0084821

SAF-RC-118
Columbia River Component of the RCBRA – Tissues
FINAL DATA PACKAGE

COMPLETE COPY OF DATA PACKAGE TO:

Kathy Wendt H4-21 KW 1/11/10
INITIAL/DATE

COMMENTS:

SDG SEQ120809 SAF-RC-118

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

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JAN 20 2010
EDMC

Sampling Location:

LWSA-SUCKER2-FILLET/CARCASS
LWSA-SUCKER3-FILLET/CARCASS
LWSA-SUCKER4-FILLET/CARCASS
100SA-CARP 5-FILLET/CARCASS
300SA–CARP5-FILLET/CARCASS
300SA–SUCKER5-FILLET/CARCASS
300SA-SUCKER4-FILLET/CARCASS
300SA-SUCKER 3-FILLET/CARCASS
300SA-SUCKER 2-FILLET/CARCASS
300SA-SUCKER1-FILLET/CARCASS

Analytical Chemistry Data Package
Inorganics Analysis

Project: Washington Closures Hanford
As Speciation Analysis of Tissue

SDG 120809

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JAN 2010

PNNL Project No. 56166
MSL CF No. 2981

Pacific Northwest
NATIONAL LABORATORY

Marine Sciences Laboratory
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Sequim, WA 98382
PM: Jill Brandenberger
(360) 681-4564

SEQ 120809

INORGANIC CHEMISTRY ANALYSIS DATA PACKAGE CONTENTS SDG120809

As Speciation Analysis in Tissue

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BATTELLE MARINE SCIENCES LABORATORY
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Washington Closure Hanford
Arsenic Speciation Study
SDG120809

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Percent Dry Wt	AsB µg/g dry wt.	DMA µg/g dry wt.	MMA µg/g dry wt.	As^{3-5} µg/g dry wt.	*Total As* µg/g dry wt.
Method Detection Limit (MDL)								*0.002*	*0.005*	*0.007*	*0.01*	*Cal.*
2981-289	J191Y1	120809	12/08/09	12/03/09	12/21/09	122109-LCDRC	24.3	0.002 U	0.005 U	0.007 U	0.0125	*0.0265*
2981-290	J19231	120809	12/08/09	12/03/09	12/21/09	122109-LCDRC	29.8	0.002 U	0.005 U	0.007 U	0.0173	*0.0313*
2981-291	J191Y2	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	24.5	0.002 U	0.005 U	0.124	0.01 U	*0.141*
2981-292	J19232	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	31.0	0.0136	0.0151	0.0650	0.01 U	*0.104*
2981-293	J191Y3	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	25.1	0.00542	0.00984	0.007 U	0.0123	*0.0346*
2981-294	J19233	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	31.5	0.00859	0.0138	0.007 U	0.0104	*0.0398*
2981-295	J19696	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	32.9	0.00660	0.0173	0.007 U	0.0163	*0.0471*
2981-295DUP	J19696	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	32.9	0.0098	0.0149	0.007 U	0.0160	*0.0477*
2981-296	J196F9	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	32.4	0.00532	0.0140	0.007 U	0.01 U	*0.0363*
2981-297	J196D4	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	40.9	0.00847	0.0238	0.007 U	0.01 U	*0.0493*
2981-298	J196K4	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	39.4	0.00335	0.00917	0.007 U	0.01 U	*0.0295*
2981-299	J191W9	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	32.7	0.00439	0.005 U	0.007 U	0.0108	*0.0272*
2981-300	J191T8	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	27.7	0.00891	0.00652	0.007 U	0.0128	*0.0353*
2981-301	J191W8	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	35.6	0.002 U	0.005 U	0.007 U	0.0176	*0.0316*
2981-302	J191T7	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	28.4	0.00790	0.0110	0.007 U	0.01 U	*0.0359*
2981-303	J191W7	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	34.2	0.00732	0.00851	0.007 U	0.0104	*0.0333*
2981-304	J191T6	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	24.5	0.00340	0.00520	0.007 U	0.01 U	*0.0256*
2981-305	J191W6	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	31.2	0.00570	0.005 U	0.007 U	0.0100	*0.0277*
2981-306	J191T5	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	27.2	0.00636	0.00596	0.007 U	0.01 U	*0.0293*
2981-307	J191W5	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	30.7	0.002 U	0.00515	0.007 U	0.0158	*0.0300*
2981-308	J191T4	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	24.7	0.00499	0.005 U	0.007 U	0.01 U	*0.0270*
QUALITY CONTROL SAMPLE RESULTS						*Average*	*30.6*					
Method Blank												
Blank R1					12/21/09	122109-LCDRC		0.002 U	0.005 U	0.007 U	0.01 U	*NA*
Blank R2					01/04/10	010410-LCDRC		0.00358	0.005 U	0.007 U	0.01 U	*NA*
Standard Reference Material												
DORM-2 r1					12/21/09	122109-LCDRC		13.5	0.233	0.007 U	0.01 U	*13.7*
DORM-2 r2					01/04/10	010410-LCDRC		14.0	0.321	0.007 U	0.01 U	*14.4*
Certified Value								**16.4**	NA	NA	NA	**18.0**
% Recovery								**82%**				**76%**
% Recovery								**85%**				**80%**
Blank Spike Results												
LCS R1					12/21/09	122109-LCDRC		2.06	2.11	2.00	4.11	*10.3*
LCS R2					01/04/10	010410-LCDRC		1.98	1.98	2.07	4.18	*10.2*
Spike								2.00	2.00	2.00	4.00	*10.0*
% Rec								**103%**	**106%**	**100%**	**103%**	**103%**
% Rec								**99%**	**99%**	**103%**	**104%**	**102%**

