WSCF Laboratory

PO Box 650 S3-30
Richland, WA 99352

RECEIVED AUGUST 24, 2011

REVISION 1

August 24, 2011

1213878

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

RDR 7278 KB 8-29-11

Dear Michael Neely,

REVISED103226 - 521934 [Report ID: 103226]

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

This letter contains the following information for sample delivery group WSCF103226

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

Very truly yours,

Electronically signed by Joseph Hale
For Lab Manager
WSCF Analytical Lab
(509) 373-7495

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EDMC

Attachments 4

CC: w/Attachments

File/LB

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF103226
Data Deliverable Date 01/04/11

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
X11-005	B28JV6	103226001	WATER	12/05/10	12/05/10
X11-005	B28JV7	103226002	WATER	12/05/10	12/05/10
X11-005	B27WV4	103226003	WATER	12/05/10	12/05/10
X11-005	B27WT6	103226004	WATER	12/05/10	12/05/10
X11-005	B27WV5	103226005	WATER	12/05/10	12/05/10
X11-005	B27WT7	103226006	WATER	12/05/10	12/05/10

ATTACHMENT 2

NARRATIVE

Consisting of 6 pages
Including cover page

Attachment 2
Narrative Rev1
WSCF103226

Revision 1 Report: RDR 110801WSCF-R7278 Correction – Case Narrative Replaces the Prior Submittal in its Entirety

Introduction

Six (6) groundwater samples were received at the WSCF Laboratory on December 5, 2010. 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. Additionally, a copy of the completed RDR # 110801WSCF-R7278 is included with this case narrative. A Data Summary Report (Attachment 3) includes analytical results, a comment report detailing method abnormalities, tentatively identified peaks if applicable, method references, and Laboratory QC information as applicable. Copies of the chain of custody and sample receipt documentation are included as Attachment 4.

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

The following generic data qualifiers (i.e., B, D, U 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.
- **U** – Analyzed for but not detected above limiting criteria. Relative Percent Difference (RPD) values associated with an analyte qualified with a "U" are not applicable.

Analytical Methodology for Requested Analyses

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

Inorganic Comments

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

Attachment 2
Narrative Rev1
WSCF103226

- Batch QC 170738 analyzed on sample# B28K67 (103228008)
- Batch QC 170739 analyzed on sample# B28JV6 (103226001)

All applicable QC controls are within the established limits.

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

- Batch QC 170722 analyzed on sample# B281K1 (103215015)
  - Cobalt and Sodium – Detected in the Blank and evaluated. No sample results in this batch were affected. "C" Flags not required.
  - Calcium, Magnesium and Silicon – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.
- Batch QC 170723 analyzed on sample# B27WT7 (103226006)
  - Thallium and Silver – Matrix Spike and/or Matrix Spike Duplicate recoveries are outside established laboratory limits. Affected sample results in this batch were "N" flagged.
  - Potassium, Silicon, Calcium, Magnesium and Sodium – Exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.

All other applicable QC controls are within the established limits.

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

- Batch QC 171243 analyzed on sample# B28YW3 (103199001)

All applicable QC controls are within the established limits.

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

- Batch QC 170878 analyzed on sample# B29L80 (103189004)

All applicable QC controls are within the established limits.

Attachment 2
Narrative Rev1
WSCF103226

Organic Comments

TPHD-WA – 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):

- Batch QC 170835 analyzed on sample# B281C8 (103218016)

All applicable QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to Technetium & Tritium), Blank and Laboratory Control Sample were analyzed with this delivery group. Analytical Note(s):

- Tracers are used to determine chemical yield. RPD is monitored in sample duplicate and is not required for tracer recovery per SOW.
- Technetium-99:
  - Batch QC 170947 analyzed on sample# B282L4 (103218014)

All applicable QC controls are within the established limits.

- Tritium:
  - Batch QC 170958 analyzed on sample# B282F0 (103215010)

All applicable QC controls are within the established limits.

- Gross Alpha / Gross Beta:
  - Batch QC 170763 analyzed on sample# B281C8 (103218016)
    - Gross Alpha - Duplicate Relative Percent Difference(s) (RPD) did not meet the established laboratory limits. Duplicate Relative Percent Difference (RPD) does not apply to results below 5X the minimum detectable activity. No flags issued.

All other applicable QC controls are within the established limits.

- Americium-241:
  - Batch QC 170694 analyzed on sample# B27X16 (103161003)

All applicable QC controls are within the established limits.

- Strontium-89/90:

Attachment 2
Narrative Rev1
WSCF103226

- Batch QC 170711 analyzed on sample# B282L4 (103218014)

All applicable QC controls are within the established limits.

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

Attachment 2
Narrative Rev1
WSCF103226

Order Number: 110801WSCF-R7278
Waste Sampling & Characterization
600 AREA Hanford, MSIN S3-28
Richland, WA 99352

Sample Delivery Group: WSCF103226

Sample(s):

Method Name: 6010_METALS_ICP

Sample #: B27WV5 Sample Date: 12/5/10 8:45 am SAF #: X11-005

Lab Sample ID	RDR Action Start Date	Constituent	Action	TAT (Hardcopy/EDD)
103226005	8/1/2011 2:50 pm	Magnesium	RECHECK	15 Days / 15 Days
Special Instructions: Results off by order of magnitude. SLF 8/1/2011				
103226005	8/1/2011 2:50 pm	Iron	RECHECK	15 Days / 15 Days
Special Instructions: Results off by order of magnitude. SLF 8/1/2011				
103226005	8/1/2011 2:50 pm	Potassium	RECHECK	15 Days / 15 Days
Special Instructions: Results off by order of magnitude. SLF 8/1/2011				
103226005	8/1/2011 2:50 pm	Sodium	RECHECK	15 Days / 15 Days
Special Instructions: Results off by order of magnitude. SLF 8/1/2011				

WSCF Response: The chemist reviewed the data. The dilution factor is incorrect; it should be 1 not 10. A revised report and EDD will be submitted.

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 65 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 #	WSCF103226
Report Date	August 24, 2011

Analytical: Electronically signed by Joseph Hale

Client Services: Electronically signed by Heather Medley

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

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

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF103226

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
170722	172576	1	BLANK	43347	BLANK		ICP-6010 - All possible metals
170722	172576	2	LCS	43348	LCS		ICP-6010 - All possible metals
170722	172576	3	MS	43349	B281K1(103215015MS)	103215015	ICP-6010 - All possible metals
170722	172576	4	MSD	43350	B281K1(103215015MSD)	103215015	ICP-6010 - All possible metals
170722	172576	22	SAMPLE	103226003	B27WV4		ICP-6010 - All possible metals
170722	172576	23	SAMPLE	103226004	B27WT6		ICP-6010 - All possible metals
170722	172576	24	SAMPLE	103226005	B27WV5		ICP-6010 - All possible metals
170723	172523	1	BLANK	43351	BLANK		ICP-6010 - All possible metals
170723	172523	2	LCS	43352	LCS		ICP-6010 - All possible metals
170723	172523	3	MS	43353	B27WT7(103226006MS)	103226006	ICP-6010 - All possible metals
170723	172523	4	MSD	43354	B27WT7(103226006MSD	103226006	ICP-6010 - All possible metals
170723	172523	5	SAMPLE	103226006	B27WT7		ICP-6010 - All possible metals
170738	170738	2	BLANK	43371	BLANK		Anions by Ion Chromatography (Water)
170738	170738	3	LCS	43372	LCS		Anions by Ion Chromatography (Water)
170738	170738	4	DUP	43373	B28K67(103228008DUP)	103228008	Anions by Ion Chromatography (Water)
170738	170738	5	MS	43374	B28K67(103228008MS)	103228008	Anions by Ion Chromatography (Water)
170738	170738	6	MSD	43375	B28K67(103228008MSD)	103228008	Anions by Ion Chromatography (Water)
170738	170738	10	SAMPLE	103226002	B28JV7		Anions by Ion Chromatography (Water)
170739	170739	2	BLANK	43378	BLANK		Anions by Ion Chromatography (Water)
170739	170739	3	LCS	43379	LCS		Anions by Ion Chromatography (Water)
170739	170739	4	DUP	43380	B28JV6(103226001DUP)	103226001	Anions by Ion Chromatography (Water)
170739	170739	5	MS	43381	B28JV6(103226001MS)	103226001	Anions by Ion Chromatography (Water)
170739	170739	6	MSD	43382	B28JV6(103226001MSD)	103226001	Anions by Ion Chromatography (Water)

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Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF103226

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
170739	170739	8	SAMPLE	103226001	B28JV6		Anions by Ion Chromatography (Water)
171243	171244	2	BLANK	43969	BLANK		ICP-2008 MS All possible metal
171243	171244	3	LCS	43970	LCS		ICP-2008 MS All possible metal
171243	171244	4	MS	43971	B28YW3(103199001MS)	103199001	ICP-2008 MS All possible metal
171243	171244	5	MSD	43972	B28YW3(103199001MSD	103199001	ICP-2008 MS All possible metal
171243	171244	21	SAMPLE	103226003	B27WV4		ICP-2008 MS All possible metal
171243	171244	22	SAMPLE	103226004	B27WT6		ICP-2008 MS All possible metal
171243	171244	24	SAMPLE	103226005	B27WV5		ICP-2008 MS All possible metal
171243	171244	25	SAMPLE	103226006	B27WT7		ICP-2008 MS All possible metal

Batch QC List

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF103226

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
170835	171055	1	BLANK	43477	BLANK		Extractable Diesel and Petroleum
170835	171055	2	LCS	43478	LCS		Extractable Diesel and Petroleum
170835	171055	3	MS	43479	B281C8(103218016MS)	103218016	Extractable Diesel and Petroleum
170835	171055	4	MSD	43480	B281C8(103218016MSD)	103218016	Extractable Diesel and Petroleum
170835	171055	9	SAMPLE	103226005	B27WV5		Extractable Diesel and Petroleum
170835	171055	10	SAMPLE	103226006	B27WT7		Extractable Diesel and Petroleum

