WSCF Laboratory

PO Box 650 S3-30
Richland, WA 99352

RECEIVED AUGUST 24, 2010

0094605

August 23, 2010

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

Dear Michael Neely,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF101713

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 WSCF101713

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

Very truly yours,

Electronically signed by Bill Baird
For Lab Manager
WSCF Analytical Lab
(509) 373-7495

Attachments 4

CC: w/Attachments

File/LB

ATTACHMENT 1

COVER SHEET

Consisting of 2 pages
Including cover page

WSCF SAF Number Cross Reference

Group # WSCF101713
Data Deliverable Date 08/29/10

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
X10-081	B26687	101713001	WATER	07/15/10	07/15/10
X10-081	B26627	101713002	WATER	07/15/10	07/15/10
X10-081	B26628	101713003	WATER	07/15/10	07/15/10

ATTACHMENT 2

NARRATIVE

Consisting of 4 pages
Including cover page

Attachment 2
Narrative
WSCF101713

Introduction

Three (3) groundwater samples were received at the WSCF Laboratory on July 15, 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. 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):

- Batch QC 143678 analyzed on sample# B26663 (10170000)

All QC controls are within the established limits.

Attachment 2
Narrative
WSCF101713

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 143794 analyzed on sample# B26622 (101675014)
  - Boron was detected in the Blank and was evaluated. No sample results in this batch were affected.
  - Calcium, Magnesium, Silicon and Sodium – exceeded spiking levels by a factor of 4. Spike recoveries and associated RPDs are not valid.

All other QC controls are within the established limits.

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

- Batch QC 146483 analyzed on sample# B26461 (101705006)

All QC controls are within the established limits.

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

- Batch QC 144584 analyzed on sample# B26557 (101700006)

All QC controls are within the established limits.

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 144580 analyzed on sample# B26628 (101713003)

All QC controls are within the established limits.

Radiochemistry Comments

Rad Chem – The hold time requirement for this analysis was met. A Duplicate, Matrix Spike (Matrix Spikes apply only to 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.

Attachment 2
Narrative
WSCF101713

- Americium-241:
  - Batch QC 143676 analyzed on sample# B26628 (101713003)
    - 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 QC controls are within the established limits.
- Technetium-99:
  - Batch QC 147775 analyzed on sample# B26475 (101705014)
    - All QC controls are within the established limits.
- Tritium:
  - Batch QC 145983 analyzed on sample# B26514 (101695009)
    - All QC controls are within the established limits.
- Gross Alpha / Gross Beta:
  - Batch QC 143698 analyzed on sample# B26628 (101713003)
    - Gross alpha and gross beta - 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 QC controls are within the established limits.
- Strontium-89/90:
  - Batch QC 147481 analyzed on sample# B26557 (101700006)
    - All QC controls are within the established limits.

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

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 44 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 # WSCF101713
Report Date August 23, 2010

Analytical: Electronically signed by Bill Baird

Client Services: Electronically signed by Susan Kon

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

Batch QC List

Attention Michael Neely
Department Inorganic

Group # WSCF101713

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
143678	143678	2	BLANK	33385	BLANK		Anions by Ion Chromatography (Water)
143678	143678	3	LCS	33386	LCS		Anions by Ion Chromatography (Water)
143678	143678	4	DUP	33387	B26663(101700001DUP)	101700001	Anions by Ion Chromatography (Water)
143678	143678	5	MS	33388	B26663(101700001MS)	101700001	Anions by Ion Chromatography (Water)
143678	143678	6	MSD	33389	B26663(101700001MSD)	101700001	Anions by Ion Chromatography (Water)
143678	143678	15	SAMPLE	101713001	B26687		Anions by Ion Chromatography (Water)
143794	148790	1	BLANK	33536	BLANK		ICP-6010 - All possible metals
143794	148790	2	LCS	33537	LCS		ICP-6010 - All possible metals
143794	148790	3	MS	33538	B26622(101675014MS)	101675014	ICP-6010 - All possible metals
143794	148790	4	MSD	33539	B26622(101675014MSD)	101675014	ICP-6010 - All possible metals
143794	148790	9	SAMPLE	101713002	B26627		ICP-6010 - All possible metals
143794	148790	10	SAMPLE	101713003	B26628		ICP-6010 - All possible metals
146483	146484	4	BLANK	34260	BLANK		ICP-2008 MS All possible metal
146483	146484	5	LCS	34261	LCS		ICP-2008 MS All possible metal
146483	146484	7	MS	34262	B26461(101705006MS)	101705006	ICP-2008 MS All possible metal
146483	146484	8	MSD	34263	B26461(101705006MSD)	101705006	ICP-2008 MS All possible metal
146483	146484	10	SAMPLE	101713002	B26627		ICP-2008 MS All possible metal
146483	146484	11	SAMPLE	101713003	B26628		ICP-2008 MS All possible metal

Batch QC List

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF101713

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
144580	147485	1	BLANK	33783	BLANK		Extractable Diesel and Petroleum
144580	147485	2	LCS	33784	LCS		Extractable Diesel and Petroleum
144580	147485	3	MS	33785	B26628(101713003MS)	101713003	Extractable Diesel and Petroleum
144580	147485	4	MSD	33786	B26628(101713003MSD)	101713003	Extractable Diesel and Petroleum
144580	147485	10	SAMPLE	101713003	B26628		Extractable Diesel and Petroleum

Batch QC List

Attention Michael Neely
Department Radiochemistry

Group # WSCF101713

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
143676	147696	1	BLANK	33381	BLANK		Americium/Curium (AEA)
143676	147696	2	LCS	33382	LCS		Americium/Curium (AEA)
143676	147696	3	SAMPLE	101713003	B26628		Americium/Curium (AEA)
143676	147696	4	DUP	33383	B26628(101713003DUP)	101713003	Americium/Curium (AEA)
143698	151382	1	BLANK	33454	BLANK		Gross Alpha/Gross Beta
143698	151382	2	LCS	33455	LCS		Gross Alpha/Gross Beta
143698	151382	3	SAMPLE	101713003	B26628		Gross Alpha/Gross Beta
143698	151382	4	SAMPLE	101713003	B26628		Gross Alpha/Gross Beta
143698	151382	5	DUP	33456	B26628(101713003DUP)	101713003	Gross Alpha/Gross Beta
145983	148783	1	BLANK	34123	BLANK		Tritium by LSC
145983	148783	2	LCS	34124	LCS		Tritium by LSC
145983	148783	4	DUP	34125	B265L4(101695009DUP)	101695009	Tritium by LSC
145983	148783	5	MS	34126	B265L4(101695009MS)	101695009	Tritium by LSC
145983	148783	12	SAMPLE	101713003	B26628		Tritium by LSC
147481	151213	1	BLANK	34374	BLANK		Strontium 89/90 (GPC/GEA)
147481	151213	2	LCS	34375	LCS		Strontium 89/90 (GPC/GEA)
147481	151213	3	DUP	34376	B26557(101700006DUP)	101700006	Strontium 89/90 (GPC/GEA)
147481	151213	10	SAMPLE	101713003	B26628		Strontium 89/90 (GPC/GEA)
147775	148486	1	BLANK	34520	BLANK		TC99 by Liquid Scintillation
147775	148486	2	LCS	34521	LCS		TC99 by Liquid Scintillation
147775	148486	4	DUP	34522	B26475(101705014DUP)	101705014	TC99 by Liquid Scintillation
147775	148486	5	MS	34523	B26475(101705014MS)	101705014	TC99 by Liquid Scintillation
147775	148486	7	SAMPLE	101713003	B26628		TC99 by Liquid Scintillation