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Washington Closure Hanford
Arsenic Speciation Study
SDG120809

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Percent Dry Wt	AsB µg/g dry wt.	DMA µg/g dry wt.	MMA µg/g dry wt.	As^{3-5} µg/g dry wt.	*Total As* µg/g dry wt.
Method Detection Limit (MDL)								*0.002* [1]	*0.005*	*0.007*	*0.01*	*Cal.*
Replicate Analysis Results												
2981-276	J196L8	112309	11/23/09	11/18/09	12/21/09	122109-LCDRC	30.1	0.002 U	0.005 U	0.007 U	0.01 U	*0.0240*
2981-276DUP	J196L8	112309	11/23/09	11/18/09	12/21/09	122109-LCDRC	30.1	0.002 U	0.005 U	0.007 U	0.01 U	*0.0240*
	RPD							NA	NA	NA	NA	NA
2981-295	J19696	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	32.9	0.00660	0.0173	0.007 U	0.0163	*0.0471*
2981-295DUP	J19696	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	32.9	0.00976	0.0149	0.007 U	0.0160	*0.0477*
	RPD							**39% ***	**15%**	NA	**1%**	**1%**
Matrix Spike Accuracy												
2981-271	J196F8	112309	11/23/09	11/18/09	12/21/09	122109-LCDRC	33.3	0.00504	0.005 U	0.007 U	0.01 U	*0.0270*
2981-271 MS					12/21/09	122109-LCDRC	33.3	2.33	0.005 U	0.468	2.85	*5.65*
2981-271 MSD					12/21/09	122109-LCDRC	33.3	2.32	0.005 U	0.936	3.22	*6.48*
Spike Amount, MS								2.29	2.29	2.29	4.59	*11.5*
Spike Amount, MSD								2.42	2.42	2.42	4.83	*12.1*
% Recovery, MS								**101%**	NA	NA	**62% N**	**49%**
% Recovery, MSD								**96%**	NA	NA	**67% N**	**53%**
RPD								**6%**	NA	NA	**7%**	**9%**
2981-271 R	J196F8	112309	11/23/09	11/18/09	01/04/10	010410-LCDRC	33.3	0.00846	0.0146	0.007 U	0.0131	*0.0431*
2981-271 MS R					01/04/10	010410-LCDRC	33.3	2.28	1.48	2.20	4.69	*10.6*
2981-271 MSD R					01/04/10	010410-LCDRC	33.3	2.37	1.54	2.26	4.71	*10.9*
Spike Amount, MS								2.54	2.54	2.54	5.09	*11.5*
Spike Amount, MSD								2.59	2.59	2.59	5.18	*12.1*
% Recovery, MS								**89%**	NA	NA	**92%**	**92%**
% Recovery, MSD								**91%**	NA	NA	**91%**	**90%**
RPD								**2%**	NA	NA	**1%**	**3%**
2981-291	J191Y2	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	24.5	0.002 U	0.005 U	0.124	0.01 U	*0.141*
2981-291 MS					01/04/10	010410-LCDRC	24.5	2.35	1.497	1.62	4.27	*9.74*
2981-291 MSD					01/04/10	010410-LCDRC	24.5	2.34	1.571	1.75	4.23	*9.88*
Spike Amount, MS								2.38	2.38	2.38	4.75	*11.9*
Spike Amount, MSD								2.43	2.43	2.43	4.85	*12.1*
% Recovery, MS								**99%**	NA	NA	**90%**	**81%**
% Recovery, MSD								**96%**	NA	NA	**87%**	**80%**
RPD								**3%**	NA	NA	**3%**	**1%**

NOTES: Arsenobetaine (AsB)
Dimethylarsinic acid (DMA)
Monomethyarsonic acid (MMA)
Arsenate (V or As^{5-})
Arsenite (III or As^{3-})
Total Inorganic Arsenic = As^{3-5}
Total As = Sum of AsB, DMA, MMA, and As^{3-5}
Cal = Calculated Value

[1] Method detection limit (MDL) for AsB calculated from instrument detection limit converted to µg/g using the average sample mass and volume for this project.

