1213299

WSCF Laboratory

PO Box 650 S3-30
Richland, WA 99352

October 25, 2011

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

Dear Scot Fitzgerald,

FINAL RESULT FOR SAMPLE DELIVERY GROUP WSCF113220

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

This letter contains the following information for sample delivery group WSCF113220

* 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

RECEIVED
APR 18 2012
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 # WSCF113220
Data Deliverable Date 10/19/11

SAF #	Sample ID	Sample #	Matrix	Sampled	Received
F11-149	B2FPH3	113220001	WATER	09/19/11	09/19/11
F11-149	B2FPH4	113220002	WATER	09/19/11	09/19/11

ATTACHMENT 2

NARRATIVE

Consisting of 3 pages
Including cover page

Attachment 2
Narrative
WSCF113220

Introduction

Samples were received at the WSCF laboratory as referenced on the WSCF SAF Number Cross Reference table included in the final report. The samples were analyzed for the analytes indicated on the attached copy of the chain of custody (COC) form in accordance with the *Statement of Work (SOW), 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):

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

Attachment 2
Narrative
WSCF113220

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

- All applicable QC controls are within the established limits.

Radiochemistry Comments

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

- Tritium:
  - All applicable QC controls are within the established limits.

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

ATTACHMENT 3

ANALYTICAL RESULTS

Consisting of 18 pages
Including cover page

WSCF ANALYTICAL RESULTS REPORT

For

CH2M Hill Plateau Remediation

PO Box 650 S3-30
Richland, WA 99352

Attention: Scot Fitzgerald

Contract #	MOA-FH-CHPRC-2008
Group #	WSCF113220
Report Date	October 25, 2011

Analytical: Electronically signed by Joseph Hale

Client Services: Electronically signed by Richard Barker

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 Scot Fitzgerald
Department Inorganic

Group # WSCF113220

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
189845	189845	2	BLANK	65055	BLANK		Anions by Ion Chromatography (Water)
189845	189845	3	LCS	65056	LCS		Anions by Ion Chromatography (Water)
189845	189845	4	DUP	65057	B2FD89(113221001DUP)	113221001	Anions by Ion Chromatography (Water)
189845	189845	5	MS	65058	B2FD89(113221001MS)	113221001	Anions by Ion Chromatography (Water)
189845	189845	6	MSD	65059	B2FD89(113221001MSD)	113221001	Anions by Ion Chromatography (Water)
189845	189845	9	SAMPLE	113220001	B2FPH3		Anions by Ion Chromatography (Water)
189845	189845	10	SAMPLE	113220001	B2FPH3		Anions by Ion Chromatography (Water)
189845	189845	11	SAMPLE	113220002	B2FPH4		Anions by Ion Chromatography (Water)
189845	189845	12	SAMPLE	113220002	B2FPH4		Anions by Ion Chromatography (Water)

Batch QC List

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF113220

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
189868	189869	1	BLANK	65126	BLANK		Tritium by LSC
189868	189869	2	LCS	65127	LCS		Tritium by LSC
189868	189869	4	DUP	65128	B2C430(113190001DUP)	113190001	Tritium by LSC
189868	189869	5	MS	65129	B2C430(113190001MS)	113190001	Tritium by LSC
189868	189869	14	SAMPLE	113220001	B2FPH3		Tritium by LSC
189868	189869	15	SAMPLE	113220002	B2FPH4		Tritium by LSC

Batch QC List

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF113220

QC Batch	Analytical Batch	S#	Type	Sample #	Client Sample#	Original	Test
189871	189871	1	LCS	65132	LCS		Total Alkalinity as mg/L CaCO3 (Water)
189871	189871	2	DUP	65133	B2FT67(113154008DUP)	113154008	Total Alkalinity as mg/L CaCO3 (Water)
189871	189871	13	LCS	65134	LCS		Total Alkalinity as mg/L CaCO3 (Water)
189871	189871	22	SAMPLE	113220001	B2FPH3		Total Alkalinity as mg/L CaCO3 (Water)
189871	189871	23	SAMPLE	113220002	B2FPH4		Total Alkalinity as mg/L CaCO3 (Water)
189871	189871	24	LCS	65135	LCS		Total Alkalinity as mg/L CaCO3 (Water)

Method Reference

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF113220

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-533-410	Anion Analysis by Ion Chromatography		
	EPA-600/R-94-111	300.0	Determination of Inorganic Anions by Ion Chromatography
	HEIS	300.0_ANIONS_IC	Determination of Inorganic Anions by Ion Chromatography