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF103226

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
170694	172528	1	BLANK	43257	BLANK		Americium/Curium (AEA)
170694	172528	2	LCS	43258	LCS		Americium/Curium (AEA)
170694	172528	4	DUP	43259	B27X16(103161003DUP)	103161003	Americium/Curium (AEA)
170694	172528	6	SAMPLE	103226005	B27WV5		Americium/Curium (AEA)
170694	172528	7	SAMPLE	103226006	B27WT7		Americium/Curium (AEA)
170711	172585	1	BLANK	43320	BLANK		Strontium 89/90 (GPC/GEA)
170711	172585	2	LCS	43321	LCS		Strontium 89/90 (GPC/GEA)
170711	172585	3	DUP	43322	B282L4(103218014DUP)	103218014	Strontium 89/90 (GPC/GEA)
170711	172585	8	SAMPLE	103226005	B27WV5		Strontium 89/90 (GPC/GEA)
170711	172585	9	SAMPLE	103226006	B27WT7		Strontium 89/90 (GPC/GEA)
170763	170919	1	BLANK	43460	BLANK		Gross Alpha/Gross Beta
170763	170919	2	LCS	43461	LCS		Gross Alpha/Gross Beta
170763	170919	5	DUP	43462	B281C8(103218016DUP)	103218016	Gross Alpha/Gross Beta
170763	170919	10	SAMPLE	103226005	B27WV5		Gross Alpha/Gross Beta
170763	170919	11	SAMPLE	103226005	B27WV5		Gross Alpha/Gross Beta
170763	170919	12	SAMPLE	103226006	B27WT7		Gross Alpha/Gross Beta
170763	170919	13	SAMPLE	103226006	B27WT7		Gross Alpha/Gross Beta
170947	171074	1	BLANK	43819	BLANK		TC99 by Liquid Scintillation
170947	171074	2	LCS	43820	LCS		TC99 by Liquid Scintillation
170947	171074	4	DUP	43821	B282L4(103218014DUP)	103218014	TC99 by Liquid Scintillation
170947	171074	5	MS	43822	B282L4(103218014MS)	103218014	TC99 by Liquid Scintillation
170947	171074	7	SAMPLE	103226005	B27WV5		TC99 by Liquid Scintillation
170947	171074	8	SAMPLE	103226006	B27WT7		TC99 by Liquid Scintillation

REVISED103226 -

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF103226

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
170958	171072	1	BLANK	43860	BLANK		Tritium by LSC
170958	171072	2	LCS	43861	LCS		Tritium by LSC
170958	171072	4	DUP	43862	B282F0(103215010DUP)	103215010	Tritium by LSC
170958	171072	5	MS	43863	B282F0(103215010MS)	103215010	Tritium by LSC
170958	171072	17	SAMPLE	103226005	B27WV5		Tritium by LSC
170958	171072	18	SAMPLE	103226006	B27WT7		Tritium by LSC

Batch QC List

Attention Michael Neely
Department Wet Chemistry

Group # WSCF103226

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
170878	170878	2	DUP	43650	B29L80(103189004DUP)	103189004	Total Alkalinity as mg/L CaCO3 (Water)
170878	170878	13	LCS	43651	LCS		Total Alkalinity as mg/L CaCO3 (Water)
170878	170878	16	SAMPLE	103226005	B27WV5		Total Alkalinity as mg/L CaCO3 (Water)
170878	170878	17	SAMPLE	103226006	B27WT7		Total Alkalinity as mg/L CaCO3 (Water)

Method Reference

Attention Michael Neely
Department Inorganic

Group # WSCF103226

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

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

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

Method Reference

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF103226

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-523-493	NWTPH-Dx, Extractible Diesel and Petroleum Productions Analysis in Soil and Water		
	WDOE	WDOE	Total Petroleum Hydrocarbons in Diesel
	HEIS	WTPH_DIESEL	TPH Diesel

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 # WSCF103226

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

LA-220-406	Strontium-89 and 90 in Aqueous Samples by SR-SPEC Separation		
	HEIS	SRTOT_SEP_PRECIP_GPC	Strontium 89/90, by Sr-Spec Sep.
LA-508-471	Determination Of Uranium, Plutonium, And Americium		
	HEIS	AMCMISO_IE_PREC_AEA	Americium/Curium Iso, Alpha Spec
LA-508-421	Operation of the Tri-Carb Model 2500TR Liquid Scintillation Analyzer		
	HEIS	ALPHA_LSC	A/B Liquid Scintillation
	HEIS	BETA_LSC	A/B Liquid Scintillation
	HEIS	TC99_3MDSK_LSC	TC99 by Liquid Scintillation
	HEIS	TRITIUM_EIE_LSC	Tritium, by Eichrome ion exchange, LSC
LA-508-415	Operation Of The Protean 2-Inch Alpha/Beta Counting System For Gross Alpha/ Beta Samples		
	HEIS	ALPHA_GPC	Gross Alpha by GPC
	HEIS	BETA_GPC	Gross Beta by GPC
	HEIS	SRTOT_SEP_PRECIP_GPC	Strontium beta isotopic, GPC

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

Method Reference

Attention Michael Neely
Department Wet Chemistry

Group # WSCF103226

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

LA-531-411	Alkalinity		
	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

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226001
SAF# X11-005
Sample ID B28JV6

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**12/06/10**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	D	0.416		ug/mL	2	0.088	0.40	12/06/10
Chloride	16887-00-6	LA-533-410	D	6.40		ug/mL	2	0.084	0.80	12/06/10
Nitrite-N	NO2-N	LA-533-410	UD	<0.036		ug/mL	2	0.036	0.20	12/06/10
Bromide	24959-67-9	LA-533-410	UD	<0.11		ug/mL	2	0.11	1.0	12/06/10
Nitrate-N	NO3-N	LA-533-410	D	4.60		ug/mL	2	0.019	0.20	12/06/10
Phosphate-P	PO4-P	LA-533-410	UD	<0.14		ug/mL	2	0.14	0.80	12/06/10
Sulfate	14808-79-8	LA-533-410	D	29.3		ug/mL	2	0.17	2.0	12/06/10

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

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

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

REVISED103226 -

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226002
SAF# X11-005
Sample ID B28JV7

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**12/06/10**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	BD	0.340		ug/mL	2	0.088	0.40	12/06/10
Chloride	16887-00-6	LA-533-410	D	6.44		ug/mL	2	0.084	0.80	12/06/10
Nitrite-N	NO2-N	LA-533-410	UD	<0.036		ug/mL	2	0.036	0.20	12/06/10
Bromide	24959-67-9	LA-533-410	UD	<0.11		ug/mL	2	0.11	1.0	12/06/10
Nitrate-N	NO3-N	LA-533-410	D	4.84		ug/mL	2	0.019	0.20	12/06/10
Phosphate-P	PO4-P	LA-533-410	UD	<0.14		ug/mL	2	0.14	0.80	12/06/10
Sulfate	14808-79-8	LA-533-410	D	30.6		ug/mL	2	0.17	2.0	12/06/10

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

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

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

REVISED103226 -

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226003
SAF# X11-005
Sample ID B27WV4

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**12/06/10**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	U	<19		ug/L	1	19	95	12/21/10
Iron	7439-89-6	LA-505-411	U	<38		ug/L	1	38	190	12/21/10
Magnesium	7439-95-4	LA-505-411		6010		ug/L	1	14	70	12/21/10
Manganese	7439-96-5	LA-505-411	U	<6.0		ug/L	1	6.0	30	12/21/10
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Potassium	7440-09-7	LA-505-411		4030		ug/L	1	73	360	12/21/10
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	12/21/10
Sodium	7440-23-5	LA-505-411		17100		ug/L	1	11	55	12/21/10
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	12/21/10
Barium	7440-39-3	LA-505-411	B	19.0		ug/L	1	4.0	20	12/21/10
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	12/21/10
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Copper	7440-50-8	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/21/10
Vanadium	7440-62-2	LA-505-411	U	<17		ug/L	1	17	85	12/21/10
Zinc	7440-66-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Calcium	7440-70-2	LA-505-411		26200		ug/L	1	28	140	12/21/10

MDL = Minimum Detection
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D - Analyte was reported at a secondary diltution factor.
E - Analyte is an estimate, see comment section.
N - MS and/or MSD recovery outside control limits.

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

REVISED103226 -

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226003
SAF# X11-005
Sample ID B27WV4

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	12/21/10
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Molybdenum	7439-98-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Strontium	7440-24-6	LA-505-411		130		ug/L	1	4.0	20	12/21/10
Thallium	7440-28-0	LA-505-411	U	<49		ug/L	1	49	240	12/21/10
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	12/21/10
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	12/21/10
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	12/21/10
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	12/21/10
Silicon	7440-21-3	LA-505-411		13500		ug/L	1	25	120	12/21/10
Phosphorus	7723-14-0	LA-505-411	U	<72		ug/L	1	72	360	12/21/10
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	12/21/10
ICPMS Prep										**12/14/10**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	200	12/17/10
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	12/17/10
Barium	7440-39-3	LA-505-412	D	26.8		ug/L	2	0.40	4.0	12/17/10

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

B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
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E - Analyte is an estimate, see comment section.
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U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED103226 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226003
SAF# X11-005
Sample ID B27WV4

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Chromium	7440-47-3	LA-505-412	BD	6.75		ug/L	2	1.0	10	12/17/10
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/17/10
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	12/17/10
Molybdenum	7439-98-7	LA-505-412	D	8.09		ug/L	2	0.10	1.0	12/17/10
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Arsenic	7440-38-2	LA-505-412	BD	5.51		ug/L	2	0.80	8.0	12/17/10
Selenium	7782-49-2	LA-505-412	BD	1.78		ug/L	2	0.60	6.0	12/17/10

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E - Analyte is an estimate, see comment section.
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X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED103226 -

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226004
SAF# X11-005
Sample ID B27WT6

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**12/06/10**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	U	<19		ug/L	1	19	95	12/21/10
Iron	7439-89-6	LA-505-411	U	<38		ug/L	1	38	190	12/21/10
Magnesium	7439-95-4	LA-505-411		7690		ug/L	1	14	70	12/21/10
Manganese	7439-96-5	LA-505-411	U	<6.0		ug/L	1	6.0	30	12/21/10
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Potassium	7440-09-7	LA-505-411		5060		ug/L	1	73	360	12/21/10
Silver	7440-22-4	LA-505-411	U	<7.0		ug/L	1	7.0	35	12/21/10
Sodium	7440-23-5	LA-505-411		21500		ug/L	1	11	55	12/21/10
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	12/21/10
Barium	7440-39-3	LA-505-411		25.0		ug/L	1	4.0	20	12/21/10
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Chromium	7440-47-3	LA-505-411	B	16.0		ug/L	1	14	70	12/21/10
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Copper	7440-50-8	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/21/10
Vanadium	7440-62-2	LA-505-411	U	<17		ug/L	1	17	85	12/21/10
Zinc	7440-66-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Calcium	7440-70-2	LA-505-411		33600		ug/L	1	28	140	12/21/10