Batch QC List

Attention Michael Neely
Department Wet Chemistry

Group # WSCF101713

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
144584	144584	1	LCS	33787	LCS		Total Alkalinity as mg/L CaCO3 (Water)
144584	144584	2	DUP	33788	B26557(101700006DUP)	101700006	Total Alkalinity as mg/L CaCO3 (Water)
144584	144584	6	SAMPLE	101713003	B26628		Total Alkalinity as mg/L CaCO3 (Water)

Method Reference

Attention Michael Neely
Department Inorganic

Group # WSCF101713

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 # WSCF101713

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 # WSCF101713

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 # WSCF101713

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 # WSCF101713

Sample # 101713001
SAF# X10-081
Sample ID B26687

Matrix WATER
Sampled 07/15/10
Received 07/15/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**07/15/10**
Anions by IC										
Fluoride	16984-48-8	LA-533-410	BD	0.166		ug/mL	2	0.060	0.40	07/15/10
Chloride	16887-00-6	LA-533-410	D	14.5		ug/mL	2	0.086	0.80	07/15/10
Nitrite-N	NO2-N	LA-533-410	UD	<0.036		ug/mL	2	0.036	0.20	07/15/10
Bromide	24959-67-9	LA-533-410	BD	0.105		ug/mL	2	0.090	1.0	07/15/10
Nitrate-N	NO3-N	LA-533-410	BD	0.165		ug/mL	2	0.062	0.20	07/15/10
Phosphate-P	PO4-P	LA-533-410	UD	<0.14		ug/mL	2	0.14	0.80	07/15/10
Sulfate	14808-79-8	LA-533-410	D	94.7		ug/mL	2	0.13	2.0	07/15/10

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. (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.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Sample # 101713002
SAF# X10-081
Sample ID B26627

Matrix WATER
Sampled 07/15/10
Received 07/15/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**07/19/10**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	U	<17		ug/L	1	17	85	08/04/10
Iron	7439-89-6	LA-505-411	B	63.0		ug/L	1	18	90	08/04/10
Magnesium	7439-95-4	LA-505-411		12100		ug/L	1	16	80	08/04/10
Manganese	7439-96-5	LA-505-411		57.0		ug/L	1	4.0	20	08/04/10
Nickel	7440-02-0	LA-505-411	U	<4.0		ug/L	1	4.0	20	08/04/10
Potassium	7440-09-7	LA-505-411		3380		ug/L	1	55	280	08/04/10
Silver	7440-22-4	LA-505-411	U	<5.0		ug/L	1	5.0	25	08/04/10
Sodium	7440-23-5	LA-505-411		36700		ug/L	1	23	120	08/04/10
Antimony	7440-36-0	LA-505-411	U	<38		ug/L	1	38	190	08/04/10
Barium	7440-39-3	LA-505-411		33.0		ug/L	1	4.0	20	08/04/10
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	08/04/10
Chromium	7440-47-3	LA-505-411	U	<13		ug/L	1	13	65	08/04/10
Cobalt	7440-48-4	LA-505-411	U	<4.0		ug/L	1	4.0	20	08/04/10
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	08/04/10
Vanadium	7440-62-2	LA-505-411	U	<12		ug/L	1	12	60	08/04/10
Zinc	7440-66-6	LA-505-411	U	<6.0		ug/L	1	6.0	30	08/04/10
Calcium	7440-70-2	LA-505-411		26200		ug/L	1	39	200	08/04/10

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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.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Sample # 101713002
SAF# X10-081
Sample ID B26627

Matrix WATER
Sampled 07/15/10
Received 07/15/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<23		ug/L	1	23	120	08/04/10
Lithium	7439-93-2	LA-505-411	B	18.0		ug/L	1	4.0	20	08/04/10
Molybdenum	7439-98-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	08/04/10
Strontium	7440-24-6	LA-505-411		314		ug/L	1	4.0	20	08/04/10
Thallium	7440-28-0	LA-505-411	U	<35		ug/L	1	35	180	08/04/10
Tin	7440-31-5	LA-505-411	U	<39		ug/L	1	39	200	08/04/10
Arsenic	7440-38-2	LA-505-411	U	<65		ug/L	1	65	320	08/04/10
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	08/04/10
Boron	7440-42-8	LA-505-411	U	<19		ug/L	1	19	95	08/04/10
Bismuth	7440-69-9	LA-505-411	B	35.0		ug/L	1	23	120	08/04/10
Silicon	7440-21-3	LA-505-411		4300		ug/L	1	61	300	08/04/10
Phosphorus	7723-14-0	LA-505-411	B	58.0		ug/L	1	55	280	08/04/10
Selenium	7782-49-2	LA-505-411	U	<45		ug/L	1	45	220	08/04/10
ICPMS Prep										**07/28/10**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	UD	<10		ug/L	2	10	200	07/28/10
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	07/28/10
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	07/28/10
Barium	7440-39-3	LA-505-412	D	35.4		ug/L	2	0.40	4.0	07/28/10

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. (Inorganic)
C - Analyte was found in the Associated Blank. (Inorganic)
D - Analyte was reported at a secondary diltution factor.
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U - Analyzed for but not detected above limiting criteria.
X,Y or Z - See comment detail and/or narrative.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Sample # 101713002
SAF# X10-081
Sample ID B26627