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

Method Reference

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF113220

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

LA-508-421 Operation of the Tri-Carb Model 2500TR Liquid Scintillation Analyzer

HEIS	ALPHA_LSC	A/B Liquid Scintillation
HEIS	BETA_LSC	A/B Liquid Scintillation
HEIS	TC99_3MDSK_LSC	TC99 by Liquid Scintillation
HEIS	TRITIUM_EIE_LSC	Tritium, by Eichrome ion exchange, LSC

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

Method Reference

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF113220

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 Scot Fitzgerald
Department Inorganic

Group # WSCF113220

Sample # 113220001
SAF# F11-149
Sample ID B2FPH3

Matrix WATER
Sampled 09/19/11
Received 09/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**09/19/11**
Anions by IC										
Chloride	16887-00-6	LA-533-410	D	42.5		ug/mL	2	0.12	0.81	09/19/11
Nitrate-N	NO3-N	LA-533-410	D	10.2		ug/mL	2	0.038	0.20	09/19/11
Sulfate	14808-79-8	LA-533-410	DN	137		ug/mL	10	0.72	10	09/19/11

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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF113220

Sample # 113220002
SAF# F11-149
Sample ID B2FPH4

Matrix WATER
Sampled 09/19/11
Received 09/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Anions by IC										**09/19/11**
Anions by IC										
Chloride	16887-00-6	LA-533-410	D	42.6		ug/mL	2	0.12	0.81	09/19/11
Nitrate-N	NO3-N	LA-533-410	D	10.2		ug/mL	2	0.038	0.20	09/19/11
Sulfate	14808-79-8	LA-533-410	DN	138		ug/mL	10	0.72	10	09/19/11

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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF113220

Sample # 113220001
SAF# F11-149
Sample ID B2FPH3

Matrix WATER
Sampled 09/19/11
Received 09/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
H3 EICHROM										**09/21/11**
TC99 TRI-CARB LSC										
Tritium	10028-17-8	LA-508-421	U	<15	140	pCi/L	1	290		09/26/11

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 Scot Fitzgerald
Department Radiochemistry

Group # WSCF113220

Sample # 113220002
SAF# F11-149
Sample ID B2FPH4

Matrix WATER
Sampled 09/19/11
Received 09/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
H3 EICHROM										**09/21/11**
TC99 TRI-CARB LSC										
Tritium	10028-17-8	LA-508-421	U	<68	150	pCi/L	1	290		09/26/11

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 Scot Fitzgerald
Department Wet Chemistry

Group # WSCF113220

Sample # 113220001
SAF# F11-149
Sample ID B2FPH3

Matrix WATER
Sampled 09/19/11
Received 09/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										**09/20/11**
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		88		mg/L	1	1	10	09/20/11

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)

WSCF Analytical Results Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF113220

Sample # 113220002
SAF# F11-149
Sample ID B2FPH4

Matrix WATER
Sampled 09/19/11
Received 09/19/11

Test Performed	CAS #	Method	RQ	Result	TP Err	Units	DF	MDL	PQL	Analyzed
Alkalinity										**09/20/11**
Alkalinity										
Total Alkalinity as CaCO3	ALKALINITY	LA-531-411		89		mg/L	1	1	10	09/20/11

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)

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF113220

QC Batch 189845
Associated Samples 113220001, 113220002

Test Anions by Ion Chromatography (Water)

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #65055**							
Chloride	16887-00-6		<0.062	ug/mL					U	09/19/11
Nitrate-N	NO3-N		<0.019	ug/mL					U	09/19/11
Sulfate	14808-79-8		<0.072	ug/mL					U	09/19/11
LCS			**QC Sample #65056**							
Chloride	16887-00-6		2.01	ug/mL	101.4	90 - 110				09/19/11
Nitrate-N	NO3-N		0.885	ug/mL	100	90 - 110				09/19/11
Sulfate	14808-79-8		3.91	ug/mL	99.8	90 - 110				09/19/11
DUP			**QC Sample #65057**							
			Original 113221001							
Chloride	16887-00-6		7.09	ug/mL			2.00	20	D	09/19/11
Nitrate-N	NO3-N		2.94	ug/mL			1.70	20	D	09/19/11
Sulfate	14808-79-8		29.0	ug/mL			1.40	20	D	09/19/11
MS			**QC Sample #65058**							
			Original 113221001							
Chloride	16887-00-6		1.72	ug/mL	85.8	80 - 120			D	09/19/11
Nitrate-N	NO3-N		0.786	ug/mL	88	80 - 120			D	09/19/11
Sulfate	14808-79-8		3.06	ug/mL	77.3	80 - 120			DN	09/19/11
MSD			**QC Sample #65059**							
			Original 113221001					**Paired**	**65058**	