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

REVISED103226 -

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226004
SAF# X11-005
Sample ID B27WT6

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	12/21/10
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Molybdenum	7439-98-7	LA-505-411	B	5.00		ug/L	1	4.0	20	12/21/10
Strontium	7440-24-6	LA-505-411		165		ug/L	1	4.0	20	12/21/10
Thallium	7440-28-0	LA-505-411	U	<49		ug/L	1	49	240	12/21/10
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	12/21/10
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	12/21/10
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/21/10
Boron	7440-42-8	LA-505-411	U	<41		ug/L	1	41	200	12/21/10
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	12/21/10
Silicon	7440-21-3	LA-505-411		17200		ug/L	1	25	120	12/21/10
Phosphorus	7723-14-0	LA-505-411	B	82.0		ug/L	1	72	360	12/21/10
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	12/21/10
ICPMS Prep										**12/14/10**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	200	12/17/10
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	12/17/10
Barium	7440-39-3	LA-505-412	D	27.7		ug/L	2	0.40	4.0	12/17/10

MDL = Minimum Detection
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TP Err = Total Propagated
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B - Analyte < the PQL(or EQL)but >= the IDL/MDL(Inorganic)
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X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED103226 -

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226004
SAF# X11-005
Sample ID B27WT6

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Chromium	7440-47-3	LA-505-412	BD	6.81		ug/L	2	1.0	10	12/17/10
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/17/10
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	12/17/10
Molybdenum	7439-98-7	LA-505-412	D	8.28		ug/L	2	0.10	1.0	12/17/10
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Arsenic	7440-38-2	LA-505-412	BD	6.12		ug/L	2	0.80	8.0	12/17/10
Selenium	7782-49-2	LA-505-412	BD	1.76		ug/L	2	0.60	6.0	12/17/10

MDL = Minimum Detection
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E - Analyte is an estimate, see comment section.
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U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED103226 -

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226005
SAF# X11-005
Sample ID B27WV5

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**12/06/10**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	UD	<19		ug/L	1	19	95	12/21/10
Iron	7439-89-6	LA-505-411	D	574		ug/L	1	38	190	12/21/10
Magnesium	7439-95-4	LA-505-411	D	77100		ug/L	1	14	70	12/21/10
Manganese	7439-96-5	LA-505-411	D	41.0		ug/L	1	6.0	30	12/21/10
Nickel	7440-02-0	LA-505-411	BD	16.0		ug/L	1	4.0	20	12/21/10
Potassium	7440-09-7	LA-505-411	D	50200		ug/L	1	73	360	12/21/10
Silver	7440-22-4	LA-505-411	UD	<7.0		ug/L	1	7.0	35	12/21/10
Sodium	7440-23-5	LA-505-411	D	2.18E5		ug/L	1	11	55	12/21/10
Antimony	7440-36-0	LA-505-411	UD	<47		ug/L	1	47	240	12/21/10
Barium	7440-39-3	LA-505-411	D	249		ug/L	1	4.0	20	12/21/10
Cadmium	7440-43-9	LA-505-411	UD	<4.0		ug/L	1	4.0	20	12/21/10
Chromium	7440-47-3	LA-505-411	UD	<14		ug/L	1	14	70	12/21/10
Cobalt	7440-48-4	LA-505-411	D	42.0		ug/L	1	4.0	20	12/21/10
Copper	7440-50-8	LA-505-411	BD	16.0		ug/L	1	5.0	25	12/21/10
Vanadium	7440-62-2	LA-505-411	D	124		ug/L	1	17	85	12/21/10
Zinc	7440-66-6	LA-505-411	D	33.0		ug/L	1	4.0	20	12/21/10
Calcium	7440-70-2	LA-505-411	D	3.36E5		ug/L	1	28	140	12/21/10

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X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED103226 -

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226005
SAF# X11-005
Sample ID B27WV5

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	BD	136		ug/L	1	42	210	12/21/10
Lithium	7439-93-2	LA-505-411	UD	<4.0		ug/L	1	4.0	20	12/21/10
Molybdenum	7439-98-7	LA-505-411	D	33.0		ug/L	1	4.0	20	12/21/10
Strontium	7440-24-6	LA-505-411	D	1660		ug/L	1	4.0	20	12/21/10
Thallium	7440-28-0	LA-505-411	BD	226		ug/L	1	49	240	12/21/10
Tin	7440-31-5	LA-505-411	UD	<49		ug/L	1	49	240	12/21/10
Arsenic	7440-38-2	LA-505-411	UD	<50		ug/L	1	50	250	12/21/10
Beryllium	7440-41-7	LA-505-411	UD	<4.0		ug/L	1	4.0	20	12/21/10
Boron	7440-42-8	LA-505-411	UD	<41		ug/L	1	41	200	12/21/10
Bismuth	7440-69-9	LA-505-411	UD	<37		ug/L	1	37	180	12/21/10
Silicon	7440-21-3	LA-505-411	D	1.72E5		ug/L	1	25	120	12/21/10
Phosphorus	7723-14-0	LA-505-411	D	538		ug/L	1	72	360	12/21/10
Selenium	7782-49-2	LA-505-411	D	377		ug/L	1	47	240	12/21/10
ICPMS Prep										**12/14/10**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	200	12/17/10
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	12/17/10
Barium	7440-39-3	LA-505-412	D	27.7		ug/L	2	0.40	4.0	12/17/10

MDL = Minimum Detection
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X,Y or Z - See comment detail and/or narrative.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED103226 -

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226005
SAF# X11-005
Sample ID B27WV5

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Chromium	7440-47-3	LA-505-412	BD	6.92		ug/L	2	1.0	10	12/17/10
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/17/10
Copper	7440-50-8	LA-505-412	BD	0.396		ug/L	2	0.20	2.0	12/17/10
Lead	7439-92-1	LA-505-412	BD	0.643		ug/L	2	0.20	2.0	12/17/10
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	12/17/10
Molybdenum	7439-98-7	LA-505-412	D	7.51		ug/L	2	0.10	1.0	12/17/10
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Arsenic	7440-38-2	LA-505-412	BD	5.72		ug/L	2	0.80	8.0	12/17/10
Selenium	7782-49-2	LA-505-412	BD	2.02		ug/L	2	0.60	6.0	12/17/10

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

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

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

REVISED103226 -

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226006
SAF# X11-005
Sample ID B27WT7

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**12/06/10**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	U	<19		ug/L	1	19	95	12/20/10
Iron	7439-89-6	LA-505-411	B	53.0		ug/L	1	38	190	12/20/10
Magnesium	7439-95-4	LA-505-411		7760		ug/L	1	14	70	12/20/10
Manganese	7439-96-5	LA-505-411	U	<6.0		ug/L	1	6.0	30	12/20/10
Nickel	7440-02-0	LA-505-411	B	6.00		ug/L	1	4.0	20	12/20/10
Potassium	7440-09-7	LA-505-411		5000		ug/L	1	73	360	12/20/10
Silver	7440-22-4	LA-505-411	UN	<7.0		ug/L	1	7.0	35	12/20/10
Sodium	7440-23-5	LA-505-411		22600		ug/L	1	11	55	12/20/10
Antimony	7440-36-0	LA-505-411	U	<47		ug/L	1	47	240	12/20/10
Barium	7440-39-3	LA-505-411		26.0		ug/L	1	4.0	20	12/20/10
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/20/10
Chromium	7440-47-3	LA-505-411	U	<14		ug/L	1	14	70	12/20/10
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/20/10
Copper	7440-50-8	LA-505-411	U	<5.0		ug/L	1	5.0	25	12/20/10
Vanadium	7440-62-2	LA-505-411	B	19.0		ug/L	1	17	85	12/20/10
Zinc	7440-66-6	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/20/10
Calcium	7440-70-2	LA-505-411		32900		ug/L	1	28	140	12/20/10

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

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

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

REVISED103226 -

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226006
SAF# X11-005
Sample ID B27WT7

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<42		ug/L	1	42	210	12/20/10
Lithium	7439-93-2	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/20/10
Molybdenum	7439-98-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/20/10
Strontium	7440-24-6	LA-505-411		171		ug/L	1	4.0	20	12/20/10
Thallium	7440-28-0	LA-505-411	UN	<49		ug/L	1	49	240	12/20/10
Tin	7440-31-5	LA-505-411	U	<49		ug/L	1	49	240	12/20/10
Arsenic	7440-38-2	LA-505-411	U	<50		ug/L	1	50	250	12/20/10
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	12/20/10
Boron	7440-42-8	LA-505-411	B	42.0		ug/L	1	41	200	12/20/10
Bismuth	7440-69-9	LA-505-411	U	<37		ug/L	1	37	180	12/20/10
Silicon	7440-21-3	LA-505-411		17400		ug/L	1	25	120	12/20/10
Phosphorus	7723-14-0	LA-505-411	B	73.0		ug/L	1	72	360	12/20/10
Selenium	7782-49-2	LA-505-411	U	<47		ug/L	1	47	240	12/20/10
ICPMS Prep										**12/14/10**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	200	12/17/10
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	12/17/10
Barium	7440-39-3	LA-505-412	D	27.0		ug/L	2	0.40	4.0	12/17/10

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

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

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

REVISED103226 -

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Sample # 103226006
SAF# X11-005
Sample ID B27WT7

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Beryllium	7440-41-7	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Chromium	7440-47-3	LA-505-412	BD	6.72		ug/L	2	1.0	10	12/17/10
Cobalt	7440-48-4	LA-505-412	UD	<0.10		ug/L	2	0.10	0.50	12/17/10
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	12/17/10
Lead	7439-92-1	LA-505-412	BD	0.551		ug/L	2	0.20	2.0	12/17/10
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	12/17/10
Molybdenum	7439-98-7	LA-505-412	D	7.27		ug/L	2	0.10	1.0	12/17/10
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	12/17/10
Arsenic	7440-38-2	LA-505-412	BD	5.57		ug/L	2	0.80	8.0	12/17/10
Selenium	7782-49-2	LA-505-412	BD	1.85		ug/L	2	0.60	6.0	12/17/10

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

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

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

REVISED103226 -

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF103226

Sample # 103226005
SAF# X11-005
Sample ID B27WV5

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Prep for Water										**12/07/10**
TPHDWA										
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	12/10/10

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

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

REVISED103226 -

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF103226

Sample # 103226006
SAF# X11-005
Sample ID B27WT7

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Prep for Water										**12/07/10**
TPHDWA										
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	12/10/10

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

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

REVISED103226 -

Attention Michael Neely
Department Radiochemistry

Group # WSCF103226

Sample # 103226005
SAF# X11-005
Sample ID B27WV5

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**12/09/10**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		3.1	1.5	pCi/L	1	1.7		12/15/10
Gross Beta	12587-47-2	LA-508-415		28	4.2	pCi/L	1	3.2		12/15/10
H3 EICHROM										**12/13/10**
TC99 TRI-CARB LSC										
Tritium	10028-17-8	LA-508-421		3.5E4	7000	pCi/L	1	180		12/16/10
Np/Th/Pu/Am/U Prep										**12/17/10**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.030	.19	pCi/L	1	0.33		12/20/10
SR-89/90										**12/20/10**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406	U	-4.1	4	pCi/L	1	1.5		12/27/10
Tc-99 Prep										**12/13/10**
TC99 TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421		43	9.8	pCi/L	1	6.3		12/18/10

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
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.

