Property No.	
Protocol: SLBY		Priority: 30 Days PRIORITY					
POSSIBLE SAMPLE HAZARDS/REMARKS: ** ** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR, but are not regulable per 49 CFR Order 5409.3 (1990/1993)				SPECIAL INSTRUCTIONS: Bold Type 300 Acre. Geospatial Knowledge Information Form applies.		Total Activity Duration: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

Sample No.	Lab ID	* Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
3217P6	015	W 7-19-07	0855	4x40-ml. aGr	8280_VOA_GCMS: Lm-2 (25)	14 Days	HCl or H2SO4 to pH <2 Cool-4C
3217P6		W		1x300-ml. G/P	2003_METALS_ICPMS: Uranium (1)	6 Months	HNO3 to pH <2
3217P6		W		1x600-ml. P	3003_AMMONIUM_IC: Lis-1 (5)	28 Days/48 Hours	Cool-4C
3217P6		W		1x1005-ml. G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
<i>[Large handwritten signature and 'ICED' stamp]</i>							

Shipped By: JP Herick CHPRC	Date/Time: SEP 13 2009	Received By: <i>[Signature]</i>	Date/Time: SEP 13 2009
Retransported By:	Date/Time:	Retransported By:	Date/Time:
Retransported By:	Date/Time:	Retransported By:	Date/Time:
Retransported By:	Date/Time:	Retransported By:	Date/Time:

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