Quality Control Report

Attention Scot Fitzgerald
Department Inorganic

Group # WSCF113220

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
Chloride	16887-00-6		1.70	ug/mL	85	80 - 120	0.90	20	D	09/19/11
Nitrate-N	NO3-N		0.792	ug/mL	88.6	80 - 120	0.70	20	D	09/19/11
Sulfate	14808-79-8		2.76	ug/mL	69.8	80 - 120	10.20	20	DN	09/19/11

Quality Control Report

Attention Scot Fitzgerald
Department Radiochemistry

Group # WSCF113220

QC Batch 189868
Associated Samples 113220001, 113220002

Test Tritium by LSC

Analyte	CAS #	Original Found	QC Found	Units	% Recov	Limits	RPD	RPD Limit	RQ	Analyzed
BLANK			**QC Sample #65126**							
Tritium	10028-17-8		<-14	pCi/L					U	09/26/11
LCS			**QC Sample #65127**							
Tritium	10028-17-8		3400	pCi/L	109.2	80 - 120				09/26/11
DUP			**QC Sample #65128**							
			Original 113190001							
Tritium	10028-17-8		1.2E4	pCi/L			8.00	20		09/26/11
MS			**QC Sample #65129**							
			Original 113190001							
Tritium	10028-17-8		19000	pCi/L	93.9	75 - 125				09/26/11

Quality Control Report

Attention Scot Fitzgerald
Department Wet Chemistry

Group # WSCF113220

QC Batch 189871
Associated Samples 113220001, 113220002

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 #65132**							
Total Alkalinity as CaCO3	ALKALINITY		100	mg/L	101.8	80 - 120				09/20/11
DUP			**QC Sample #65133**							
			Original 113154008							
Total Alkalinity as CaCO3	ALKALINITY		330	mg/L			0.00	20		09/20/11
LCS			**QC Sample #65134**							
Total Alkalinity as CaCO3	ALKALINITY		100	mg/L	102.7	80 - 120				09/20/11
LCS			**QC Sample #65135**							
Total Alkalinity as CaCO3	ALKALINITY		100	mg/L	104	80 - 120				09/20/11

ATTACHMENT4

SAMPLE RECEIPT

Consisting of 4 pages
Including cover page

Sample Receipt

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

ACKNOWLEDGEMENT OF SAMPLES RECEIVED

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

ATTN: Scot Fitzgerald

Customer Code: CHPRC
PO #: 402089/ES20
Work Order #: 113220
Profile #: F11-149-001
Proj. Mgr.:
Phone:

The following samples were received from you on 9/19/2011 10:40:00 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		
113220001	B2FPH3	WATER	9/19/2011 10:00	9/19/2011 10:40
		ALK-W, H3-COL-W, IC-W		
113220002	B2FPH4	WATER	9/19/2011 10:00	9/19/2011 10:40
		ALK-W, H3-COL-W, IC-W		

Test Acronym Description

Test Acronym	Description
ALK-W	Total Alkalinity (W)
H3-COL-W	Tritium by EICHROM Column (W)
IC-W	Anions by IC (W)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-149-001

PAGE 1 OF 1

COLLECTOR: Rosanne Rost Kauer

SAMPLING LOCATION: CB204 001

ICE CHEST NO.:

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1667

PROJECT DESIGNATION: Liquid Effluent Retention Facility (LERF) Replacement Well CB204 Water

FIELD LOGBOOK NO.: HNF-N-376-3 A 130

ACTUAL SAMPLE DEPTH: 203.0

OFFSITE PROPERTY NO.: N/A

PROJECT COORDINATOR: LUKE, SN

SAF NO.: F11-149

COA: B020NN510

PRICE CODE: 7H

AIR QUALITY:

DATA TURNAROUND: 30 Days / 30 Days

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

BILL OF LADING/AIR BILL NO.: N/A

SHIPPED TO: Waste Sampling & Characterization

MATRIX*: A=Air, D=Drum Liquids, DS=Drum Solids, L=Liquid, O=Oil, S=Soil, SE=Sediment, T=Tissue, V=Vegetation, W=Water, WI=Wipe, X=Other