REVISED103226 -

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103226

Sample # 103226006
SAF# X11-005
Sample ID B27WT7

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**12/09/10**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415		3.2	1.5	pCi/L	1	1.7		12/15/10
Gross Beta	12587-47-2	LA-508-415		29	4.2	pCi/L	1	3.2		12/15/10
H3 EICHROM										**12/13/10**
TC99 TRI-CARB LSC										
Tritium	10028-17-8	LA-508-421		3.5E4	7100	pCi/L	1	180		12/16/10
Np/Th/Pu/Am/U Prep										**12/17/10**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	-0.040	.2	pCi/L	1	0.36		12/20/10
SR-89/90										**12/20/10**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406	U	-3.2	4.4	pCi/L	1	1.7		12/27/10
Tc-99 Prep										**12/13/10**
TC99 TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421		41	9.4	pCi/L	1	6.3		12/18/10

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
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.

REVISED103226 -

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF103226

Sample # 103226005
SAF# X11-005
Sample ID B27WV5

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										**12/06/10**
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		110		mg/L	1	1	10	12/06/10

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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED103226 -

Attention Michael Neely
Department Wet Chemistry

Group # WSCF103226

Sample # 103226006
SAF# X11-005
Sample ID B27WT7

Matrix WATER
Sampled 12/05/10
Received 12/05/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										**12/06/10**
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		110		mg/L	1	1	10	12/06/10

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.
PQL is equivalent to Estimated Quantitation Limit (EQL)

REVISED103226 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

QC Batch 170722
Associated Samples 103226003, 103226004, 103226005

Test ICP-6010 - All possible metals

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #43347**						
Aluminum	7429-90-5		<19	ug/L				U	12/21/10
Iron	7439-89-6		<38	ug/L				U	12/21/10
Magnesium	7439-95-4		<14	ug/L				U	12/21/10
Manganese	7439-96-5		<6.0	ug/L				U	12/21/10
Nickel	7440-02-0		<4.0	ug/L				U	12/21/10
Potassium	7440-09-7		<73	ug/L				U	12/21/10
Silver	7440-22-4		<7.0	ug/L				U	12/21/10
Sodium	7440-23-5		14.0	ug/L				B	12/21/10
Antimony	7440-36-0		<47	ug/L				U	12/21/10
Barium	7440-39-3		<4.0	ug/L				U	12/21/10
Cadmium	7440-43-9		<4.0	ug/L				U	12/21/10
Chromium	7440-47-3		<14	ug/L				U	12/21/10
Cobalt	7440-48-4		4.00	ug/L				B	12/21/10
Copper	7440-50-8		<5.0	ug/L				U	12/21/10
Vanadium	7440-62-2		<17	ug/L				U	12/21/10
Zinc	7440-66-6		<4.0	ug/L				U	12/21/10
Calcium	7440-70-2		<28	ug/L				U	12/21/10
Lead	7439-92-1		<42	ug/L				U	12/21/10
Lithium	7439-93-2		<4.0	ug/L				U	12/21/10

REVISED103226 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Molybdenum	7439-98-7		<4.0	ug/L					U	12/21/10
Strontium	7440-24-6		<4.0	ug/L					U	12/21/10
Thallium	7440-28-0		<49	ug/L					U	12/21/10
Tin	7440-31-5		<49	ug/L					U	12/21/10
Arsenic	7440-38-2		<50	ug/L					U	12/21/10
Beryllium	7440-41-7		<4.0	ug/L					U	12/21/10
Boron	7440-42-8		<41	ug/L					U	12/21/10
Bismuth	7440-69-9		<37	ug/L					U	12/21/10
Silicon	7440-21-3		<25	ug/L					U	12/21/10
Phosphorus	7723-14-0		<72	ug/L					U	12/21/10
Selenium	7782-49-2		<47	ug/L					U	12/21/10
LCS			**QC Sample #43348**							
Aluminum	7429-90-5		943	ug/L	94.3	80 - 120				12/21/10
Iron	7439-89-6		997	ug/L	99.7	80 - 120				12/21/10
Magnesium	7439-95-4		952	ug/L	95.2	80 - 120				12/21/10
Manganese	7439-96-5		989	ug/L	98.9	80 - 120				12/21/10
Nickel	7440-02-0		1020	ug/L	102	80 - 120				12/21/10
Potassium	7440-09-7		956	ug/L	95.6	80 - 120				12/21/10
Silver	7440-22-4		949	ug/L	94.9	80 - 120				12/21/10
Sodium	7440-23-5		986	ug/L	98.6	80 - 120				12/21/10
Antimony	7440-36-0		989	ug/L	98.9	80 - 120				12/21/10
Barium	7440-39-3		480	ug/L	96	80 - 120				12/21/10
Cadmium	7440-43-9		1030	ug/L	103	80 - 120				12/21/10
Chromium	7440-47-3		981	ug/L	98.1	80 - 120				12/21/10

REVISED103226 -

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Cobalt	7440-48-4		1020	ug/L	102	80 - 120				12/21/10
Copper	7440-50-8		978	ug/L	97.8	80 - 120				12/21/10
Vanadium	7440-62-2		965	ug/L	96.5	80 - 120				12/21/10
Zinc	7440-66-6		1010	ug/L	101	80 - 120				12/21/10
Calcium	7440-70-2		1100	ug/L	110	80 - 120				12/21/10
Lead	7439-92-1		1080	ug/L	108	80 - 120				12/21/10
Lithium	7439-93-2		468	ug/L	93.6	80 - 120				12/21/10
Molybdenum	7439-98-7		1000	ug/L	100	80 - 120				12/21/10
Strontium	7440-24-6		491	ug/L	98.2	80 - 120				12/21/10
Thallium	7440-28-0		819	ug/L	81.9	80 - 120				12/21/10
Tin	7440-31-5		1030	ug/L	103	80 - 120				12/21/10
Arsenic	7440-38-2		1030	ug/L	103	80 - 120				12/21/10
Beryllium	7440-41-7		511	ug/L	102.2	80 - 120				12/21/10
Boron	7440-42-8		959	ug/L	95.9	80 - 120				12/21/10
Bismuth	7440-69-9		997	ug/L	99.7	80 - 120				12/21/10
Silicon	7440-21-3		1030	ug/L	103	80 - 120				12/21/10
Phosphorus	7723-14-0		1080	ug/L	108	80 - 120				12/21/10
Selenium	7782-49-2		1030	ug/L	103	80 - 120				12/21/10
MS			**QC Sample #43349**							
			Original 103215015							
Aluminum	7429-90-5		938	ug/L	93.8	75 - 125				12/21/10
Iron	7439-89-6		1010	ug/L	101	75 - 125				12/21/10
Magnesium	7439-95-4		1040	ug/L	104	75 - 125			X	12/21/10
Manganese	7439-96-5		992	ug/L	99.2	75 - 125				12/21/10
Nickel	7440-02-0		1020	ug/L	102	75 - 125				12/21/10

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7		940	ug/L	94	75 - 125				12/21/10
Silver	7440-22-4		860	ug/L	86	75 - 125				12/21/10
Sodium	7440-23-5		950	ug/L	95	75 - 125				12/21/10
Antimony	7440-36-0		1030	ug/L	103	75 - 125				12/21/10
Barium	7440-39-3		489	ug/L	97.8	75 - 125				12/21/10
Cadmium	7440-43-9		1030	ug/L	103	75 - 125				12/21/10
Chromium	7440-47-3		1000	ug/L	100	75 - 125				12/21/10
Cobalt	7440-48-4		1020	ug/L	102	75 - 125				12/21/10
Copper	7440-50-8		970	ug/L	97	75 - 125				12/21/10
Vanadium	7440-62-2		977	ug/L	97.7	75 - 125				12/21/10
Zinc	7440-66-6		1020	ug/L	102	75 - 125				12/21/10
Calcium	7440-70-2		1500	ug/L	150	75 - 125			X	12/21/10
Lead	7439-92-1		1050	ug/L	105	75 - 125				12/21/10
Lithium	7439-93-2		468	ug/L	93.6	75 - 125				12/21/10
Molybdenum	7439-98-7		1010	ug/L	101	75 - 125				12/21/10
Strontium	7440-24-6		503	ug/L	100.6	75 - 125				12/21/10
Thallium	7440-28-0		812	ug/L	81.2	75 - 125				12/21/10
Tin	7440-31-5		1060	ug/L	106	75 - 125				12/21/10
Arsenic	7440-38-2		1050	ug/L	105	75 - 125				12/21/10
Beryllium	7440-41-7		513	ug/L	102.6	75 - 125				12/21/10
Boron	7440-42-8		984	ug/L	98.4	75 - 125				12/21/10
Bismuth	7440-69-9		979	ug/L	97.9	75 - 125				12/21/10
Silicon	7440-21-3		1350	ug/L	135	75 - 125			X	12/21/10
Phosphorus	7723-14-0		1050	ug/L	105	75 - 125				12/21/10
Selenium	7782-49-2		1020	ug/L	102	75 - 125				12/21/10