U Not detected at or above MDL shown
NS Not spiked
N Outside Method DQOs for Blank Spikes (≤ 15%), MS/MSD (≤ 25%), SRM (≤ 25%) results
* Outside Method DQOs for Duplicates (≤ 25%)

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Washington Closure Hanford
Arsenic Speciation Study
Wet Weight Conversion Table
SDG120809

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Percent Dry Wt	AsB µg/g wet wt.	DMA µg/g wet wt.	MMA µg/g wet wt.	As^{3-5} µg/g wet wt.	*Total As* µg/g wet wt.
Method Detection Limit (MDL)								*0.00061* [1]	*0.002*	*0.002*	*0.003*	*Cal.*
2981-289	J191Y1	120809	12/08/09	12/03/09	12/21/09	122109-LCDRC	24.3	0.0006 U	0.002 U	0.002 U	######	*0.00764*
2981-290	J19231	120809	12/08/09	12/03/09	12/21/09	122109-LCDRC	29.8	0.0006 U	0.002 U	0.002 U	######	*0.00974*
2981-291	J191Y2	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	24.5	0.0006 U	0.002 U	0.0305	0.003 U	*0.0361*
2981-292	J19232	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	31.0	0.00422	0.00469	0.0202	0.003 U	*0.0321*
2981-293	J191Y3	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	25.1	0.00136	0.00247	0.002 U	######	*0.00893*
2981-294	J19233	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	31.5	0.00271	0.00436	0.002 U	######	*0.0123*
2981-295	J19696	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	32.9	0.00217	0.00569	0.002 U	######	*0.0152*
2981-295DUP	J19696	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	32.9	0.00321	0.00489	0.002 U	######	*0.0154*
2981-296	J196F9	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	32.4	0.00172	0.00452	0.002 U	0.003 U	*0.0112*
2981-297	J196D4	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	40.9	0.00347	0.00974	0.002 U	0.003 U	*0.0182*
2981-298	J196K4	120809	12/08/09	12/03/09	01/04/10	010410-LCDRC	39.4	0.00132	0.00361	0.002 U	0.003 U	*0.0099*
2981-299	J191W9	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	32.7	0.00144	0.002 U	0.002 U	######	*0.00898*
2981-300	J191T8	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	27.7	0.00247	0.002 U	0.002 U	######	*0.0100*
2981-301	J191W8	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	35.6	0.0006 U	0.002 U	0.002 U	######	*0.0109*
2981-302	J191T7	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	28.4	0.00224	0.00312	0.002 U	0.003 U	*0.0104*
2981-303	J191W7	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	34.2	0.00250	0.00291	0.002 U	######	*0.0110*
2981-304	J191T6	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	24.5	0.000833	0.002 U	0.002 U	0.003 U	*0.00783*
2981-305	J191W6	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	31.2	0.00178	0.002 U	0.002 U	######	*0.00891*
2981-306	J191T5	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	27.2	0.00173	0.002 U	0.002 U	0.003 U	*0.00873*
2981-307	J191W5	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	30.7	0.0006 U	0.002 U	0.002 U	######	*0.00945*
2981-308	J191T4	120809	12/08/09	12/01/09	01/04/10	010410-LCDRC	24.7	0.00123	0.002 U	0.002 U	0.003 U	*0.00823*
						Average	*30.6*					

NOTES: Arsenobetaine (AsB)
Dimethylarsinic acid (DMA)
Monomethyarsonic acid (MMA)
Arsenate (V or As^{5+})
Arsenite (III or As^{3+})
Total Inorganic Arsenic = As^{3-5}
Total As = Sum of AsB, DMA, MMA, and As^{3-5}
Cal = Calculated Value

[1] Method detection limit (MDL) for AsB calculated from instrument detection limit converted to µg/g using the average sample mass and volume for this project.

QA/QC NARRATIVE

PROJECT:	Washington Closures Hanford SDG120809
PARAMETER:	Arsenic Speciation – Total Inorganic Arsenic (TIA)
LABORATORY:	Pacific Northwest National Laboratory (PNNL) operated by Battelle, Marine Sciences Laboratory (MSL), Sequim, Washington
MATRIX:	Tissue Homogenate
SAMPLE CUSTODY AND PROCESSING:	Tissue samples were received at MSL on 12/08/09. All samples were received in good condition (i.e., no sample containers were broken or leaking). Samples were assigned a Battelle Central File (CF) identification number (2981) and were entered into the MSL sample tracking and project management system.

SAMPLE PROCESSING INFORMATION:

MSL Code:	**SDG102809: 2981*289-308**
Description:	Freshwater Fish Homogenate
Collection dates	12/01/09 and 12/03/09
Laboratory arrival date	12/08/09
Cooler temperature on arrival	3.7°C
Extraction Dates:	12/17/09 and 01/03/10
Analyses Dates:	12/21/09 and 01/04/10

METHODS:

The tissue homogenate was processed and analyzed for total inorganic arsenic defined as the sum of arsenate (V or As5+) and arsenite (III or As3+) following MSL standard operating procedure MSL-I-037 Arsenic Speciation using High Performance Liquid Chromatography – Inductively Coupled Plasma Mass Spectrometry (HPLC-ICP-MS) in Aqueous, Sediment, and Tissue Samples. This method was developed from guidance in EPA Method 1632 for the speciation of arsenic in waters. This method is applicable to the determination of total inorganic arsenic (As) and arsenic species in drinking, surface, groundwater, seawater, tissue and sediment extracts. The anionic or cationic arsenic species are separated by an anion ion exchange column on high-performance liquid chromatography (HPLC) followed by detection and quantification using inductively coupled plasma – mass spectrometry with a dynamic reaction cell accessory (ICP-DRC-MS). This method quantitatively determines organic species of arsenic including arsenobetaine (AsB), dimethylarsinic acid (DMA), monomethyarsonic acid (MMA), and can be set up to separate the inorganic oxidation states of 3+ and 5+. This allows risk assessment to be conducted on a chemical species of interest rather than just the total arsenic. This is particularly significant for arsenic as the toxicity is highly dependent on the chemical species, with the most toxic being the As3+ oxidation state. The data for the organic arsenic species were included along with the total inorganic arsenic determined as the sum of the inorganic oxidation states of 3+ and 5+. The quality control evaluated was conducted only on the total inorganic arsenic concentration identified in the table as As^{3+5}.