Matrix WATER
Sampled 07/15/10
Received 07/15/10

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	07/28/10
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	07/28/10
Chromium	7440-47-3	LA-505-412	UD	<1.0		ug/L	2	1.0	10	07/28/10
Cobalt	7440-48-4	LA-505-412	BD	0.207		ug/L	2	0.10	0.50	07/28/10
Copper	7440-50-8	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	07/28/10
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	07/28/10
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	07/28/10
Molybdenum	7439-98-7	LA-505-412	D	4.33		ug/L	2	0.10	1.0	07/28/10
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	07/28/10
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	07/28/10
Arsenic	7440-38-2	LA-505-412	UD	<0.80		ug/L	2	0.80	8.0	07/28/10
Selenium	7782-49-2	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	07/28/10

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. (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.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Sample # 101713003
SAF# X10-081
Sample ID B26628

Matrix WATER
Sampled 07/15/10
Received 07/15/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
ICP Prep										**07/19/10**
ICP-AES										
Aluminum	7429-90-5	LA-505-411	U	<17		ug/L	1	17	85	08/04/10
Iron	7439-89-6	LA-505-411		4340		ug/L	1	18	90	08/04/10
Magnesium	7439-95-4	LA-505-411		12300		ug/L	1	16	80	08/04/10
Manganese	7439-96-5	LA-505-411		83.0		ug/L	1	4.0	20	08/04/10
Nickel	7440-02-0	LA-505-411	B	7.00		ug/L	1	4.0	20	08/04/10
Potassium	7440-09-7	LA-505-411		3400		ug/L	1	55	280	08/04/10
Silver	7440-22-4	LA-505-411	U	<5.0		ug/L	1	5.0	25	08/04/10
Sodium	7440-23-5	LA-505-411		37300		ug/L	1	23	120	08/04/10
Antimony	7440-36-0	LA-505-411	U	<38		ug/L	1	38	190	08/04/10
Barium	7440-39-3	LA-505-411		42.0		ug/L	1	4.0	20	08/04/10
Cadmium	7440-43-9	LA-505-411	U	<4.0		ug/L	1	4.0	20	08/04/10
Chromium	7440-47-3	LA-505-411	U	<13		ug/L	1	13	65	08/04/10
Cobalt	7440-48-4	LA-505-411	B	5.00		ug/L	1	4.0	20	08/04/10
Copper	7440-50-8	LA-505-411	U	<4.0		ug/L	1	4.0	20	08/04/10
Vanadium	7440-62-2	LA-505-411	U	<12		ug/L	1	12	60	08/04/10
Zinc	7440-66-6	LA-505-411	U	<6.0		ug/L	1	6.0	30	08/04/10
Calcium	7440-70-2	LA-505-411		26700		ug/L	1	39	200	08/04/10

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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.

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Sample # 101713003
SAF# X10-081
Sample ID B26628

Matrix WATER
Sampled 07/15/10
Received 07/15/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Lead	7439-92-1	LA-505-411	U	<23		ug/L	1	23	120	08/04/10
Lithium	7439-93-2	LA-505-411	B	18.0		ug/L	1	4.0	20	08/04/10
Molybdenum	7439-98-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	08/04/10
Strontium	7440-24-6	LA-505-411		324		ug/L	1	4.0	20	08/04/10
Thallium	7440-28-0	LA-505-411	U	<35		ug/L	1	35	180	08/04/10
Tin	7440-31-5	LA-505-411	U	<39		ug/L	1	39	200	08/04/10
Arsenic	7440-38-2	LA-505-411	U	<65		ug/L	1	65	320	08/04/10
Beryllium	7440-41-7	LA-505-411	U	<4.0		ug/L	1	4.0	20	08/04/10
Boron	7440-42-8	LA-505-411	U	<19		ug/L	1	19	95	08/04/10
Bismuth	7440-69-9	LA-505-411	U	<23		ug/L	1	23	120	08/04/10
Silicon	7440-21-3	LA-505-411		4810		ug/L	1	61	300	08/04/10
Phosphorus	7723-14-0	LA-505-411	U	<55		ug/L	1	55	280	08/04/10
Selenium	7782-49-2	LA-505-411	U	<45		ug/L	1	45	220	08/04/10
ICPMS Prep										**07/28/10**
ICP-MS										
Aluminum	7429-90-5	LA-505-412	BD	22.9		ug/L	2	10	200	07/28/10
Silver	7440-22-4	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	07/28/10
Antimony	7440-36-0	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	07/28/10
Barium	7440-39-3	LA-505-412	D	42.5		ug/L	2	0.40	4.0	07/28/10

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

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

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

WSCF Analytical Results Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Sample # 101713003
SAF# X10-081
Sample ID B26628

Matrix WATER
Sampled 07/15/10
Received 07/15/10

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	07/28/10
Cadmium	7440-43-9	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	07/28/10
Chromium	7440-47-3	LA-505-412	BD	9.37		ug/L	2	1.0	10	07/28/10
Cobalt	7440-48-4	LA-505-412	D	0.760		ug/L	2	0.10	0.50	07/28/10
Copper	7440-50-8	LA-505-412	D	4.10		ug/L	2	0.20	2.0	07/28/10
Lead	7439-92-1	LA-505-412	UD	<0.20		ug/L	2	0.20	2.0	07/28/10
Mercury	7439-97-6	LA-505-412	UD	<0.10		ug/L	2	0.10	0.40	07/28/10
Molybdenum	7439-98-7	LA-505-412	D	2.62		ug/L	2	0.10	1.0	07/28/10
Thallium	7440-28-0	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	07/28/10
Tin	7440-31-5	LA-505-412	UD	<0.10		ug/L	2	0.10	1.0	07/28/10
Arsenic	7440-38-2	LA-505-412	BD	1.04		ug/L	2	0.80	8.0	07/28/10
Selenium	7782-49-2	LA-505-412	UD	<0.60		ug/L	2	0.60	6.0	07/28/10

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. (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.

WSCF Analytical Results Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF101713

Sample # 101713003
SAF# X10-081
Sample ID B26628

Matrix WATER
Sampled 07/15/10
Received 07/15/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Prep for Water										**07/21/10**
TPHDWA										
Diesel	TPHDIESEL	LA-523-493	U	<70		ug/L	1	70	100	07/28/10

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 - Presumpt. compound evidence based on MS library search.