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #43350**								
			Original	**103215015**					**Paired**	**43349**	
Aluminum	7429-90-5		927	ug/L	92.7	75 - 125	1.20	20			12/21/10
Iron	7439-89-6		964	ug/L	96.4	75 - 125	4.70	20			12/21/10
Magnesium	7439-95-4		820	ug/L	82	75 - 125	23.70	20	*	X	12/21/10
Manganese	7439-96-5		967	ug/L	96.7	75 - 125	2.60	20			12/21/10
Nickel	7440-02-0		993	ug/L	99.3	75 - 125	2.70	20			12/21/10
Potassium	7440-09-7		870	ug/L	87	75 - 125	7.70	20			12/21/10
Silver	7440-22-4		892	ug/L	89.2	75 - 125	3.70	20			12/21/10
Sodium	7440-23-5		860	ug/L	86	75 - 125	9.90	20			12/21/10
Antimony	7440-36-0		1010	ug/L	101	75 - 125	2.00	20			12/21/10
Barium	7440-39-3		473	ug/L	94.6	75 - 125	3.30	20			12/21/10
Cadmium	7440-43-9		1010	ug/L	101	75 - 125	2.00	20			12/21/10
Chromium	7440-47-3		975	ug/L	97.5	75 - 125	2.50	20			12/21/10
Cobalt	7440-48-4		993	ug/L	99.3	75 - 125	2.70	20			12/21/10
Copper	7440-50-8		946	ug/L	94.6	75 - 125	2.50	20			12/21/10
Vanadium	7440-62-2		944	ug/L	94.4	75 - 125	3.40	20			12/21/10
Zinc	7440-66-6		1000	ug/L	100	75 - 125	2.00	20			12/21/10
Calcium	7440-70-2		400	ug/L	40	75 - 125	115.80	20	*	X	12/21/10
Lead	7439-92-1		1030	ug/L	103	75 - 125	1.90	20			12/21/10
Lithium	7439-93-2		462	ug/L	92.4	75 - 125	1.30	20			12/21/10
Molybdenum	7439-98-7		993	ug/L	99.3	75 - 125	1.70	20			12/21/10
Strontium	7440-24-6		481	ug/L	96.2	75 - 125	4.50	20			12/21/10
Thallium	7440-28-0		790	ug/L	79	75 - 125	2.70	20			12/21/10
Tin	7440-31-5		1040	ug/L	104	75 - 125	1.90	20			12/21/10

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
Arsenic	7440-38-2		1000	ug/L	100	75 - 125	4.90	20			12/21/10
Beryllium	7440-41-7		500	ug/L	100	75 - 125	2.60	20			12/21/10
Boron	7440-42-8		962	ug/L	96.2	75 - 125	2.30	20			12/21/10
Bismuth	7440-69-9		941	ug/L	94.1	75 - 125	4.00	20			12/21/10
Silicon	7440-21-3		990	ug/L	99	75 - 125	30.80	20	*	X	12/21/10
Phosphorus	7723-14-0		1000	ug/L	100	75 - 125	4.90	20			12/21/10
Selenium	7782-49-2		987	ug/L	98.7	75 - 125	3.30	20			12/21/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

QC Batch 170723
Associated Samples 103226006

Test ICP-6010 - All possible metals

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #43351**						
Aluminum	7429-90-5		<19	ug/L				U	12/20/10
Iron	7439-89-6		<38	ug/L				U	12/20/10
Magnesium	7439-95-4		<14	ug/L				U	12/20/10
Manganese	7439-96-5		<6.0	ug/L				U	12/20/10
Nickel	7440-02-0		<4.0	ug/L				U	12/20/10
Potassium	7440-09-7		<73	ug/L				U	12/20/10
Silver	7440-22-4		<7.0	ug/L				U	12/20/10
Sodium	7440-23-5		<11	ug/L				U	12/20/10
Antimony	7440-36-0		<47	ug/L				U	12/20/10
Barium	7440-39-3		<4.0	ug/L				U	12/20/10
Cadmium	7440-43-9		<4.0	ug/L				U	12/20/10
Chromium	7440-47-3		<14	ug/L				U	12/20/10
Cobalt	7440-48-4		<4.0	ug/L				U	12/20/10
Copper	7440-50-8		<5.0	ug/L				U	12/20/10
Vanadium	7440-62-2		<17	ug/L				U	12/20/10
Zinc	7440-66-6		<4.0	ug/L				U	12/20/10
Calcium	7440-70-2		<28	ug/L				U	12/20/10
Lead	7439-92-1		<42	ug/L				U	12/20/10
Lithium	7439-93-2		<4.0	ug/L				U	12/20/10

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Molybdenum	7439-98-7		<4.0	ug/L					U	12/20/10
Strontium	7440-24-6		<4.0	ug/L					U	12/20/10
Thallium	7440-28-0		<49	ug/L					U	12/20/10
Tin	7440-31-5		<49	ug/L					U	12/20/10
Arsenic	7440-38-2		<50	ug/L					U	12/20/10
Beryllium	7440-41-7		<4.0	ug/L					U	12/20/10
Boron	7440-42-8		<41	ug/L					U	12/20/10
Bismuth	7440-69-9		<37	ug/L					U	12/20/10
Silicon	7440-21-3		<25	ug/L					U	12/20/10
Phosphorus	7723-14-0		<72	ug/L					U	12/20/10
Selenium	7782-49-2		<47	ug/L					U	12/20/10
LCS			**QC Sample #43352**							
Aluminum	7429-90-5		990	ug/L	99	80 - 120				12/20/10
Iron	7439-89-6		1030	ug/L	103	80 - 120				12/20/10
Magnesium	7439-95-4		974	ug/L	97.4	80 - 120				12/20/10
Manganese	7439-96-5		987	ug/L	98.7	80 - 120				12/20/10
Nickel	7440-02-0		952	ug/L	95.2	80 - 120				12/20/10
Potassium	7440-09-7		1060	ug/L	106	80 - 120				12/20/10
Silver	7440-22-4		798	ug/L	79.8	80 - 120			X	12/20/10
Sodium	7440-23-5		1020	ug/L	102	80 - 120				12/20/10
Antimony	7440-36-0		983	ug/L	98.3	80 - 120				12/20/10
Barium	7440-39-3		494	ug/L	98.8	80 - 120				12/20/10
Cadmium	7440-43-9		972	ug/L	97.2	80 - 120				12/20/10
Chromium	7440-47-3		1010	ug/L	101	80 - 120				12/20/10

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Attention Michael Neely
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Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Cobalt	7440-48-4		957	ug/L	95.7	80 - 120				12/20/10
Copper	7440-50-8		1000	ug/L	100	80 - 120				12/20/10
Vanadium	7440-62-2		977	ug/L	97.7	80 - 120				12/20/10
Zinc	7440-66-6		960	ug/L	96	80 - 120				12/20/10
Calcium	7440-70-2		1010	ug/L	101	80 - 120				12/20/10
Lead	7439-92-1		1010	ug/L	101	80 - 120				12/20/10
Lithium	7439-93-2		484	ug/L	96.8	80 - 120				12/20/10
Molybdenum	7439-98-7		955	ug/L	95.5	80 - 120				12/20/10
Strontium	7440-24-6		503	ug/L	100.6	80 - 120				12/20/10
Thallium	7440-28-0		750	ug/L	75	80 - 120			X	12/20/10
Tin	7440-31-5		1010	ug/L	101	80 - 120				12/20/10
Arsenic	7440-38-2		1030	ug/L	103	80 - 120				12/20/10
Beryllium	7440-41-7		515	ug/L	103	80 - 120				12/20/10
Boron	7440-42-8		1010	ug/L	101	80 - 120				12/20/10
Bismuth	7440-69-9		996	ug/L	99.6	80 - 120				12/20/10
Silicon	7440-21-3		979	ug/L	97.9	80 - 120				12/20/10
Phosphorus	7723-14-0		1030	ug/L	103	80 - 120				12/20/10
Selenium	7782-49-2		969	ug/L	96.9	80 - 120				12/20/10
MS			**QC Sample #43353**							
			Original 103226006							
Aluminum	7429-90-5	<19	976	ug/L	97.6	75 - 125				12/20/10
Iron	7439-89-6	53.0	987	ug/L	98.7	75 - 125				12/20/10
Magnesium	7439-95-4	7760	810	ug/L	81	75 - 125			X	12/20/10
Manganese	7439-96-5	<6.0	965	ug/L	96.5	75 - 125				12/20/10
Nickel	7440-02-0	6.00	936	ug/L	93.6	75 - 125				12/20/10

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Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7	5000	1000	ug/L	100	75 - 125			X	12/20/10
Silver	7440-22-4	<7.0	935	ug/L	93.5	75 - 125				12/20/10
Sodium	7440-23-5	22600	1100	ug/L	110	75 - 125			X	12/20/10
Antimony	7440-36-0	<47	983	ug/L	98.3	75 - 125				12/20/10
Barium	7440-39-3	26.0	487	ug/L	97.4	75 - 125				12/20/10
Cadmium	7440-43-9	<4.0	969	ug/L	96.9	75 - 125				12/20/10
Chromium	7440-47-3	<14	993	ug/L	99.3	75 - 125				12/20/10
Cobalt	7440-48-4	<4.0	942	ug/L	94.2	75 - 125				12/20/10
Copper	7440-50-8	<5.0	986	ug/L	98.6	75 - 125				12/20/10
Vanadium	7440-62-2	19.0	963	ug/L	96.3	75 - 125				12/20/10
Zinc	7440-66-6	<4.0	968	ug/L	96.8	75 - 125				12/20/10
Calcium	7440-70-2	32900	-1000	ug/L	-100	75 - 125			X	12/20/10
Lead	7439-92-1	<42	986	ug/L	98.6	75 - 125				12/20/10
Lithium	7439-93-2	<4.0	484	ug/L	96.8	75 - 125				12/20/10
Molybdenum	7439-98-7	<4.0	954	ug/L	95.4	75 - 125				12/20/10
Strontium	7440-24-6	171	492	ug/L	98.4	75 - 125				12/20/10
Thallium	7440-28-0	<49	705	ug/L	70.5	75 - 125			N	12/20/10
Tin	7440-31-5	<49	998	ug/L	99.8	75 - 125				12/20/10
Arsenic	7440-38-2	<50	1040	ug/L	104	75 - 125				12/20/10
Beryllium	7440-41-7	<4.0	508	ug/L	101.6	75 - 125				12/20/10
Boron	7440-42-8	42.0	956	ug/L	95.6	75 - 125				12/20/10
Bismuth	7440-69-9	<37	942	ug/L	94.2	75 - 125				12/20/10
Silicon	7440-21-3	17400	-100	ug/L	-10	75 - 125			X	12/20/10
Phosphorus	7723-14-0	73.0	1010	ug/L	100.7	75 - 125				12/20/10
Selenium	7782-49-2	<47	1010	ug/L	101	75 - 125				12/20/10