Upon arrival at MSL, the wet tissue samples were stored at <-18°C until samples were lyophilized. Approximately 500 mg of dried, homogenized tissue was extracting using deionized water and tetramethyl ammonium hydroxide (TMAOH). An aliquot of the supernatant is subsequently analyzed for arsenic species using the HPLC coupled with the ICP-DRC-MS. Analytical results are reported in µg/g dry weight. These concentrations are then converted back to a wet weight concentration using the following formula: wet weight concentration = dry weight concentration * % dry weight / 100.

QA/QC NARRATIVE

NOTE: The data for arsenobetaine (AsB), dimethylarsinic acid (DMA), monomethyarsonic acid (MMA) are reported for information purposes only. The data are quantitatively determined, but the MSL QA program only validates the analytes requested by the client. The requested species of arsenic is the total inorganic arsenic, which is the sum of the two inorganic oxidation states of 3+ and 5+. The other arsenic species may be validated upon request. The quality control review below applies only to the As^{3+5} data.

HOLDING TIMES: Wet tissue samples were stored at either 4 °C, frozen, or at ≤ -18 °C from time of collection to analysis. Holding times are 28 days at 4 ± 2 °C and 180 days at ≤ -18 °C. Dry samples in plastic or glass jars may be stored at room temperature for 180 days. The samples were received 4-5 days after collection and stored at ≤ -18 °C and then lyophilized. With these storage requirements the samples were analyzed within the 180 days from collection.

DATA QUALITY CRITERIA (DQC):

Analyte	Analytical Method	Range of Blank Spike Recovery	Range of MS/MSD Spike Recovery	SRM Percent Recovery	Replicate Precisions (RPD)	Achieved MDL (µg/g dry wt.)	Achieved MDL (µg/g wet wt.)
AsB	HPLC/ICP-DRC-MS	NA	NA	NA	NA	0.002 µg/g	0.0006 µg/g
DMA	HPLC/ICP-DRC-MS	NA	NA	NA	NA	0.005 µg/g	0.001 µg/g
MMA	HPLC/ICP-DRC-MS	NA	NA	NA	NA	0.007 µg/g	0.002 µg/g
As^{3+5}	HPLC/ICP-DRC-MS	85-115%	75-125%	±25%	≤25%	0.01 µg/g	0.003 µg/g

NA = Data quality not applicable to the organic arsenic species for this project.

DETECTION LIMITS: Analytical results were reported to the laboratory achieved method detection limits (MDL) as determined from the Annual MDL study. The MDLs were determined according to EPA's "Definition and Procedure for the Determination of the Method Detection Limit - revision 1.11" 40 CFR Part 136, Appendix B. The only exception is the MDL determined for the AsB, which was the instrument detection limit converted from µg/L to µg/g using the average sample mass and volume for these samples. Data were evaluated and flagged in accordance with the following criteria:

U Undetected at the MDL, MDL reported.

* Duplicates outside the QC sample criterion.

N Spikes outside the QC sample criterion.

METHOD BLANKS: Method blanks were prepared and analyzed with the samples at a frequency of one each per analytical batch of 20 or fewer samples. Two analytical batches are reported for this data set. Total inorganic arsenic was not detected in either of the method blanks.

LABORATORY CONTROL SAMPLE (LCS) ACCURACY: Laboratory control samples (LCS) were prepared and analyzed at a frequency of one each per analytical batch of 20 or fewer samples. The LCS consists of reagents spiked with the arsenic species of interest that are processed and analyzed with the samples. The LCS samples were within the QC criterion of 85-115% recovery.

QA/QC NARRATIVE

REPLICATE PRECISION:

Laboratory duplicates were analyzed at a frequency of one each per 20 field samples or analytical batch. Two duplicates were prepared and analyzed with this SDG. Two samples from SDG120809 were analyzed with SDG112309 in analytical batch 122109-LCDRC. The laboratory duplicate and matrix spike were analyzed on samples in SDG112309. The values are reported for the purpose of meeting the quality control requirement. The duplicate total inorganic arsenic concentrations for analytical batch 122109-LCDRC were less than the method detection limit. The total inorganic arsenic duplicate for analytical batch 010410-LCDRC was within the QC criterion of ≤25% RPD. Analytical precision was also assessed using the matrix spike duplicates and were within the QC acceptance criterion of ≤25% RPD.

MATRIX SPIKE ACCURACY:

The analytical method requires a matrix spike at a frequency of one per 20 samples or analytical batch. A matrix spike duplicate was also added to provide a measure of precision (as discussed above). The matrix spike duplicate on sample 2981-271 reported for the analytical batch 122109-LCDRC was outside the 75-125% recovery criterion (62% and 67%, respectively). The matrix spikes were prepared a second time and analyzed in analytical batch 010410-LCDRC and achieved the QC criterion. In addition, a second set of matrix spike duplicates were prepared in this analytical batch and were within the QC criterion.