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

WSCF Analytical Results Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF101713

Sample # 101713003
SAF# X10-081
Sample ID B26628

Matrix WATER
Sampled 07/15/10
Received 07/15/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alpha/Beta Prep										**08/08/10**
Gross Alpha/Beta										
Gross Alpha	12587-46-1	LA-508-415	U	-0.11	.87	pCi/L	1	1.8		08/16/10
Gross Beta	12587-47-2	LA-508-415		12	2.6	pCi/L	1	2.7		08/16/10
H3 EICHROM										**07/26/10**
TRI-CARB LSC										
Tritium	10028-17-8	LA-508-421	U	-19	69	pCi/L	1	160		08/04/10
SR-89/90										**08/04/10**
SR-89/90										
Strontium-89/90	SR-RAD	LA-220-406	U	-3.1	2.4	pCi/L	1	1.9		08/17/10
Tc-99										**07/29/10**
TRI-CARB LSC										
Technetium-99	14133-76-7	LA-508-421	U	-1.6	3.6	pCi/L	1	6.1		08/04/10
Th/Pu/Am/U Teva										**07/29/10**
AEA Am-U-Pu										
Americium-241	14596-10-2	LA-508-471	U	0.049	.17	pCi/L	1	0.29		07/29/10

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.

WSCF Analytical Results Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF101713

Sample # 101713003
SAF# X10-081
Sample ID B26628

Matrix WATER
Sampled 07/15/10
Received 07/15/10

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										**07/20/10**
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		78		mg/L	1	1	10	07/20/10

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.

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

QC Batch 143678
Associated Samples 101713001

Test Anions by Ion Chromatography (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #33385**							
Fluoride	16984-48-8		<0.030	ug/mL					U	07/15/10
Chloride	16887-00-6		<0.043	ug/mL					U	07/15/10
Nitrite-N	NO2-N		<0.018	ug/mL					U	07/15/10
Bromide	24959-67-9		<0.045	ug/mL					U	07/15/10
Nitrate-N	NO3-N		<0.031	ug/mL					U	07/15/10
Phosphate-P	PO4-P		<0.070	ug/mL					U	07/15/10
Sulfate	14808-79-8		<0.066	ug/mL					U	07/15/10
LCS			**QC Sample #33386**							
Fluoride	16984-48-8		0.899	ug/mL	90.8	90 - 110				07/15/10
Chloride	16887-00-6		1.95	ug/mL	98.5	90 - 110				07/15/10
Nitrite-N	NO2-N		0.970	ug/mL	99.2	90 - 110				07/15/10
Bromide	24959-67-9		3.88	ug/mL	98.9	90 - 110				07/15/10
Nitrate-N	NO3-N		0.892	ug/mL	100.7	90 - 110				07/15/10
Phosphate-P	PO4-P		1.92	ug/mL	100.4	90 - 110				07/15/10
Sulfate	14808-79-8		3.94	ug/mL	100.5	90 - 110				07/15/10
DUP			**QC Sample #33387**							
			Original 101700001							
Fluoride	16984-48-8		0.371	ug/mL			5.30	20	BD	07/15/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chloride	16887-00-6		6.38	ug/mL			1.60	20	D	07/15/10
Nitrite-N	NO2-N		<0.036	ug/mL			0.00	20	UD	07/15/10
Bromide	24959-67-9		<0.090	ug/mL			0.00	20	UD	07/15/10
Nitrate-N	NO3-N		4.65	ug/mL			0.90	20	D	07/15/10
Phosphate-P	PO4-P		<0.14	ug/mL			0.00	20	UD	07/15/10
Sulfate	14808-79-8		29.3	ug/mL			1.70	20	D	07/15/10
MS			**QC Sample #33388**							
			Original 101700001							
Fluoride	16984-48-8		0.971	ug/mL	97.1	80 - 120			D	07/15/10
Chloride	16887-00-6		2.16	ug/mL	107.9	80 - 120			D	07/15/10
Nitrite-N	NO2-N		0.932	ug/mL	94.3	80 - 120			D	07/15/10
Bromide	24959-67-9		3.94	ug/mL	99.5	80 - 120			D	07/15/10
Nitrate-N	NO3-N		0.874	ug/mL	97.8	80 - 120			D	07/15/10
Phosphate-P	PO4-P		1.96	ug/mL	101.5	80 - 120			D	07/15/10
Sulfate	14808-79-8		3.85	ug/mL	97.2	80 - 120			D	07/15/10
MSD			**QC Sample #33389**							
			Original 101700001					**Paired 33388**		
Fluoride	16984-48-8		0.972	ug/mL	97.2	80 - 120	0.10	20	D	07/15/10
Chloride	16887-00-6		2.14	ug/mL	106.9	80 - 120	0.90	20	D	07/15/10
Nitrite-N	NO2-N		0.953	ug/mL	96.4	80 - 120	2.20	20	D	07/15/10
Bromide	24959-67-9		3.94	ug/mL	99.4	80 - 120	0.10	20	D	07/15/10
Nitrate-N	NO3-N		0.898	ug/mL	100.5	80 - 120	2.70	20	D	07/15/10
Phosphate-P	PO4-P		1.86	ug/mL	96.2	80 - 120	5.40	20	D	07/15/10
Sulfate	14808-79-8		3.87	ug/mL	97.7	80 - 120	0.50	20	D	07/15/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