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Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #43354**								
			Original	**103226006**					**Paired**	**43353**	
Aluminum	7429-90-5	<19	1000	ug/L	100	75 - 125	2.40	20			12/20/10
Iron	7439-89-6	53.0	1030	ug/L	102.7	75 - 125	4.00	20			12/20/10
Magnesium	7439-95-4	7760	1200	ug/L	120	75 - 125	38.80	20	*	X	12/20/10
Manganese	7439-96-5	<6.0	992	ug/L	99.2	75 - 125	2.80	20			12/20/10
Nickel	7440-02-0	6.00	944	ug/L	94.4	75 - 125	0.90	20			12/20/10
Potassium	7440-09-7	5000	1300	ug/L	130	75 - 125	26.10	20	*	X	12/20/10
Silver	7440-22-4	<7.0	945	ug/L	94.5	75 - 125	1.10	20			12/20/10
Sodium	7440-23-5	22600	2100	ug/L	210	75 - 125	62.50	20	*	X	12/20/10
Antimony	7440-36-0	<47	1000	ug/L	100	75 - 125	1.70	20			12/20/10
Barium	7440-39-3	26.0	498	ug/L	99.6	75 - 125	2.20	20			12/20/10
Cadmium	7440-43-9	<4.0	974	ug/L	97.4	75 - 125	0.50	20			12/20/10
Chromium	7440-47-3	<14	1020	ug/L	102	75 - 125	2.70	20			12/20/10
Cobalt	7440-48-4	<4.0	950	ug/L	95	75 - 125	0.80	20			12/20/10
Copper	7440-50-8	<5.0	1000	ug/L	100	75 - 125	1.40	20			12/20/10
Vanadium	7440-62-2	19.0	991	ug/L	99.1	75 - 125	2.90	20			12/20/10
Zinc	7440-66-6	<4.0	972	ug/L	97.2	75 - 125	0.40	20			12/20/10
Calcium	7440-70-2	32900	-200	ug/L	-20	75 - 125	-133.30	20		X	12/20/10
Lead	7439-92-1	<42	993	ug/L	99.3	75 - 125	0.70	20			12/20/10
Lithium	7439-93-2	<4.0	497	ug/L	99.4	75 - 125	2.70	20			12/20/10
Molybdenum	7439-98-7	<4.0	962	ug/L	96.2	75 - 125	0.80	20			12/20/10
Strontium	7440-24-6	171	512	ug/L	102.4	75 - 125	4.00	20			12/20/10
Thallium	7440-28-0	<49	765	ug/L	76.5	75 - 125	8.20	20			12/20/10
Tin	7440-31-5	<49	997	ug/L	99.7	75 - 125	0.10	20			12/20/10

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
Arsenic	7440-38-2	<50	1060	ug/L	106	75 - 125	1.90	20			12/20/10
Beryllium	7440-41-7	<4.0	521	ug/L	104.2	75 - 125	2.50	20			12/20/10
Boron	7440-42-8	42.0	1030	ug/L	102.8	75 - 125	7.30	20			12/20/10
Bismuth	7440-69-9	<37	984	ug/L	98.4	75 - 125	4.40	20			12/20/10
Silicon	7440-21-3	17400	300	ug/L	30	75 - 125	400.00	20	*	X	12/20/10
Phosphorus	7723-14-0	73.0	997	ug/L	99.7	75 - 125	1.00	20			12/20/10
Selenium	7782-49-2	<47	1000	ug/L	100	75 - 125	1.00	20			12/20/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

QC Batch 170738
Associated Samples 103226002

Test Anions by Ion Chromatography (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #43371**							
Fluoride	16984-48-8		<0.044	ug/mL					U	12/06/10
Chloride	16887-00-6		<0.042	ug/mL					U	12/06/10
Nitrite-N	NO2-N		<0.018	ug/mL					U	12/06/10
Bromide	24959-67-9		<0.054	ug/mL					U	12/06/10
Nitrate-N	NO3-N		<9.7E-3	ug/mL					U	12/06/10
Phosphate-P	PO4-P		<0.072	ug/mL					U	12/06/10
Sulfate	14808-79-8		<0.083	ug/mL					U	12/06/10
LCS			**QC Sample #43372**							
Fluoride	16984-48-8		0.910	ug/mL	91.9	90 - 110				12/06/10
Chloride	16887-00-6		2.00	ug/mL	100.9	90 - 110				12/06/10
Nitrite-N	NO2-N		0.989	ug/mL	101.1	90 - 110				12/06/10
Bromide	24959-67-9		4.05	ug/mL	103.2	90 - 110				12/06/10
Nitrate-N	NO3-N		0.921	ug/mL	104.1	90 - 110				12/06/10
Phosphate-P	PO4-P		1.97	ug/mL	102.8	90 - 110				12/06/10
Sulfate	14808-79-8		4.08	ug/mL	104	90 - 110				12/06/10
DUP			**QC Sample #43373**							
			Original 103228008							
Fluoride	16984-48-8		<0.088	ug/mL			0.00	20	UD	12/06/10

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
Chloride	16887-00-6		<0.084	ug/mL			200.00	20	*	UXD	12/06/10
Nitrite-N	NO2-N		<0.036	ug/mL			0.00	20		UD	12/06/10
Bromide	24959-67-9		<0.11	ug/mL			0.00	20		UD	12/06/10
Nitrate-N	NO3-N		<0.019	ug/mL			0.00	20		UD	12/06/10
Phosphate-P	PO4-P		<0.14	ug/mL			0.00	20		UD	12/06/10
Sulfate	14808-79-8		<0.17	ug/mL			0.00	20		UD	12/06/10
MS			**QC Sample #43374**								
			Original 103228008								
Fluoride	16984-48-8		0.813	ug/mL	81.3	80 - 120				D	12/06/10
Chloride	16887-00-6		2.04	ug/mL	102.2	80 - 120				D	12/06/10
Nitrite-N	NO2-N		0.973	ug/mL	98.4	80 - 120				D	12/06/10
Bromide	24959-67-9		4.19	ug/mL	105.9	80 - 120				D	12/06/10
Nitrate-N	NO3-N		0.940	ug/mL	105.1	80 - 120				D	12/06/10
Phosphate-P	PO4-P		2.00	ug/mL	103.3	80 - 120				D	12/06/10
Sulfate	14808-79-8		4.16	ug/mL	104.9	80 - 120				D	12/06/10
MSD			**QC Sample #43375**								
			Original 103228008						**Paired**	**43374**	
Fluoride	16984-48-8		0.856	ug/mL	85.6	80 - 120	5.20	20		D	12/06/10
Chloride	16887-00-6		2.07	ug/mL	103.5	80 - 120	1.30	20		D	12/06/10
Nitrite-N	NO2-N		0.949	ug/mL	96	80 - 120	2.50	20		D	12/06/10
Bromide	24959-67-9		4.00	ug/mL	101	80 - 120	4.70	20		D	12/06/10
Nitrate-N	NO3-N		0.923	ug/mL	103.2	80 - 120	1.80	20		D	12/06/10
Phosphate-P	PO4-P		2.06	ug/mL	106.5	80 - 120	3.10	20		D	12/06/10
Sulfate	14808-79-8		4.09	ug/mL	103.2	80 - 120	1.60	20		D	12/06/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

QC Batch 170739
Associated Samples 103226001

Test Anions by Ion Chromatography (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #43378**							
Fluoride	16984-48-8		<0.044	ug/mL					U	12/06/10
Chloride	16887-00-6		<0.042	ug/mL					U	12/06/10
Nitrite-N	NO2-N		<0.018	ug/mL					U	12/06/10
Bromide	24959-67-9		<0.054	ug/mL					U	12/06/10
Nitrate-N	NO3-N		<9.7E-3	ug/mL					U	12/06/10
Phosphate-P	PO4-P		<0.072	ug/mL					U	12/06/10
Sulfate	14808-79-8		<0.083	ug/mL					U	12/06/10
LCS			**QC Sample #43379**							
Fluoride	16984-48-8		0.974	ug/mL	98.4	90 - 110				12/06/10
Chloride	16887-00-6		1.96	ug/mL	98.8	90 - 110				12/06/10
Nitrite-N	NO2-N		0.950	ug/mL	97.1	90 - 110				12/06/10
Bromide	24959-67-9		3.89	ug/mL	99.2	90 - 110				12/06/10
Nitrate-N	NO3-N		0.882	ug/mL	99.6	90 - 110				12/06/10
Phosphate-P	PO4-P		1.90	ug/mL	99.6	90 - 110				12/06/10
Sulfate	14808-79-8		4.00	ug/mL	101.9	90 - 110				12/06/10
DUP			**QC Sample #43380**							
			Original 103226001							
Fluoride	16984-48-8	0.416	0.411	ug/mL			1.20	20	D	12/06/10

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chloride	16887-00-6	6.40	6.53	ug/mL			2.00	20	D	12/06/10
Nitrite-N	NO2-N	<0.036	<0.036	ug/mL			0.00	20	UD	12/06/10
Bromide	24959-67-9	<0.11	<0.11	ug/mL			0.00	20	UD	12/06/10
Nitrate-N	NO3-N	4.60	4.70	ug/mL			2.20	20	D	12/06/10
Phosphate-P	PO4-P	<0.14	<0.14	ug/mL			0.00	20	UD	12/06/10
Sulfate	14808-79-8	29.3	29.9	ug/mL			2.00	20	D	12/06/10
MS			**QC Sample #43381**							
			Original 103226001							
Fluoride	16984-48-8	0.416	0.980	ug/mL	98	80 - 120			D	12/06/10
Chloride	16887-00-6	6.40	2.16	ug/mL	107.8	80 - 120			D	12/06/10
Nitrite-N	NO2-N	<0.036	0.937	ug/mL	94.8	80 - 120			D	12/06/10
Bromide	24959-67-9	<0.11	4.01	ug/mL	101.3	80 - 120			D	12/06/10
Nitrate-N	NO3-N	4.60	0.993	ug/mL	111.1	80 - 120			D	12/06/10
Phosphate-P	PO4-P	<0.14	1.95	ug/mL	101.2	80 - 120			D	12/06/10
Sulfate	14808-79-8	29.3	4.30	ug/mL	108.6	80 - 120			D	12/06/10
MSD			**QC Sample #43382**							
			Original 103226001					**Paired**	**43381**	
Fluoride	16984-48-8	0.416	1.02	ug/mL	102.2	80 - 120	4.20	20	D	12/06/10
Chloride	16887-00-6	6.40	2.25	ug/mL	112.5	80 - 120	4.30	20	D	12/06/10
Nitrite-N	NO2-N	<0.036	0.950	ug/mL	96.1	80 - 120	1.40	20	D	12/06/10
Bromide	24959-67-9	<0.11	3.98	ug/mL	100.5	80 - 120	0.80	20	D	12/06/10
Nitrate-N	NO3-N	4.60	0.985	ug/mL	110.1	80 - 120	0.90	20	D	12/06/10
Phosphate-P	PO4-P	<0.14	1.94	ug/mL	100.7	80 - 120	0.50	20	D	12/06/10
Sulfate	14808-79-8	29.3	4.56	ug/mL	115.1	80 - 120	5.80	20	D	12/06/10