STANDARD REFERENCE MATERIAL:

The standard reference material (SRM) Dorm-2 Dogfish Mussel was prepared and analyzed with each analytical batch. The SRM is not certified for total inorganic arsenic, but certified values are provided for AsB and total As. The concentrations for these two species were within the QC criterion of 75-125% recovery.

REFERENCES:

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Gong, Z., Lu, X., Ma, M., Watt, C., Le, C., 2002. Arsenic speciation analysis. Talanta, 58: 77-96

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SAMPLE LOGIN

Pacific Northwest NATIONAL LABORATORY | Battelle The Business of Innovation

Project Manager: Brandenberger
Date Received: 12/08/09
Batch: 21
Login Designee: Mcgahan

Marine Sciences Laboratory
1529 West Sequim Bay Road
Sequim, Washington 98382
PH: (360) 681-4565

Project: **Washington Closure Hanford**

Sponsor ID	Site Description	Battelle Code	Matrix	Storage Location	Requested Parameters	Collection Date
J191Y1	na	2981-289	other solid	Deep Freezer B-1	Total Inorganic As	12/03/09
J19231	na	2981-290	other solid	Deep Freezer B-1	Total Inorganic As	12/03/09
J191Y2	na	2981-291	other solid	Deep Freezer B-1	Total Inorganic As	12/03/09
J19232	na	2981-292	other solid	Deep Freezer B-1	Total Inorganic As	12/03/09
J191Y3	na	2981-293	other solid	Deep Freezer B-1	Total Inorganic As	12/03/09
J19233	na	2981-294	other solid	Deep Freezer B-1	Total Inorganic As	12/03/09
J19696	na	2981-295	other solid	Deep Freezer B-1	Total Inorganic As	12/03/09
J196F9	na	2981-296	other solid	Deep Freezer B-1	Total Inorganic As	12/03/09
J196D4	na	2981-297	other solid	Deep Freezer B-1	Total Inorganic As	12/03/09
J196K4	na	2981-298	other solid	Deep Freezer B-1	Total Inorganic As	12/03/09
J191W9	na	2981-299	other solid	Deep Freezer B-1	Total Inorganic As	12/01/09
J191T8	na	2981-300	other solid	Deep Freezer B-1	Total Inorganic As	12/01/09
J191W8	na	2981-301	other solid	Deep Freezer B-1	Total Inorganic As	12/01/09
J191T7	na	2981-302	other solid	Deep Freezer B-1	Total Inorganic As	12/01/09
J191W7	na	2981-303	other solid	Deep Freezer B-1	Total Inorganic As	12/01/09
J191T6	na	2981-304	other solid	Deep Freezer B-1	Total Inorganic As	12/01/09
J191W6	na	2981-305	other solid	Deep Freezer B-1	Total Inorganic As	12/01/09
J191T5	na	2981-306	other solid	Deep Freezer B-1	Total Inorganic As	12/01/09
J191W5	na	2981-307	other solid	Deep Freezer B-1	Total Inorganic As	12/01/09
J191T4	na	2981-308	other solid	Deep Freezer B-1	Total Inorganic As	12/01/09

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-564	Page 1 of 1

Collector: WENDY WEST	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-SUCKER 2 -FILLET		SAF No.: RC-118
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX 798198019443

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C											
Type of Container	P/G											
No. of Container(s)	1											
Volume	15mL											
SAMPLE ANALYSIS	Total Inoganic Arsenic											
Sample No.	Matrix *	Sample Date	Sample Time									
J191Y1 2981.289	OTHER SOLID	12/3/09	1100	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: WENDY WEST	Date/Time 1100 12/3/09	Received By/Stored In: EAS LOCKED STORAGE 2	Date/Time 1100 12/3/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	Date/Time 12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON	Date/Time 12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time 12/7/09 1000	Received By/Stored In: FDX	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In: [illegible]	Date/Time 12/08/09 1500
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-584	Page 1 of 1

Collector: WENDY WEST	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-SUCKER 2 -CARCASS		SAF No.: RC-118
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FL 798198019443

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C											
Type of Container	P/G											
No. of Container(s)	1											
Volume	15mL											
SAMPLE ANALYSIS	Total Inoganic Arsenic											
Sample No.	Matrix *	Sample Date	Sample Time									
J19231 2981.290	OTHER SOLID	12/3/09	1130	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: WENDY WEST	1130 12/3/09	Received By/Stored In: EAS LOCKED STORAGE 2	1130 12/3/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON	12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	12/7/09 1000	Received By/Stored In: EDS	
Relinquished By/Removed From		Received By/Stored In	12/07/09
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-565	Page 1 of 1

Collector: WENDY WEST	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-SUCKER 3 -FILLET		SAF No.: RC-118
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FL 798198019443

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C											
Type of Container	P/G											
No. of Container(s)	1											
Volume	15mL											
SAMPLE ANALYSIS	Total Inorganic Arsenic											
Sample No.	Matrix *	Sample Date	Sample Time									
J191Y2 2981-291	OTHER SOLID	12/3/09	1145	X								