QC Batch 143794
Associated Samples 101713002, 101713003

Test ICP-6010 - All possible metals

Analyte	CAS #	Original Found	QC Found	Units	% Recov Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #33536**						
Aluminum	7429-90-5		<17	ug/L				U	08/04/10
Iron	7439-89-6		<18	ug/L				U	08/04/10
Magnesium	7439-95-4		<16	ug/L				U	08/04/10
Manganese	7439-96-5		<4.0	ug/L				U	08/04/10
Nickel	7440-02-0		<4.0	ug/L				U	08/04/10
Potassium	7440-09-7		<55	ug/L				U	08/04/10
Silver	7440-22-4		<5.0	ug/L				U	08/04/10
Sodium	7440-23-5		<23	ug/L				U	08/04/10
Antimony	7440-36-0		<38	ug/L				U	08/04/10
Barium	7440-39-3		<4.0	ug/L				U	08/04/10
Cadmium	7440-43-9		<4.0	ug/L				U	08/04/10
Chromium	7440-47-3		<13	ug/L				U	08/04/10
Cobalt	7440-48-4		<4.0	ug/L				U	08/04/10
Copper	7440-50-8		<4.0	ug/L				U	08/04/10
Vanadium	7440-62-2		<12	ug/L				U	08/04/10
Zinc	7440-66-6		<6.0	ug/L				U	08/04/10
Calcium	7440-70-2		<39	ug/L				U	08/04/10
Lead	7439-92-1		<23	ug/L				U	08/04/10
Lithium	7439-93-2		<4.0	ug/L				U	08/04/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Molybdenum	7439-98-7		<4.0	ug/L					U	08/04/10
Strontium	7440-24-6		<4.0	ug/L					U	08/04/10
Thallium	7440-28-0		<35	ug/L					U	08/04/10
Tin	7440-31-5		<39	ug/L					U	08/04/10
Arsenic	7440-38-2		<65	ug/L					U	08/04/10
Beryllium	7440-41-7		<4.0	ug/L					U	08/04/10
Boron	7440-42-8		25.0	ug/L					B	08/04/10
Bismuth	7440-69-9		<23	ug/L					U	08/04/10
Silicon	7440-21-3		<61	ug/L					U	08/04/10
Phosphorus	7723-14-0		<55	ug/L					U	08/04/10
Selenium	7782-49-2		<45	ug/L					U	08/04/10
LCS			**QC Sample #33537**							
Aluminum	7429-90-5		998	ug/L	99.8	80 - 120				08/04/10
Iron	7439-89-6		1040	ug/L	104	80 - 120				08/04/10
Magnesium	7439-95-4		996	ug/L	99.6	80 - 120				08/04/10
Manganese	7439-96-5		1000	ug/L	100	80 - 120				08/04/10
Nickel	7440-02-0		982	ug/L	98.2	80 - 120				08/04/10
Potassium	7440-09-7		9990	ug/L	99.9	80 - 120				08/04/10
Silver	7440-22-4		982	ug/L	98.2	80 - 120				08/04/10
Sodium	7440-23-5		1090	ug/L	109	80 - 120				08/04/10
Antimony	7440-36-0		1030	ug/L	103	80 - 120				08/04/10
Barium	7440-39-3		509	ug/L	101.8	80 - 120				08/04/10
Cadmium	7440-43-9		991	ug/L	99.1	80 - 120				08/04/10
Chromium	7440-47-3		986	ug/L	98.6	80 - 120				08/04/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Cobalt	7440-48-4		998	ug/L	99.8	80 - 120				08/04/10
Copper	7440-50-8		1030	ug/L	103	80 - 120				08/04/10
Vanadium	7440-62-2		1010	ug/L	101	80 - 120				08/04/10
Zinc	7440-66-6		1030	ug/L	103	80 - 120				08/04/10
Calcium	7440-70-2		989	ug/L	98.9	80 - 120				08/04/10
Lead	7439-92-1		973	ug/L	97.3	80 - 120				08/04/10
Lithium	7439-93-2		529	ug/L	105.8	80 - 120				08/04/10
Molybdenum	7439-98-7		982	ug/L	98.2	80 - 120				08/04/10
Strontium	7440-24-6		517	ug/L	103.4	80 - 120				08/04/10
Thallium	7440-28-0		862	ug/L	86.2	80 - 120				08/04/10
Tin	7440-31-5		1020	ug/L	102	80 - 120				08/04/10
Arsenic	7440-38-2		1040	ug/L	104	80 - 120				08/04/10
Beryllium	7440-41-7		534	ug/L	106.8	80 - 120				08/04/10
Boron	7440-42-8		1030	ug/L	103	80 - 120				08/04/10
Bismuth	7440-69-9		1050	ug/L	105	80 - 120				08/04/10
Silicon	7440-21-3		1000	ug/L	100	80 - 120				08/04/10
Phosphorus	7723-14-0		1030	ug/L	103	80 - 120				08/04/10
Selenium	7782-49-2		982	ug/L	98.2	80 - 120				08/04/10
MS			**QC Sample #33538**							
			Original 101675014							
Aluminum	7429-90-5		1010	ug/L	101	75 - 125				08/04/10
Iron	7439-89-6		1030	ug/L	103	75 - 125				08/04/10
Magnesium	7439-95-4		1000	ug/L	100	75 - 125			X	08/04/10
Manganese	7439-96-5		985	ug/L	98.5	75 - 125				08/04/10
Nickel	7440-02-0		955	ug/L	95.5	75 - 125				08/04/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Potassium	7440-09-7		9910	ug/L	99.1	75 - 125				08/04/10
Silver	7440-22-4		965	ug/L	96.5	75 - 125				08/04/10
Sodium	7440-23-5		1090	ug/L	109	75 - 125			X	08/04/10
Antimony	7440-36-0		1040	ug/L	104	75 - 125				08/04/10
Barium	7440-39-3		502	ug/L	100.4	75 - 125				08/04/10
Cadmium	7440-43-9		974	ug/L	97.4	75 - 125				08/04/10
Chromium	7440-47-3		969	ug/L	96.9	75 - 125				08/04/10
Cobalt	7440-48-4		975	ug/L	97.5	75 - 125				08/04/10
Copper	7440-50-8		1000	ug/L	100	75 - 125				08/04/10
Vanadium	7440-62-2		986	ug/L	98.6	75 - 125				08/04/10
Zinc	7440-66-6		1010	ug/L	101	75 - 125				08/04/10
Calcium	7440-70-2		700	ug/L	70	75 - 125			X	08/04/10
Lead	7439-92-1		956	ug/L	95.6	75 - 125				08/04/10
Lithium	7439-93-2		527	ug/L	105.4	75 - 125				08/04/10
Molybdenum	7439-98-7		952	ug/L	95.2	75 - 125				08/04/10
Strontium	7440-24-6		514	ug/L	102.8	75 - 125				08/04/10
Thallium	7440-28-0		789	ug/L	78.9	75 - 125				08/04/10
Tin	7440-31-5		920	ug/L	92	75 - 125				08/04/10
Arsenic	7440-38-2		1050	ug/L	105	75 - 125				08/04/10
Beryllium	7440-41-7		527	ug/L	105.4	75 - 125				08/04/10
Boron	7440-42-8		1020	ug/L	102	75 - 125				08/04/10
Bismuth	7440-69-9		1020	ug/L	102	75 - 125				08/04/10
Silicon	7440-21-3		900	ug/L	90	75 - 125			X	08/04/10
Phosphorus	7723-14-0		1020	ug/L	102.5	75 - 125				08/04/10
Selenium	7782-49-2		998	ug/L	99.8	75 - 125				08/04/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
MSD			**QC Sample #33539**								
			Original 101675014						**Paired**	**33538**	
Aluminum	7429-90-5		986	ug/L	98.6	75 - 125	2.40	20			08/04/10
Iron	7439-89-6		1020	ug/L	102	75 - 125	1.00	20			08/04/10
Magnesium	7439-95-4		800	ug/L	80	75 - 125	22.20	20	*	X	08/04/10
Manganese	7439-96-5		973	ug/L	97.3	75 - 125	1.20	20			08/04/10
Nickel	7440-02-0		950	ug/L	95	75 - 125	0.50	20			08/04/10
Potassium	7440-09-7		9710	ug/L	97.1	75 - 125	2.00	20			08/04/10
Silver	7440-22-4		961	ug/L	96.1	75 - 125	0.40	20			08/04/10
Sodium	7440-23-5		990	ug/L	99	75 - 125	9.60	20		X	08/04/10
Antimony	7440-36-0		1010	ug/L	101	75 - 125	2.90	20			08/04/10
Barium	7440-39-3		500	ug/L	100	75 - 125	0.40	20			08/04/10
Cadmium	7440-43-9		972	ug/L	97.2	75 - 125	0.20	20			08/04/10
Chromium	7440-47-3		972	ug/L	97.2	75 - 125	0.30	20			08/04/10
Cobalt	7440-48-4		958	ug/L	95.8	75 - 125	1.80	20			08/04/10
Copper	7440-50-8		999	ug/L	99.9	75 - 125	0.10	20			08/04/10
Vanadium	7440-62-2		995	ug/L	99.5	75 - 125	0.90	20			08/04/10
Zinc	7440-66-6		1010	ug/L	101	75 - 125	0.00	20			08/04/10
Calcium	7440-70-2		-200	ug/L	-20	75 - 125	360.00	20	*	X	08/04/10
Lead	7439-92-1		947	ug/L	94.7	75 - 125	0.90	20			08/04/10
Lithium	7439-93-2		530	ug/L	106	75 - 125	0.60	20			08/04/10
Molybdenum	7439-98-7		954	ug/L	95.4	75 - 125	0.20	20			08/04/10
Strontium	7440-24-6		509	ug/L	101.8	75 - 125	1.00	20			08/04/10
Thallium	7440-28-0		797	ug/L	79.7	75 - 125	1.00	20			08/04/10
Tin	7440-31-5		959	ug/L	95.9	75 - 125	4.20	20			08/04/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