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Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF103226

QC Batch 170835
Associated Samples 103226005, 103226006

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #43477**							
Diesel	TPHDIESEL		<0.4	ug/L					U	12/10/10
LCS			**QC Sample #43478**							
Diesel	TPHDIESEL		2400	ug/L	95.3	65 - 128				12/10/10
MS			**QC Sample #43479**							
			Original 103218016							
Diesel	TPHDIESEL		2100	ug/L	91.1	73 - 123				12/10/10
MSD			**QC Sample #43480**							
			Original 103218016					**Paired**	**43479**	
Diesel	TPHDIESEL		2300	ug/L	96.7	73 - 123	6.00	20		12/10/10

Quality Control Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF103226

QC Batch 170878
Associated Samples 103226005, 103226006

Test Total Alkalinity as mg/L CaCO3 (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
DUP			**QC Sample #43650**							
			Original 103189004							
Total Alkalinity as CaCO3	ALKALINITY		110	mg/L			8.70	20		12/06/10
LCS			**QC Sample #43651**							
Total Alkalinity as CaCO3	ALKALINITY		100	mg/L	100	80 - 120				12/06/10

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

QC Batch 171243
Associated Samples 103226003, 103226004, 103226005, 103226006

Test ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #43969**							
Aluminum	7429-90-5		<5.0	ug/L					U	12/17/10
Silver	7440-22-4		<0.10	ug/L					U	12/17/10
Antimony	7440-36-0		<0.30	ug/L					U	12/17/10
Barium	7440-39-3		<0.20	ug/L					U	12/17/10
Beryllium	7440-41-7		<0.10	ug/L					U	12/17/10
Cadmium	7440-43-9		<0.10	ug/L					U	12/17/10
Chromium	7440-47-3		<0.50	ug/L					U	12/17/10
Cobalt	7440-48-4		<0.050	ug/L					U	12/17/10
Copper	7440-50-8		<0.10	ug/L					U	12/17/10
Lead	7439-92-1		<0.10	ug/L					U	12/17/10
Mercury	7439-97-6		<0.050	ug/L					U	12/17/10
Molybdenum	7439-98-7		<0.050	ug/L					U	12/17/10
Thallium	7440-28-0		<0.050	ug/L					U	12/17/10
Tin	7440-31-5		<0.050	ug/L					U	12/17/10
Arsenic	7440-38-2		<0.40	ug/L					U	12/17/10
Selenium	7782-49-2		<0.30	ug/L					U	12/17/10
LCS			**QC Sample #43970**							
Aluminum	7429-90-5		398	ug/L	99.4	85 - 115				12/17/10

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Silver	7440-22-4		42.1	ug/L	105.2	85 - 115				12/17/10
Antimony	7440-36-0		40.2	ug/L	100.6	85 - 115				12/17/10
Barium	7440-39-3		40.8	ug/L	102	85 - 115				12/17/10
Beryllium	7440-41-7		40.3	ug/L	100.8	85 - 115				12/17/10
Cadmium	7440-43-9		39.9	ug/L	99.8	85 - 115				12/17/10
Chromium	7440-47-3		41.7	ug/L	104.2	85 - 115				12/17/10
Cobalt	7440-48-4		40.3	ug/L	100.8	85 - 115				12/17/10
Copper	7440-50-8		39.7	ug/L	99.2	85 - 115				12/17/10
Lead	7439-92-1		42.2	ug/L	105.6	85 - 115				12/17/10
Mercury	7439-97-6		1.86	ug/L	93	85 - 115				12/17/10
Molybdenum	7439-98-7		41.4	ug/L	103.4	85 - 115				12/17/10
Thallium	7440-28-0		40.8	ug/L	101.9	85 - 115				12/17/10
Tin	7440-31-5		41.0	ug/L	102.5	85 - 115				12/17/10
Arsenic	7440-38-2		39.4	ug/L	98.4	85 - 115				12/17/10
Selenium	7782-49-2		37.5	ug/L	93.8	85 - 115				12/17/10
MS			**QC Sample #43971**							
			Original 103199001							
Aluminum	7429-90-5		365	ug/L	91.2	70 - 130				12/17/10
Silver	7440-22-4		39.0	ug/L	97.4	70 - 130				12/17/10
Antimony	7440-36-0		39.6	ug/L	99.1	70 - 130				12/17/10
Barium	7440-39-3		37.7	ug/L	94.2	70 - 130				12/17/10
Beryllium	7440-41-7		39.0	ug/L	97.5	70 - 130				12/17/10
Cadmium	7440-43-9		38.0	ug/L	95	70 - 130				12/17/10
Chromium	7440-47-3		40.0	ug/L	100	70 - 130				12/17/10
Cobalt	7440-48-4		37.7	ug/L	94.3	70 - 130				12/17/10

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Copper	7440-50-8		34.9	ug/L	87.2	70 - 130				12/17/10
Lead	7439-92-1		42.5	ug/L	106.2	70 - 130				12/17/10
Mercury	7439-97-6		1.88	ug/L	94	70 - 130				12/17/10
Molybdenum	7439-98-7		42.0	ug/L	105	70 - 130				12/17/10
Thallium	7440-28-0		42.4	ug/L	106	70 - 130				12/17/10
Tin	7440-31-5		40.8	ug/L	102.1	70 - 130				12/17/10
Arsenic	7440-38-2		40.3	ug/L	100.9	70 - 130				12/17/10
Selenium	7782-49-2		35.9	ug/L	89.7	70 - 130				12/17/10
MSD			**QC Sample #43972**							
			Original 103199001						**Paired 43971**	
Aluminum	7429-90-5		347	ug/L	86.8	70 - 130	4.90	20		12/17/10
Silver	7440-22-4		38.9	ug/L	97.3	70 - 130	0.10	20		12/17/10
Antimony	7440-36-0		40.1	ug/L	100.3	70 - 130	1.20	20		12/17/10
Barium	7440-39-3		40.3	ug/L	100.6	70 - 130	6.60	20		12/17/10
Beryllium	7440-41-7		38.8	ug/L	96.9	70 - 130	0.60	20		12/17/10
Cadmium	7440-43-9		37.9	ug/L	94.6	70 - 130	0.40	20		12/17/10
Chromium	7440-47-3		39.8	ug/L	99.6	70 - 130	0.40	20		12/17/10
Cobalt	7440-48-4		37.2	ug/L	93.1	70 - 130	1.30	20		12/17/10
Copper	7440-50-8		34.8	ug/L	86.9	70 - 130	0.30	20		12/17/10
Lead	7439-92-1		42.3	ug/L	105.8	70 - 130	0.40	20		12/17/10
Mercury	7439-97-6		1.89	ug/L	94.6	70 - 130	0.60	20		12/17/10
Molybdenum	7439-98-7		42.5	ug/L	106.3	70 - 130	1.20	20		12/17/10
Thallium	7440-28-0		42.0	ug/L	104.9	70 - 130	1.00	20		12/17/10
Tin	7440-31-5		41.1	ug/L	102.6	70 - 130	0.50	20		12/17/10
Arsenic	7440-38-2		41.0	ug/L	102.6	70 - 130	1.70	20		12/17/10

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Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF103226

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Selenium	7782-49-2		37.1	ug/L	92.7	70 - 130	3.30	20		12/17/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103226

QC Batch 170694
Associated Samples 103226005, 103226006

Test Americium/Curium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #43257**								
Americium-241	14596-10-2		-0.068	pCi/L						U	12/20/10
LCS			**QC Sample #43258**								
Americium-241	14596-10-2		5.9	pCi/sample	106.4	80 - 120					12/20/10
DUP			**QC Sample #43259**								
			Original 103161003								
Americium-241	14596-10-2		-0.17	pCi/L			-141.70	20	*	U	12/20/10

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Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103226

QC Batch 170711
Associated Samples 103226005, 103226006

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #43320**								
Strontium-89/90	SR-RAD		-3.2	pCi/L						U	12/27/10
LCS			**QC Sample #43321**								
Strontium-89/90	SR-RAD		87	pCi/L	93.4	80 - 120					12/27/10
DUP			**QC Sample #43322**								
			Original 103218014								
Strontium-89/90	SR-RAD		-1.4	pCi/L			386.70	20	*	U	12/27/10

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Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103226

QC Batch 170763
Associated Samples 103226005, 103226006

Test Gross Alpha/Gross Beta

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #43460**								
Gross Alpha	12587-46-1		0.36	pCi/L						U	12/15/10
Gross Beta	12587-47-2		2.3	pCi/L						U	12/15/10
LCS			**QC Sample #43461**								
Gross Alpha	12587-46-1		79	pCi/L	96.6	80 - 120					12/15/10
Gross Beta	12587-47-2		250	pCi/L	116.1	80 - 120					12/15/10
DUP			**QC Sample #43462**								
			Original 103218016								
Gross Alpha	12587-46-1		2.3	pCi/L			38.60	20	*	X	12/15/10
Gross Beta	12587-47-2		48	pCi/L			6.50	20			12/15/10

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Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103226

QC Batch 170947
Associated Samples 103226005, 103226006

Test TC99 by Liquid Scintillation

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #43819**								
Technetium-99	14133-76-7		-6.4	pCi/L						U	12/18/10
LCS			**QC Sample #43820**								
Technetium-99	14133-76-7		250	pCi/L	102.1	80 - 120					12/18/10
DUP			**QC Sample #43821**								
			Original 103218014								
Technetium-99	14133-76-7		3.6	pCi/L			26.50	20	*	U	12/18/10
MS			**QC Sample #43822**								
			Original 103218014								
Technetium-99	14133-76-7		1000	pCi/L	103.9	75 - 125					12/18/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103226

QC Batch 170958
Associated Samples 103226005, 103226006

Test Tritium by LSC

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #43860**							
Tritium	10028-17-8		-34	pCi/L					U	12/16/10
LCS			**QC Sample #43861**							
Tritium	10028-17-8		2800	pCi/L	89.1	80 - 120				12/16/10
DUP			**QC Sample #43862**							
			Original 103215010							
Tritium	10028-17-8		4600	pCi/L			4.30	20		12/16/10
MS			**QC Sample #43863**							
			Original 103215010							
Tritium	10028-17-8		19000	pCi/L	90.5	75 - 125				12/16/10

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Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103226