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HNO3 to pH <2	Cool<4C	Cool<4C	None
HOLDING TIME	6 Months	48 hours	14 days	6 Months
TYPE OF CONTAINER	G/P	P	G/P	G
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	500mL	500mL	250mL	250mL
SAMPLE ANALYSIS	SEE ITEM 11 IN SPECIAL INSTRUCTIONS	SEE ITEM 12 IN SPECIAL INSTRUCTIONS	300.0 A, SO4, NO3 (Multi-Ion)	Tritium (Low Level)

DB 10/24/11

Shipped

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2FFH3	WATER	9-19-11	1000				

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Larry Rosse Larry Rosse	9-19-11 1040	M. Nelson M. Nelson	9/19/11 1040
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402089ES20.

☐ ** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GKI applies to this SAF.
(1) ICP Metals - 6010 (TAL) (Calcium, Magnesium, Potassium, Sodium);
(2) IC Anions - 300.0 (Chloride, Nitrogen in Nitrate, Sulfate);

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

FINAL SAMPLE DISPOSITION: DISPOSAL METHOD | DISPOSED BY | DATE/TIME

PRINTED ON 7/19/2011

4-6001-618 (REV 7)

CH2MHill Plateau Remediation Company

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

F11-149-002 PAGE 1 OF 1

COLLECTOR: Lorne Rist Kauer

COMPANY CONTACT: LUKE, SN

TELEPHONE NO.: 372-1662

PROJECT COORDINATOR: LUKE, SN

PRICE CODE: 7H

DATA TURNAROUND: 30 Days / 30 Days

SAMPLING LOCATION: C6204-001 DUP

PROJECT DESIGNATION: Liquid Effluent Retention Facility (LERF) Replacement Well C6204 - Water

AIR QUALITY:

SAF NO.: F11-149

ICE CHEST NO.:

FIELD LOGBOOK NO.: HNF-N-576-3 pg 130

ACTUAL SAMPLE DEPTH: 203.0

COA: 302066ES10

METHOD OF SHIPMENT: GOVERNMENT VEHICLE

ORIGINAL

SHIPPED TO: Waste Sampling & Characterization

OFFSITE PROPERTY NO.: N/A

BILL OF LADING/AIR BILL NO.: N/A

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

POSSIBLE SAMPLE HAZARDS/ REMARKS: Contains Radioactive Material at concentrations that may or may not be regulated for transportation per 49 CFR / IATA Dangerous Goods Regulations but are not releasable per DOE Order 5400.5 (1990/1993)

SPECIAL HANDLING AND/OR STORAGE

PRESERVATION	HNO3 to pH <2	Cool <4C	Cool <4C	None
HOLDING TIME	6 Months	48 Hours	14 Days	6 Months
TYPE OF CONTAINER	G/P	P	G/P	G
NO. OF CONTAINER(S)	1	1	1	1
VOLUME	500mL	500mL	250mL	250mL
SAMPLE ANALYSIS	SEE ITEM 13 IN SPECIAL INSTRUCTIONS	SEE ITEM 13 IN SPECIAL INSTRUCTIONS	[illegible]	[illegible]

KB 10/20/11 Shipped

SAMPLE NO.	MATRIX*	SAMPLE DATE	SAMPLE TIME				
B2FFH4	2 WATER	9-19-11	1000	✓	✓	✓	✓

CHAIN OF POSSESSION / SIGN/ PRINT NAMES

RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
Lorne Rist Kauer	9-19-11/1040	M. Nelson M. Nelson	9/19/11 1040
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME
RELINQUISHED BY/REMOVED FROM	DATE/TIME	RECEIVED BY/STORED IN	DATE/TIME

SPECIAL INSTRUCTIONS

** The CACN for all analytical work at WSCF laboratory is 402089ES20.

☐

** The 200 Area S&GRP Characterization and Monitoring Sampling and Analysis GK1 applies to this SAF.

(1) ICP Metals - 6010 (TAL) (Calcium, Magnesium, Potassium, Sodium);

(2) IC Anions - 300.0 (Chloride, Nitrogen in Nitrate, Sulfate);

LABORATORY SECTION: RECEIVED BY | TITLE | DATE/TIME

FINAL SAMPLE DISPOSITION: DISPOSAL METHOD | DISPOSED BY | DATE/TIME

PRINTED ON 7/19/2011

A 5001 6.3 (REV 2)