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			08/04/10
Beryllium	7440-41-7		526	ug/L	105.2	75 - 125	0.20	20			08/04/10
Boron	7440-42-8		1030	ug/L	103	75 - 125	1.00	20			08/04/10
Bismuth	7440-69-9		1040	ug/L	104	75 - 125	1.90	20			08/04/10
Silicon	7440-21-3		600	ug/L	60	75 - 125	40.00	20	*	X	08/04/10
Phosphorus	7723-14-0		1020	ug/L	102.5	75 - 125	0.00	20			08/04/10
Selenium	7782-49-2		1000	ug/L	100	75 - 125	0.20	20			08/04/10

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF101713

QC Batch 144580
Associated Samples 101713003

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #33783**							
Diesel	TPHDIESEL		<80	ug/L					U	07/28/10
LCS			**QC Sample #33784**							
Diesel	TPHDIESEL		2400	ug/L	95	65 - 128				07/28/10
MS			**QC Sample #33785**							
			Original 101713003							
Diesel	TPHDIESEL	<70	2300	ug/L	96.8	73 - 123				07/28/10
MSD			**QC Sample #33786**							
			Original 101713003					**Paired 33785**		
Diesel	TPHDIESEL	<70	2300	ug/L	95.4	73 - 123	1.50	20		07/28/10

Quality Control Report

Attention Michael Neely
Department Wet Chemistry

Group # WSCF101713

QC Batch 144584
Associated Samples 101713003

Test Total Alkalinity as mg/L CaCO3 (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
LCS			**QC Sample #33787**							
Total Alkalinity as CaCO3	ALKALINITY		120	mg/L	100.2	80 - 120				07/20/10
DUP			**QC Sample #33788**							
			Original 101700006							
Total Alkalinity as CaCO3	ALKALINITY		120	mg/L			0.00	20		07/20/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

QC Batch 146483
Associated Samples 101713002, 101713003

Test ICP-2008 MS All possible metal

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #34260**							
Aluminum	7429-90-5		<5.0	ug/L					U	07/28/10
Silver	7440-22-4		<0.10	ug/L					U	07/28/10
Antimony	7440-36-0		<0.30	ug/L					U	07/28/10
Barium	7440-39-3		<0.20	ug/L					U	07/28/10
Beryllium	7440-41-7		<0.050	ug/L					U	07/28/10
Cadmium	7440-43-9		<0.10	ug/L					U	07/28/10
Chromium	7440-47-3		<0.50	ug/L					U	07/28/10
Cobalt	7440-48-4		<0.050	ug/L					U	07/28/10
Copper	7440-50-8		<0.10	ug/L					U	07/28/10
Lead	7439-92-1		<0.10	ug/L					U	07/28/10
Mercury	7439-97-6		<0.050	ug/L					U	07/28/10
Molybdenum	7439-98-7		<0.050	ug/L					U	07/28/10
Thallium	7440-28-0		<0.050	ug/L					U	07/28/10
Tin	7440-31-5		<0.050	ug/L					U	07/28/10
Arsenic	7440-38-2		<0.40	ug/L					U	07/28/10
Selenium	7782-49-2		<0.30	ug/L					U	07/28/10
LCS			**QC Sample #34261**							
Aluminum	7429-90-5		383	ug/L	95.7	85 - 115				07/28/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Silver	7440-22-4		36.9	ug/L	92.2	85 - 115				07/28/10
Antimony	7440-36-0		38.5	ug/L	96.4	85 - 115				07/28/10
Barium	7440-39-3		37.9	ug/L	94.7	85 - 115				07/28/10
Beryllium	7440-41-7		36.8	ug/L	92	85 - 115				07/28/10
Cadmium	7440-43-9		37.4	ug/L	93.4	85 - 115				07/28/10
Chromium	7440-47-3		37.9	ug/L	94.7	85 - 115				07/28/10
Cobalt	7440-48-4		36.4	ug/L	90.9	85 - 115				07/28/10
Copper	7440-50-8		37.8	ug/L	94.6	85 - 115				07/28/10
Lead	7439-92-1		37.5	ug/L	93.8	85 - 115				07/28/10
Mercury	7439-97-6		1.91	ug/L	95.4	85 - 115				07/28/10
Molybdenum	7439-98-7		38.6	ug/L	96.4	85 - 115				07/28/10
Thallium	7440-28-0		37.2	ug/L	93	85 - 115				07/28/10
Tin	7440-31-5		39.0	ug/L	97.4	85 - 115				07/28/10
Arsenic	7440-38-2		37.3	ug/L	93.3	85 - 115				07/28/10
Selenium	7782-49-2		34.7	ug/L	86.8	85 - 115				07/28/10
MS			**QC Sample #34262**							
			Original 101705006							
Aluminum	7429-90-5		403	ug/L	100.7	70 - 130				07/28/10
Silver	7440-22-4		38.6	ug/L	96.5	70 - 130				07/28/10
Antimony	7440-36-0		41.1	ug/L	102.7	70 - 130				07/28/10
Barium	7440-39-3		38.6	ug/L	96.5	70 - 130				07/28/10
Beryllium	7440-41-7		39.8	ug/L	99.6	70 - 130				07/28/10
Cadmium	7440-43-9		39.9	ug/L	99.7	70 - 130				07/28/10
Chromium	7440-47-3		39.0	ug/L	97.4	70 - 130				07/28/10
Cobalt	7440-48-4		36.6	ug/L	91.5	70 - 130				07/28/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Copper	7440-50-8		37.3	ug/L	93.4	70 - 130				07/28/10
Lead	7439-92-1		41.0	ug/L	102.4	70 - 130				07/28/10
Mercury	7439-97-6		2.00	ug/L	100	70 - 130				07/28/10
Molybdenum	7439-98-7		41.9	ug/L	104.8	70 - 130				07/28/10
Thallium	7440-28-0		41.2	ug/L	102.9	70 - 130				07/28/10
Tin	7440-31-5		41.6	ug/L	104.1	70 - 130				07/28/10
Arsenic	7440-38-2		41.5	ug/L	103.8	70 - 130				07/28/10
Selenium	7782-49-2		40.0	ug/L	100.1	70 - 130				07/28/10
MSD			**QC Sample #34263**							
			Original 101705006						**Paired 34262**	
Aluminum	7429-90-5		410	ug/L	102.5	70 - 130	1.80	20		07/28/10
Silver	7440-22-4		38.2	ug/L	95.4	70 - 130	1.10	20		07/28/10
Antimony	7440-36-0		41.5	ug/L	103.8	70 - 130	1.10	20		07/28/10
Barium	7440-39-3		42.1	ug/L	105.2	70 - 130	8.60	20		07/28/10
Beryllium	7440-41-7		41.0	ug/L	102.6	70 - 130	3.00	20		07/28/10
Cadmium	7440-43-9		39.2	ug/L	98	70 - 130	1.70	20		07/28/10
Chromium	7440-47-3		39.7	ug/L	99.2	70 - 130	1.80	20		07/28/10
Cobalt	7440-48-4		37.1	ug/L	92.8	70 - 130	1.40	20		07/28/10
Copper	7440-50-8		37.4	ug/L	93.5	70 - 130	0.10	20		07/28/10
Lead	7439-92-1		40.5	ug/L	101.3	70 - 130	1.10	20		07/28/10
Mercury	7439-97-6		2.04	ug/L	102.2	70 - 130	2.20	20		07/28/10
Molybdenum	7439-98-7		42.6	ug/L	106.5	70 - 130	1.60	20		07/28/10
Thallium	7440-28-0		40.7	ug/L	101.6	70 - 130	1.30	20		07/28/10
Tin	7440-31-5		41.8	ug/L	104.6	70 - 130	0.50	20		07/28/10
Arsenic	7440-38-2		40.9	ug/L	102.2	70 - 130	1.60	20		07/28/10