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: WENDY WEST	Date/Time: 1145 12/3/09	Received By/Stored In: EAS LOCKED STORAGE 2
Relinquished By/Removed From: EAS LOCKED STORAGE 2	Date/Time: 12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 12/7/09 1000	Received By/Stored In:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In: 12/08/09 1500
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-585	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-SUCKER 3 -CARCASS	SAF No.: RC-118	
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX 798198019443	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inogmic Arsenic										
Sample No. / Matrix * / Sample Date / Sample Time											
J19232 2981.292 / OTHER SOLID / 12/3/09 / 1200	X										

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: WENDY WEST; Date/Time: 12/3/09 1200	Received By/Stored In: EAS LOCKED STORAGE2; Date/Time: 12/3/09 1200	
Relinquished By/Removed From: EAS LOCKED STORAGE2; Date/Time: 12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON; Date/Time: 12/7/09 1000	
Relinquished By/Removed From: SHANNAN JOHNSON; Date/Time: 12/7/09 1000	Received By/Stored In: FDX; Date/Time:	
Relinquished By/Removed From: Date/Time:	Received By/Stored In: Date/Time: 12/08/09 1500	
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-566	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N ND 72009
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-SUCKER 4 -FILLET	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FEDEX 798198019443

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										

Sample No.	Matrix *	Sample Date	Sample Time									
J191Y3 2981 . 293	OTHER SOLID	12/3/09	1230	K								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: WENDY WEST Wendy West	12/3/09 1230	Received By/Stored In: Wendy West EAS LOCKED STORAGE 2	12/3/09 1230
Relinquished By/Removed From: EAS LOCKED STORAGE 2	12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON	12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	12/7/09 1000	Received By/Stored In: FAX	
Relinquished By/Removed From		Received By/Stored In: [illegible]	12/05/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-586	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: LWSA-SUCKER 4 -CARCASS	SAF No.: RC-118	072009
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FD 798198019443	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										
Sample No.	Matrix *	Sample Date	Sample Time								
J19233 2981-294	OTHER SOLID	12/3/09	1300	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: WENDY WEST	1300 12/3/09	FAS LOCKED STORAGE 2	1300 12/3/09
Relinquished By/Removed From: FAS LOCKED STORAGE 2	12/7/09 1000	SHANNAN JOHNSON	12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	12/7/09 1000	FDL	
Relinquished By/Removed From			12/08/09 800
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-965	Page 1 of 1

Collector: WENDY WEST	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N 4/10/2009	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-CARP 5 FILLET		SAF No.: RC-118
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FL 98198019443

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C											
Type of Container	P/G											
No. of Container(s)	1											
Volume	15mL											
SAMPLE ANALYSIS	Total Inoganic Arsenic											
Sample No.	Matrix *	Sample Date	Sample Time									
J19696 2981·295	OTHER SOLID	12/3/09	1330	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: WENDY WEST Wendy West	1330 12/3/09	Received By/Stored In: Wendy West EAS LOCKED STORAGE 2	1330 12/3/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON	12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	12/7/09 1000	Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In: 12/05/09	500
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-1007	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-CARP 5 FILLET	SAF No.: RC-118	
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: F 798198019443	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										

Sample No.	Matrix *	Sample Date	Sample Time									
J196F9 2981 296	OTHER SOLID	12/3/09	1430	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: WENDY WEST	1430 12/3/09	FAS LOCKED STORAGE	1430 12/3/09
Relinquished By/Removed From: FAS LOCKED STORAGE 2	12/7/09 1000	SHANNAN JOHNSON	12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	12/7/09 1000	FDX	
Relinquished By/Removed From		Received By/Stored In	12/08/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-992	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-CARP 5 CARCASS	SAF No.: RC-118	
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX 7981980 19443	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										
Sample No.	Matrix *	Sample Date	Sample Time								
J196D4 2381.297	OTHER SOLID	12/3/09	1400	X							

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: WENDY WEST, Date/Time 1400, 12/3/09	Received By/Stored In: EAS LOCKED STORAGE, Date/Time 1400, 12/3/09	Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.	S=Soil; SE=Sediment; SO=Solid; SI=Sludge; W = Water; O=Oil; A=Air; DS=Drum Solids; DL=Drum Liquids; T=Tissue; WI=Wipe; L=Liquid; V=Vegetation; X=Other
Relinquished By/Removed From: EAS LOCKED STORAGE, Date/Time 12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON, Date/Time 12/7/09 1000		
Relinquished By/Removed From: SHANNAN JOHNSON, Date/Time 12/7/09 1000	Received By/Stored In: FDX, Date/Time		
Relinquished By/Removed From: Date/Time	Received By/Stored In: Date/Time 12/08/09 1520		
Relinquished By/Removed From: Date/Time	Received By/Stored In: 12/08/09 5, Date/Time		
Relinquished By/Removed From: Date/Time	Received By/Stored In: Date/Time		

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-1032	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-CARP 5 CARCASS	SAF No.: RC-118	SAD 91007
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: 9819801943	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										
Sample No.	Matrix *	Sample Date	Sample Time								
J196K4 2981.298	OTHER SOLID	12/3/09	1500	X							