QC Batch 170694
Associated Samples 103226005, 103226006

Test Americium/Curium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #103226005**							
Americium-243 Tracer	14993-75-0				84.9	25 - 105				12/20/10
SAMPLE			**Sample #103226006**							
Americium-243 Tracer	14993-75-0				81.7	25 - 105				12/20/10
BLANK			**QC Sample #43257**							
Americium-243 Tracer	14993-75-0				91.6	25 - 105				12/20/10
LCS			**QC Sample #43258**							
Americium-243 Tracer	14993-75-0				85.1	25 - 105				12/20/10
DUP			**QC Sample #43259**							
			Original 103161003							
Americium-243 Tracer	14993-75-0				94.2	25 - 105	0.00			12/20/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF103226

QC Batch 170711
Associated Samples 103226005, 103226006

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #103226005**							
Strontium-85	13967-73-2				87.6	25 - 105				12/27/10
SAMPLE			**Sample #103226006**							
Strontium-85	13967-73-2				79.1	25 - 105				12/27/10
BLANK			**QC Sample #43320**							
Strontium-85	13967-73-2				86.1	25 - 105				12/27/10
LCS			**QC Sample #43321**							
Strontium-85	13967-73-2				92.3	25 - 105				12/27/10
DUP			**QC Sample #43322**							
			Original 103218014							
Strontium-85	13967-73-2				87.4	25 - 105	8.30			12/27/10

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF103226

QC Batch 170835
Associated Samples 103226005, 103226006

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #103226005**							
o-Terphenyl	84-15-1				83.5	70 - 130				12/10/10
SAMPLE			**Sample #103226006**							
o-Terphenyl	84-15-1				81.2	70 - 130				12/10/10
BLANK			**QC Sample #43477**							
o-Terphenyl	84-15-1				81.2	70 - 130				12/10/10
LCS			**QC Sample #43478**							
o-Terphenyl	84-15-1				102.4	70 - 130				12/10/10
MS			**QC Sample #43479**							
			Original 103218016							
o-Terphenyl	84-15-1				88.2	70 - 130				12/10/10
MSD			**QC Sample #43480**							
			Original 103218016						**Paired 43479**	
o-Terphenyl	84-15-1				104.6	70 - 130	17.00	20		12/10/10

REVISED103226 -

Attention: Michael Neely **Group #** WSCF103226

Quality Control Comments

Department Inorganic

43349 B281K1(103215015MS)

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

43350 B281K1(103215015MSD)

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

43352 LCS for HBN 170723 [INOG/2958]

Analyte Silver - ICP-6010 - All possible metals
[1] LCS failure, out-of-limits recovery.

Analyte Thallium - ICP-6010 - All possible metals
[1] LCS failure, out-of-limits recovery.

43353 B27WT7(103226006MS)

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

Analyte Silicon - 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 #** WSCF103226

Quality Control Comments

Analyte Sodium - ICP-6010 - All possible metals
[1] X5: Sample concentration exceed spiking level by a factor of 4. Spike recoveries are not valid.
43354 B27WT7(103226006MSD)

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

Analyte Silicon - 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.
43373 B28K67(103228008DUP)

Analyte Chloride - Anions by Ion Chromatography (Water)
[1] Duplicate is flagged for RPD out-of-limits. RPD does not apply to samples concentrations below the calibration range. RPD is calculated on measured values and not applicable for a result below the RDL.

Analytical Comment Report

Attention: Michael Neely

Group # WSCF103226

Quality Control Comments

Department Radiochemistry

43462 B281C8(103218016DUP)

Analyte Gross Alpha - Gross Alpha/Gross Beta

[1] Duplicate RPD out-of-limits. RPD limit does not apply to results near the Minimum Detectable Concentration.

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 7 pages
Including cover page

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

ACKNOWLEDGEMENT OF SAMPLES RECEIVED

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

ATTN: Michael Neely

Customer Code: CHPRC
PO #: 401922
Work Order #: 103226
Profile #: X11-005-312
Proj. Mgr.:
Phone:

The following samples were received from you on 12/5/2010 9:50:00 AM. 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		
103226001	B28JV6	WATER	12/5/2010 08:45	12/5/2010 09:50
		IC-W		
103226002	B28JV7	WATER	12/5/2010 08:45	12/5/2010 09:50
		IC-W		
103226003	B27WV4	WATER	12/5/2010 08:45	12/5/2010 09:50
		2008-W; 6010-W		
103226004	B27WT6	WATER	12/5/2010 08:45	12/5/2010 09:50
		2008-W; 6010-W		
103226005	B27WV5	WATER	12/5/2010 08:45	12/5/2010 09:50
		2008-W; 6010-W; AEA-AM-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W; SR89/90-W; TC99-W; TPHDWA-W		
103226006	B27WT7	WATER	12/5/2010 08:45	12/5/2010 09:50
		2008-W; 6010-W; AEA-AM-W; ALK-W; GAB-AO-W; GAB-BO-W; H3-COL-W; SR89/90-W; TC99-W; TPHDWA-W		

Test Acronym Description

Test Acronym	Description
2008-W	ICP-MS (W)
6010-W	ICP-AES (W)
AEA-AM-W	Americium (AEA) (W)
ALK-W	Total Alkalinity (W)
GAB-AO-W	Gross Alpha/Beta (A only)(W)
GAB-BO-W	Gross Alpha/Beta (B only)(W)

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

H3-COL-W	Tritium by EICHROM Column (W)
IC-W	Anions by IC (W)
SR89/90-W	Strontium 89/90 (GPC) (W)
TC99-W	Technetium-99 (W)
TPHDWA-W	TPHD-WA (W)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-005-312 Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-1630
SAF No.: X11-005	Sampling Origin	Purchase Order/Charge Code: X0118ES20
Project Title: B12, B16DURA, OCTOBER 2010	Logbook No.: HNF-N-506 33179	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

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

103226

SPECIAL INSTRUCTIONS Hold Time
Site Wide Area Generator Knowledge Information Form applies
The CACN for all analytical work at WSCF is 401922
Please report all TICs

Total Activity Exemption Yes ☑ No ☐

Sample No	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B25JV6 00	N	W	12-5-10	0845	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Date/Time	Received By	Date/Time
CA Snyder CHPRC (Print) (Sign)	DEC 05 2010 0550	Victor Sim (Print) (Sign)	DEC 05 2010 0950
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *

S = Soil	DS = Dried Solid		
SE = Sediment	DI = Drum Liquids		
SO = Solid	T = Tissue		
SL = Sludge	WT = Water		
W = Water	L = Liquid		
O = Oil	V = Vegetation		
A = Air	X = Other		

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

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-005-313 Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Hustad	Telephone No.: 376-4650
SAF No.: X11-005	Sampling Origin:	Purchase Order/Charge Code: 300118E520
Project Title: IU2 JUGDURA OCTOBER 2010	Logbook No.: HNF-N-506 33179	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

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

SPECIAL INSTRUCTIONS Hold Time — Total Activity Exemption: Yes ☑ No ☐
Site Wide Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401922.
Please report all TICs.

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B28JV7 002	N	W	12-5-10	0845	1x500-mL P	300.0_ANIONS_IC: List-1 + Brom_Phosp (7)	48 Hours	Cool-4C

Relinquished By	Date/Time	Received By	Date/Time
CA Snyder CHPRC (Print / Sign)	DEC 05 2010 0950	Victor (Print / Sign)	DEC 05 2010 0950
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time
Relinquished By	Date/Time	Received By	Date/Time

Matrix *: S = Soil; SD = Solid; SL = Sludge; W = Water; O = Oil; A = Air; DS = Drum Solid; DL = Drum Liquid; T = Tissue; WI = Wipe; L = Liquid; V = Vegetation; X = Other

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

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-005-54 Page 1 of 1

Collector: CA Snyder	Contact/Requester: Karen Waters-Halsted	Telephone No.: 376-4650
SAF No.: CHPRC X11-005	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300118E520
Project Title: U-2 R16DURA OCTOBER 2010	Logbook No.: HNF-N-506 83179	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days **PRIORITY**	Offsite Property No.: N/A

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

SPECIAL INSTRUCTIONS Hold Time
Site Wide Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401522
Please report all TICs

Total Activity Exemption: Yes ☑ No ☐

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B27WV4 003	Y	W	12-5-10	0845	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B27WV4	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B27WV4	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B27WV5 005	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B27WV5	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B27WV5	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B27WV5	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B27WV5	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B27WV5	N	W			1x1000-mL G/P	AMCMISO_IE_PREC_AEA: Am-241 (1)	180 Days	HNO3 to pH <2
B27WV5	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B27WV5	N	W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B27WV5	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B27WV5	N	W	12-5-10	0845	3x1000-mL aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			DEC 05 2010 0950	Victor			DEC 06 2010 0950
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

A-6004-842 (REV 2)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C. # X11-005-53 Page 1 of 1

Collector: CA Snyder CHPRC	Contact/Requester: Karen Waters-Husted	Telephone No.: 376-6650
SAF No.: X11-005	Sampling Origin: Hanford Site	Purchase Order/Charge Code: 300LRES20
Project Title: B/Z EXDURA OCTOBER 2010	Logbook No: HNF-N-506 33179	Ice Chest No.: N/A
Shipped To (Lab): Waste Sampling & Characterization	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: CERCLA	Priority: 30 Days PRIORITY	Offsite Property No.: N/A

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

SPECIAL INSTRUCTIONS: Hold Time — Total Activity Exemption: Yes ☑ No ☐
Site Wide Area Generator Knowledge Information Form applies.
The CACN for all analytical work at WSCF is 401927
Please report all TICs

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B27WT6 004	Y	W	12-5-10	0845	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B27WT6	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B27WT6	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B27WT7 006	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B27WT7	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B27WT7	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B27WT7	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B27WT7	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2); ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B27WT7	N	W			1x1000-mL G/P	AVCMISO_IE_PREC_AEA: Am-241 (1)	180 Days	HNO3 to pH <2
B27WT7	N	W			1x1-L G/P	Strontium-89,90 -- Total Sr	6 Months	HNO3 to pH <2
B27WT7	N	W			1x1000-mL G/P	TC99_CMDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B27WT7	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B27WT7	N	W	12-5-10	0845	3x1000-mL aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C

Relinquished By	Print	Sign	Date/Time	Received By	Print	Sign	Date/Time
CA Snyder CHPRC			DEC 05 2010 1150	Victor			DEC 05 2010 0750
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time
Relinquished By			Date/Time	Received By			Date/Time

Matrix *

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

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

A-6004-842 (REV 2)