Quality Control Report

Attention Michael Neely
Department Inorganic

Group # WSCF101713

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Selenium	7782-49-2		39.7	ug/L	99.2	70 - 130	0.90	20		07/28/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF101713

QC Batch 143676
Associated Samples 101713003

Test Americium/Curium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #33381**								
Americium-241	14596-10-2		0.055	pCi/L						U	08/02/10
LCS			**QC Sample #33382**								
Americium-241	14596-10-2		5.6	pCi/sample	100.7	80 - 120					08/02/10
DUP			**QC Sample #33383**								
			Original 101713003								
Americium-241	14596-10-2	0.049	-0.030	pCi/L			831.60	-20 - 20	*	U	07/29/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF101713

QC Batch 143698
Associated Samples 101713003

Test Gross Alpha/Gross Beta

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit		RQ	Analyzed
BLANK			**QC Sample #33454**								
Gross Alpha	12587-46-1		0.27	pCi/L						U	08/16/10
Gross Beta	12587-47-2		1.4	pCi/L						U	08/16/10
LCS			**QC Sample #33455**								
Gross Alpha	12587-46-1		73	pCi/L	89.6	80 - 120					08/16/10
Gross Beta	12587-47-2		240	pCi/L	109.6	80 - 120					08/16/10
DUP			**QC Sample #33456**								
			Original 101713003								
Gross Alpha	12587-46-1	-0.11	0.67	pCi/L			278.60	-20 - 20	*	U	08/16/10
Gross Beta	12587-47-2	12	6.1	pCi/L			65.20	-20 - 20	*	X	08/16/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF101713

QC Batch 145983
Associated Samples 101713003

Test Tritium by LSC

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #34123**							
Tritium	10028-17-8		67	pCi/L					U	08/04/10
LCS			**QC Sample #34124**							
Tritium	10028-17-8		3000	pCi/L	98.2	80 - 120				08/04/10
DUP			**QC Sample #34125**							
			Original 101695009							
Tritium	10028-17-8		4.8E4	pCi/L			2.10	-20 - 20		08/04/10
MS			**QC Sample #34126**							
			Original 101695009							
Tritium	10028-17-8		20000	pCi/L	97.1	75 - 125				08/04/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF101713

QC Batch 147481
Associated Samples 101713003

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #34374**							
Strontium-89/90	SR-RAD		-1.3	pCi/L					U	08/17/10
LCS			**QC Sample #34375**							
Strontium-89/90	SR-RAD		100	pCi/L	91.5	80 - 120				08/17/10
DUP			**QC Sample #34376**							
			Original 101700006							
Strontium-89/90	SR-RAD		-2.6	pCi/L			-3.80	-20 - 20	U	08/17/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF101713

QC Batch 147775
Associated Samples 101713003

Test TC99 by Liquid Scintillation

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #34520**							
Technetium-99	14133-76-7		-0.50	pCi/L					U	08/04/10
LCS			**QC Sample #34521**							
Technetium-99	14133-76-7		220	pCi/L	98.3	80 - 120				08/04/10
DUP			**QC Sample #34522**							
			Original 101705014							
Technetium-99	14133-76-7		100	pCi/L			1.00	-20 - 20		08/04/10
MS			**QC Sample #34523**							
			Original 101705014							
Technetium-99	14133-76-7		910	pCi/L	99.6	75 - 125				08/04/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF101713

QC Batch 143676
Associated Samples 101713003

Test Americium/Curium (AEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #101713003**							
Americium-243 Tracer	14993-75-0				85.1	25 - 105				07/29/10
BLANK			**QC Sample #33381**							
Americium-243 Tracer	14993-75-0				73.1	25 - 105				08/02/10
LCS			**QC Sample #33382**							
Americium-243 Tracer	14993-75-0				81.7	25 - 105				08/02/10
DUP			**QC Sample #33383**							
			Original 101713003							
Americium-243 Tracer	14993-75-0				88	25 - 105	0.00			07/29/10

Quality Control Report

Attention Michael Neely
Department Organic, Semivolatiles

Group # WSCF101713

QC Batch 144580
Associated Samples 101713003

Test Extractable Diesel and Petroleum

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #101713003**							
o-Terphenyl	84-15-1				91	70 - 130				07/28/10
BLANK			**QC Sample #33783**							
o-Terphenyl	84-15-1				80.4	70 - 130				07/28/10
LCS			**QC Sample #33784**							
o-Terphenyl	84-15-1				91.2	70 - 130				07/28/10
MS			**QC Sample #33785**							
			Original 101713003							
o-Terphenyl	84-15-1				89.9	70 - 130				07/28/10
MSD			**QC Sample #33786**							
			Original 101713003						**Paired 33785**	
o-Terphenyl	84-15-1				86.6	70 - 130	3.70	20		07/28/10

Quality Control Report

Attention Michael Neely
Department Radiochemistry

Group # WSCF101713

QC Batch 147481
Associated Samples 101713003

Test Strontium 89/90 (GPC/GEA)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
SAMPLE			**Sample #101713003**							
Strontium-85	13967-73-2				84.4	25 - 105				08/17/10
BLANK			**QC Sample #34374**							
Strontium-85	13967-73-2				85.3	25 - 105				08/17/10
LCS			**QC Sample #34375**							
Strontium-85	13967-73-2				88.7	25 - 105				08/17/10
DUP			**QC Sample #34376**							
			Original 101700006							
Strontium-85	13967-73-2				82.7	25 - 105	5.40			08/17/10

Attention: Michael Neely

Group # WSCF101713

Quality Control Comments

Department Inorganic

33538 B26622(101675014MS)

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.

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

33539 B26622(101675014MSD)

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.

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

Analytical Comment Report

Attention: Michael Neely **Group #** WSCF101713

Quality Control Comments

Department Radiochemistry

33456 B26628(101713003DUP)

Analyte Gross Beta - 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 4 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 #: 101713
Profile #: X10-081-350
Proj. Mgr.:
Phone:

The following samples were received from you on 7/15/2010 2:00:00 PM. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using Waste Sampling and Characterization Facility.

Sample #	Sample ID	Matrix	Collected	Received
		Tests scheduled		
101713001	B26687	WATER	7/15/2010 11:35	7/15/2010 14:00
		IC-W		
101713002	B26627	WATER	7/15/2010 11:35	7/15/2010 14:00
		2008-W; 6010-W		
101713003	B26628	WATER	7/15/2010 11:35	7/15/2010 14:00
		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)
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 101713	C.O.C.# X10-081-350 Page 1 of 1
Collector KE Hamilton CHPRC	Contact/Requester [illegible]	Telephone No. [illegible]
SAF No. [illegible]	Sampling Origin [illegible]	Purchase Order/Charge Code [illegible]
Project Title [illegible]	Logbook No. HNF-N-506 25, 41	Ice Chest No. N/A
Shipped To (Lab) Waste Sampling & Characterization	Method of Shipment Government Vehicle	Bill of Lading/Air Bill No. N/A
Protocol CERCLA	Priority: 45 Days	Offsite Property No. N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
** Contains Radioactive Material at concentrations that are not regulated for transportation per 49 CFR but are not releasable per DOE Order [illegible]

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ✓ No
[illegible]

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B26087	N	W	7-15-10	1135	1x500-mL P	300.0_ANIONS_IC: List 1 + Brom_Phosp (7)	48 Hours	Cool~4C

Relinquished By	Print / Sign	Date/Time	Received By	Print / Sign	Date/Time
Relinquished By	KE Hamilton CHPRC [signature]	JUL 15 2010 1400	Received By	M D Kessler [signature]	JUL 15 2010 1400
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-6004-042 (05/10)

CHPRC	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	C.O.C.# X10-081-287
		Page 1 of 1

Collector: KE Hamilton CHPRC	Contact/Requester: [illegible]	Telephone No.: [illegible]
SAF No.: X10-081	Sampling Origin: [illegible]	Purchase Order/Charge Code: [illegible]
Project Title: [illegible]	Logbook No.: HNF-N-506 25/61	Ice Chest No.: N/A
Shipped To (Lab): [illegible]	Method of Shipment: Government Vehicle	Bill of Lading/Air Bill No.: N/A
Protocol: [illegible]	Priority: 48 Days	Offsite Property No.: N/A

POSSIBLE SAMPLE HAZARDS/REMARKS
[illegible]

SPECIAL INSTRUCTIONS Hold Time — Total Activity Exemption: Yes ✓ No
[illegible]
Please report [illegible]

Sample No.	Filter	*	Date	Time	No/Type Container	Sample Analysis	Holding Time	Preservative
B26627 2	Y	W	7-15-10	1135	1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B26627	Y	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B26627	Y	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B26628 3	N	W			1x500-mL G	200.8_HG - ICPMS	28 Days	HNO3 to pH <2
B26628	N	W			1x500-mL G/P	200.8_METALS_ICPMS: DURA LIST (10)	6 Months	HNO3 to pH <2
B26628	N	W			1x500-mL G/P	6010_METALS_ICP: DURA LIST (29)	6 Months	HNO3 to pH <2
B26628	N	W			1x250-mL G/P	2320_ALKALINITY: Alkalinity (1)	14 Days	Cool~4C
B26628	N	W			1x500-mL G/P	ALPHABETA_GPC: Alpha discrete + Beta (2) ALPHABETA_GPC: Alpha discrete + Beta (2)	6 Months	HNO3 to pH <2
B26628	N	W			1x1000-mL G/P	AMCMISO_IE_PREC_AEA: Am-241 (1)	180 Days	HNO3 to pH <2
B26628	N	W			1x1L G/P	Strontium-89,90 - Total Sr	6 Months	HNO3 to pH <2
B26628	N	W			1x1000-mL G/P	TC99_3MDSK_LSC: Tc-99 (1)	6 Months	HCl to pH <2
B26628	N	W			1x250-mL G	TRITIUM_EIE_LSC: Tritium (1)	6 Months	None
B26628	N	W			3x1000-mL aG	TPH-Diesel Range - WTPH-D	14/40 Days	HCl to pH <2 Cool~4C

Relinquished By	Date/Time	Received By	Date/Time
KE Hamilton CHPRC [signature]	JUL 15 2010 1400	M D Kessler [signature]	JUL 15 2010 1400
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 *
[illegible]

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

A-6004-612 (05/10)