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: WENDY WEST	Date/Time: 1500 12/3/09	Received By/Stored In: EAS LOCKED STORAGE 2	Date/Time: 1500 12/3/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	Date/Time: 12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 12/7/09 1000	Received By/Stored In: FDX	Date/Time:
Relinquished By/Removed From	Date/Time	Received By/Stored In:	Date/Time: 12/08/09 1500
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-552	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N 11/20/09
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-SUCKER 5 -CARCASS	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: GRD -222	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FD 7931980194 43	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										
Sample No.	Matrix *	Sample Date	Sample Time								
J191W9 2981·299	OTHER SOLID	12/1/09	1530	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: WENDY WEST	1530 12/1/09	Received By/Stored In: EAS LOCKED STORAGE 2	1530 12/1/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON	12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	12/7/09 1000	Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	12/08/09 0526
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-532	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-SUCKER 5 -FILLET	SAF No.: RC-118	
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: 7961980194 43	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										
Sample No.	Matrix *	Sample Date	Sample Time								
J191T8 2981-300	OTHER SOLID	12/1/09	1500	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: WENDY WEST	1500 12/1/09	Received By/Stored In: FAS LOCKED STORAGE2	1500 12/1/09
Relinquished By/Removed From: FAS LOCKED STORAGE2	12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON	12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	12/7/09 1000	Received By/Stored In: FDX	
Relinquished By/Removed From:		Received By/Stored In:	12/08/09 1520
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-551	Page 1 of 1

Collector: WENDY WEST	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-SUCKER 4 -CARCASS	SAF No.: RC-118	11/17/2009
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FEDEX 798198019443	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										
Sample No.	Matrix *	Sample Date	Sample Time								
J191W8 2981-301	OTHER SOLID	12/1/09	1400	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: WENDY WEST	1400 12/1/09	EAS LOCKED STORAGE2	1400 12/1/09
Relinquished By/Removed From: EAS LOCKED STORAGE2	12/7/09 1000	SHANNAN JOHNSON	12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	12/7/09 1000	FDX	
Relinquished By/Removed From		12/08/09 1500	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-531	Page 1 of 1

Collector: WENDY WEST	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-SUCKER 4 -FILLET		SAF No.: RC-118
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FD 7981980 19443

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C											
Type of Container	P/G											
No. of Container(s)	1											
Volume	15mL											
SAMPLE ANALYSIS	Total Inoganic Arsenic											
Sample No.	Matrix *	Sample Date	Sample Time									
J191T7 2981-302	OTHER SOLID	12/1/09	1330	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: WENDY WEST Wendy West	1330 12/1/09	Received By/Stored In: EAS LOCKED STORAGE2 Wendy West	1330 12/1/09
Relinquished By/Removed From: EAS LOCKED STORAGE2	2/7/09 1000	Received By/Stored In: SHANNAN JOHNSON	2/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	2/7/09 1000	Received By/Stored In: FDX	
Relinquished By/Removed From:		Received By/Stored In: 13/2/09 0800	
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-550	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-SUCKER 3 -CARCASS	SAF No.: RC-118	MS 72009
Ice Chest No.: GRO-222	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX 798198019443	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										
Sample No.	Matrix *	Sample Date	Sample Time								
J191W7 2981-302	OTHER SOLID	12/1/09	1200	X							

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: WENDY WEST Wendy West; Date/Time: 1200 12/1/09	Received By/Stored In: FAS LOCKED STORAGE Wendy West; Date/Time: 1200 12/1/09		S=Soil; SE=Sediment; SO=Solid; SI=Sludge; W = Water; O=Oil; A=Air; DS=Drum Solids; DL=Drum Liquids; T=Tissue; WI=Wipe; L=Liquid; V=Vegetation; X=Other
Relinquished By/Removed From: FAS LOCKED STORAGE; Date/Time: 12/1/09 1000	Received By/Stored In: SHANNAN JOHNSON; Date/Time: 12/1/09 1000		
Relinquished By/Removed From: SHANNAN JOHNSON; Date/Time: 12/1/09 1000	Received By/Stored In: FDX; Date/Time:		
Relinquished By/Removed From: ; Date/Time:	Received By/Stored In: ; Date/Time: 12/08/09 1500		
Relinquished By/Removed From: ; Date/Time:	Received By/Stored In: ; Date/Time:		
Relinquished By/Removed From: ; Date/Time:	Received By/Stored In: ; Date/Time:		

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-530	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K ~~N~~ WD 71509
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-SUCKER 3 -FILLET	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: GRD -222	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FD 798198019443	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inorganic Arsenic										
Sample No.	Matrix *	Sample Date	Sample Time								
J191T6 2981.304	OTHER SOLID	12/1/09	1130	X							

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: WENDY WEST Wendy West 12/1/09 Date/Time 1130	Received By/Stored In: FAS LOCKED STORAGE 2 Wendy West Wendy West 12/1/09 Date/Time 1130	
Relinquished By/Removed From: FAS LOCKED STORAGE 2 Date/Time 12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON Date/Time 12/7/09 1000	
Relinquished By/Removed From: SHANNAN JOHNSON Date/Time 12/7/09 1000	Received By/Stored In: HDY Date/Time	
Relinquished By/Removed From: Date/Time	Received By/Stored In: [illegible] 12/08/09 0500 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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-549	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-SUCKER 2 -CARCASS	SAF No.: RC-118	
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX 798198019443	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										
Sample No.	Matrix *	Sample Date	Sample Time								
J191W6 2981-305	OTHER SOLID	12/1/09	1100	X							

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 1100	Received By/Stored In	Date/Time 1100
WENDY WEST Wendy West	12/1/09	EAS LOCKED STORAGE 2 Wendy West	12/1/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	Date/Time 2/7/09 1000	Received By/Stored In: SHANNAN JOHNSON	Date/Time 2/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time 2/7/09 1000	Received By/Stored In: FDX	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time 12/05/09 1500
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

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-529	Page 1 of 1
Collector: WENDY WEST	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-SUCKER 2 -FILLET	SAF No.: RC-118	
Ice Chest No.: ERD-222	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX 798198019443	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										
Sample No. / Matrix * / Sample Date / Sample Time											
J191T5 2981-306 / OTHER SOLID / 12/1/09 / 1030	X										

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: WENDY WEST; Date/Time: 12/1/09 1030	Received By/Stored In: EAS LOCKED STORAGE 2; Date/Time: 12/1/09 1030	Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.
Relinquished By/Removed From: EAS LOCKED STORAGE 2; Date/Time: 12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON; Date/Time: 12/7/09 1000	
Relinquished By/Removed From: SHANNAN JOHNSON; Date/Time: 12/7/09 1000	Received By/Stored In: FDX; Date/Time:	
Relinquished By/Removed From: ; Date/Time:	Received By/Stored In: ; Date/Time: 12/08/09 1520	
Relinquished By/Removed From: ; Date/Time:	Received By/Stored In: ; Date/Time:	
Relinquished By/Removed From: ; Date/Time:	Received By/Stored In: ; Date/Time:	

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-548	Page 1 of 1

Collector: WENDY WEST	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N AH 72009	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-SUCKER 1 -CARCASS		SAF No.: RC-118
Ice Chest No.: GRO - 222	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Airbill No.: 7981980 19443

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C											
Type of Container	P/G											
No. of Container(s)	1											
Volume	15mL											
SAMPLE ANALYSIS	Total Inoganic Arsenic											
Sample No.	Matrix *	Sample Date	Sample Time									
J191W5 2981.309	OTHER SOLID	12/1/09	1000	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: WENDY WEST Wendy West	1000 12/1/09	Received By/Stored In: FAS LOCKED STORAGE Wendy West Wendy West	1000 12/1/09
Relinquished By/Removed From: FAS LOCKED STORAGE 2	12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON	12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	12/7/09 1000	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In:	12/08/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-528	Page 1 of 1

Collector: WENDY WEST	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-SUCKER 1 -FILLET		SAF No.: RC-118
Ice Chest No.: GRD-222	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FE 798198019443

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C											
Type of Container	P/G											
No. of Container(s)	1											
Volume	15mL											
SAMPLE ANALYSIS	Total Inorganic Arsenic											
Sample No.	Matrix *	Sample Date	Sample Time									
J191T4 2281-308	OTHER SOLID	12/1/09	0930	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: WENDY WEST Wendy West	0930 12/1/09	Received By/Stored In: Wendy West EAS LOCKED STORAGE2	0930 12/1/09
Relinquished By/Removed From: EAS LOCKED STORAGE2	12/7/09 1000	Received By/Stored In: SHANNAN JOHNSON	12/7/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	12/7/09 1000	Received By/Stored In: FDX	
Relinquished By/Removed From:		Received By/Stored In:	12/08/09 1500
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.

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

LABORATORY SECTION	Received By	Title	Date/Time
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

LOG-IN CHECKLIST

Reference SOP# MSL-A-001

Central File #: 2981 Sample No(s): 289-308 Batch: 21

Project Name: WA Closure Hanford Project Manager:

TO BE COMPLETED BY PROJECT MANAGER (prior to arrival when possible)

Matrix: WP#

Yes	No	
		Navy-type Project (requires high-level sample tracking procedures)
		USDA Samples (see Compliance Agreement Checklist) — PM Verification:
		Filter Samples: Amount: Entire sample Half of sample
		Freeze dry sample(s) - samples will be weighed and placed in ultralow temp freezer (Login Lab)
		Special Instructions:

Sample Preservation Instructions:

See LIMS for archive/disposal information

TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN

Yes	No	N/A	Indicate in Appropriate Box	
	✓		Custody seal present — Seal intact? YES NO	
✓			Cooler temperature (acceptable range: 4±2°C or solids:frozen) (if multiple coolers, note temp. of each)	3.7 °C °C
		✓	Project Manager notified of any custody/login discrepancies (cooler temp, sponsor codes, etc) Comment/Remedy:	
✓			Were all chain of custody forms signed and dated?	
	✓		Were samples filtered at MSL?	

Sample condition(s): Acceptable Other (Explain):

Container type: Poly Glass Dip. Vial Other:

Notes:

Completed By: [signature] Date/Time: 12/08/09 1500

SAMPLE PRESERVATION

✓		Sample(s) were preserved prior to arrival at MSL (noted on CoC / Sample / per PM Instruction)	
		Random pH checked for ~10% of samples (use dip paper)	Sample IDs:
		Complete pH check required for project (use pH meter and record on pH Record form)	
		Sample(s) were preserved at MSL	

Type:

	0.2% HNO3	Notes:	Lot#
	0.5% HCl (Hg samples)	Notes:	Lot#
✓	Refrigerate/Freeze	Notes: deep freezer B-1	
	Other	Notes:	

Completed By: [signature] Date/Time: 12/09/09 0730

Storage Shelf: