

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

**COMPLETE COPY OF DATA PACKAGE TO:**

Kathy Wendt H4-21

KW 2/1/10  
INITIAL/DATE

**COMMENTS:**

**SDG SEQ091109**

**SAF-RC-118**

Rad only

Chem only

Rad & Chem

Complete

Partial

**Sampling Location:**

**STURGEON 27 FILLET/CARCASS**  
**STURGEON 28 FILLET/CARCASS**  
**STURGEON 29 FILLET/CARCASS**  
**STURGEON 30 FILLET/CARCASS**

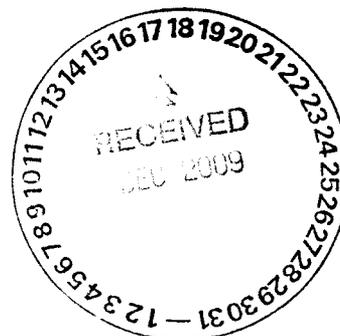
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# Analytical Chemistry Data Package Inorganics Analysis

**Project: Washington Closures Hanford  
As Speciation Analysis of Tissue**

SDG 091109  
SDG 091809  
SDG 092309



PNNL Project No. 56166  
MSL CF No. 2981



**Pacific Northwest**  
NATIONAL LABORATORY

Marine Sciences Laboratory  
1529 West Sequim Bay Road  
Sequim, WA 98382  
PM: Jill Brandenberger  
(360) 681-4564

SEQ 091109

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**BATTELLE MARINE SCIENCES LABORATORY**

1529 West Sequim Bay Road  
 Sequim, Washington 98382  
 (360) 681-4564

**Washington Closure Hanford**

Arsenic Speciation Study  
 SDG091109, SDG091809, and SDG092309

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 <sup>3+5</sup> µg/g dry wt.	Total As µg/g dry wt.	
<b>Method Detection Limit (MDL)</b>								0.002 <sup>1</sup>	0.005	0.007	0.01	Cal.	
2981-186	J19476	SDG091109	09/11/09	09/03/09	12/02/09	120209-LCDRC	27.6	0.0796	0.005 U	0.278	0.0164	0.379	
2981-188	J19477	SDG091109	09/11/09	09/03/09	12/02/09	120209-LCDRC	30.2	0.0271	0.005 U	0.007 U	0.01 U	0.0491	
2981-189	J19487	SDG091109	09/11/09	09/03/09	12/02/09	120209-LCDRC	43.4	0.002 U	0.005 U	0.007 U	0.0116	0.0256	
2981-191	J19486	SDG091109	09/11/09	09/03/09	12/02/09	120209-LCDRC	34.0	0.0319	0.005 U	0.007 U	0.01 U	0.0539	
2981-193	J19497	SDG091109	09/11/09	09/08/09	12/02/09	120209-LCDRC	34.4	0.105	0.005 U	0.007 U	0.01 U	0.127	
2981-196	J19496	SDG091109	09/11/09	09/08/09	12/02/09	120209-LCDRC	26.6	0.276	0.005 U	0.007 U	0.01 U	0.298	
2981-198	J194B7	SDG091109	09/11/09	09/08/09	12/02/09	120209-LCDRC	32.6	0.0296	0.005 U	0.007 U	0.0106	0.0523	
2981-200	J194B8	SDG091109	09/11/09	09/08/09	12/02/09	120209-LCDRC	19.3	0.0113	0.005 U	0.007 U	0.0115	0.0347	
2981-201	J194C8	SDG091109	09/11/09	09/09/09	12/02/09	120209-LCDRC	11.0	0.0709	0.005 U	0.0186	0.0150	0.110	
2981-202	J194C9	SDG091109	09/11/09	09/09/09	12/02/09	120209-LCDRC	15.0	0.0313	0.005 U	0.007 U	0.01 U	0.0533	
2981-203	J19503	SDG091809	09/18/09	09/10/09	12/02/09	120209-LCDRC	31.1	0.0848	0.005 U	0.007 U	0.01 U	0.107	
2981-204	J19504	SDG091809	09/18/09	09/10/09	12/02/09	120209-LCDRC	37.9	0.0313	0.005 U	0.007 U	0.01 U	0.0533	
2981-205	J195R1	SDG091809	09/18/09	09/10/09	12/03/09	120309-LCDRC	42.3	0.00784	0.005 U	0.007 U	0.01 U	0.0298	
2981-206	J195R0	SDG091809	09/18/09	09/10/09	12/03/09	120309-LCDRC	34.5	0.0363	0.005 U	0.0156	0.01 U	0.0669	
2981-207	J195T2	SDG091809	09/18/09	09/14/09	12/03/09	120309-LCDRC	36.7	0.0444	0.005 U	0.007 U	0.01 U	0.0664	
2981-207DUF	J195T2	SDG091809	09/18/09	09/14/09	12/03/09	120309-LCDRC	36.7	0.0445	0.005 U	0.007 U	0.0104	0.0669	
2981-208	J195T3	SDG091809	09/18/09	09/14/09	12/03/09	120309-LCDRC	40.2	0.0155	0.005 U	0.007 U	0.01 U	0.0375	
2981-209	J195Y0	SDG091809	09/18/09	09/15/09	12/03/09	120309-LCDRC	37.7	0.0223	0.005 U	0.007 U	0.01 U	0.0443	
2981-210	J195X9	SDG091809	09/18/09	09/15/09	12/03/09	120309-LCDRC	32.2	0.0451	0.005 U	0.007 U	0.01 U	0.0671	
2981-211	J19609	SDG091809	09/18/09	09/15/09	12/03/09	120309-LCDRC	32.9	0.0279	0.005 U	0.007 U	0.01 U	0.0499	
2981-212	J19610	SDG091809	09/18/09	09/15/09	12/03/09	120309-LCDRC	38.7	0.0122	0.005 U	0.007 U	0.0115	0.0358	
2981-213	J19629	SDG092309	09/23/09	09/16/09	12/03/09	120309-LCDRC	34.7	0.0220	0.005 U	0.007 U	0.0130	0.0470	
2981-214	J19628	SDG092309	09/23/09	09/16/09	12/03/09	120309-LCDRC	28.9	0.0461	0.005 U	0.007 U	0.01 U	0.0681	
2981-215	J19639	SDG092309	09/23/09	09/16/09	12/03/09	120309-LCDRC	23.9	0.0395	0.005 U	0.007 U	0.01 U	0.0615	
2981-218	J19640	SDG092309	09/23/09	09/16/09	12/03/09	120309-LCDRC	29.7	0.0154	0.005 U	0.007 U	0.01 U	0.0374	
2981-219	J19650	SDG092309	09/23/09	09/17/09	12/03/09	120309-LCDRC	36.0	0.0249	0.005 U	0.007 U	0.01 U	0.0469	
2981-220	J19649	SDG092309	09/23/09	09/17/09	12/03/09	120309-LCDRC	29.2	0.0690	0.005 U	0.007 U	0.01 U	0.0910	
2981-221	J19660	SDG092309	09/23/09	09/17/09	12/03/09	120309-LCDRC	32.0	0.0587	0.005 U	0.007 U	0.0121	0.0828	
2981-222	J19659	SDG092309	09/23/09	09/17/09	12/03/09	120309-LCDRC	28.7	0.131	0.005 U	0.007 U	0.01 U	0.153	
<b>QUALITY CONTROL SAMPLE RESULTS</b>							<i>Average</i>	31.7					
<b>Method Blank</b>													
Blank R1		SDG091109	09/11/09		12/02/09	120209-LCDRC		0.002 U	0.005 U	0.007 U	0.01 U	NA	
Blank R2		Multiple			12/03/09	120309-LCDRC		0.002 U	0.005 U	0.007 U	0.01 U	NA	
<b>Standard Reference Material</b>													
DORM-2 r1		SDG091109	09/11/09		12/02/09	120209-LCDRC		14.5	0.0407	0.007 U	0.01 U	14.6	
DORM-2 r2		Multiple			12/03/09	120309-LCDRC		12.7	0.203	0.007 U	0.01 U	12.9	
<b>Certified Value</b>								16.4	NA	NA	NA	18.0	
<b>% Recovery</b>								88%				81%	
<b>% Recovery</b>								77%				72%	
<b>Blank Spike Results</b>													
LCS R1		SDG091109	09/11/09		12/02/09	120209-LCDRC		2.02	2.08	2.00	4.02	10.1	
LCS R2		Multiple			12/03/09	120309-LCDRC		1.97	1.91	2.01	3.87	9.75	
<b>Spike</b>								2.00	2.00	2.00	4.00	10.0	
<b>% Rec</b>								101%	104%	100%	100%	101%	
<b>% Rec</b>								98%	95%	100%	97%	98%	

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**Washington Closure Hanford**  
 Arsenic Speciation Study  
 SDG091109, SDG091809, and SDG092309

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Percent Dry Wt	AsB	DMA	MMA	As <sup>3-5</sup>	Total As
								µg/g dry wt.	µg/g dry wt.	µg/g dry wt.	µg/g dry wt.	µg/g dry wt.
<b>Method Detection Limit (MDL)</b>								0.002 <sup>1</sup>	0.005	0.007	0.01	Cal.
<b>Replicate Analysis Results</b>												
2981-187	J195V0	SDG091109	09/11/09	09/03/09	12/02/09	120209-LCDRC	32.2	0.0327	0.005 U	0.007 U	0.0102	0.0549
2981-187DUF	J195V0	SDG091109	09/11/09	09/03/09	12/02/09	120209-LCDRC	32.2	0.0295	0.005 U	0.007 U	0.01 U	0.0515
<b>RPD</b>								<b>10%</b>	NA	NA	NA	<b>6%</b>
2981-207	J195T2	SDG091809	09/18/09	09/14/09	12/03/09	120309-LCDRC	36.7	0.0444	0.005 U	0.007 U	0.01 U	0.0664
2981-207DUF	J195T2	SDG091809	09/18/09	09/14/09	12/03/09	120309-LCDRC	36.7	0.0445	0.005 U	0.007 U	0.0104	0.0669
<b>RPD</b>								<b>0%</b>	NA	NA	NA	<b>1%</b>
<b>Matrix Spike Accuracy</b>												
2981-185	J195T9	SDG091109	09/11/09	09/03/09	12/02/09	120209-LCDRC	26.4	0.0951	0.005 U	0.007 U	0.01 U	0.117
2981-185 MS								2.49	0.42	1.82	4.14	8.87
2981-185 MSD								2.95	0.20	1.26	3.89	8.30
<b>Spike Amount, MS</b>								2.43	NA	NA	4.87	NA
<b>Spike Amount, MSD</b>								2.35	NA	NA	4.69	NA
<b>% Recovery, MS</b>								<b>99%</b>	NA	NA	<b>85%</b>	NA
<b>% Recovery, MSD</b>								<b>117%</b>	NA	NA	<b>80%</b>	NA
<b>RPD</b>								<b>17%</b>	NA	NA	<b>6%</b>	NA
2981-210	J195X9	SDG091809	09/18/09	09/15/09	12/03/09	120309-LCDRC	32.2	0.0451	0.005 U	0.007 U	0.01 U	0.0671
2981-210MS								2.06	0.17	0.95	3.04	6.22
2981-210MSD								2.06	0.11	0.49	2.91	5.57
<b>Spike Amount, MS</b>								2.05	NA	NA	4.10	NA
<b>Spike Amount, MSD</b>								2.05	NA	NA	4.11	NA
<b>% Recovery, MS</b>								<b>98%</b>	NA	NA	<b>74% N</b>	NA
<b>% Recovery, MSD</b>								<b>98%</b>	NA	NA	<b>71% N</b>	NA
<b>RPD</b>								<b>0%</b>	NA	NA	<b>4%</b>	NA

**NOTES:** Arsenobetaine (AsB)  
 Dimethylarsinic acid (DMA)  
 Monomethylarsonic acid (MMA)  
 Arsenate (V or As<sup>5-</sup>)  
 Arsenite (III or As<sup>3-</sup>)  
 Total Inorganic Arsenic = As<sup>3-5</sup>  
 Total As = Sum of AsB, DMA, MMA, and As<sup>3-5</sup>  
 Cal = Calculated Value

<sup>1</sup> 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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 Arsenic Speciation Study  
 SDG091109, SDG091809, and SDG092309  
 WET WEIGHT TABLE

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Percent Dry Wt	AsB	DMA	MMA	As <sup>3-5</sup>	Total As
								µg/g wet wt.	µg/g wet wt.	µg/g wet wt.	µg/g wet wt.	µg/g wet wt.
<i>Method Detection Limit (MDL)</i>								<i>0.00063<sup>1</sup></i>	<i>0.002</i>	<i>0.002</i>	<i>0.003</i>	<i>0.003</i>
2981-186	J19476	SDG091109	09/11/09	09/03/09	12/02/09	120209-LCDRC	27.6	0.0220	0.002 U	0.0768	0.00453	0.105
2981-188	J19477	SDG091109	09/11/09	09/03/09	12/02/09	120209-LCDRC	30.2	0.00817	0.002 U	0.007 U	0.003 U	0.0272
2981-189	J19487	SDG091109	09/11/09	09/03/09	12/02/09	120209-LCDRC	43.4	0.000869	0.002 U	0.007 U	0.00502	0.0149
2981-191	J19486	SDG091109	09/11/09	09/03/09	12/02/09	120209-LCDRC	34.0	0.0109	0.002 U	0.007 U	0.003 U	0.0299
2981-193	J19497	SDG091109	09/11/09	09/08/09	12/02/09	120209-LCDRC	34.4	0.0361	0.002 U	0.007 U	0.003 U	0.0551
2981-196	J19496	SDG091109	09/11/09	09/08/09	12/02/09	120209-LCDRC	26.6	0.0732	0.002 U	0.007 U	0.003 U	0.0922
2981-198	J194B7	SDG091109	09/11/09	09/08/09	12/02/09	120209-LCDRC	32.6	0.00965	0.002 U	0.007 U	0.00345	0.0221
2981-200	J194B8	SDG091109	09/11/09	09/08/09	12/02/09	120209-LCDRC	19.3	0.00218	0.002 U	0.007 U	0.003 U	0.0134
2981-201	J194C8	SDG091109	09/11/09	09/09/09	12/02/09	120209-LCDRC	11.0	0.00777	0.002 U	0.00204	0.003 U	0.0135
2981-202	J194C9	SDG091109	09/11/09	09/09/09	12/02/09	120209-LCDRC	15.0	0.00471	0.002 U	0.007 U	0.003 U	0.0237
2981-203	J19503	SDG091809	09/18/09	09/10/09	12/02/09	120209-LCDRC	31.1	0.0264	0.002 U	0.007 U	0.003 U	0.0454
2981-204	J19504	SDG091809	09/18/09	09/10/09	12/02/09	120209-LCDRC	37.9	0.0118	0.002 U	0.007 U	0.003 U	0.0308
2981-205	J195R1	SDG091809	09/18/09	09/10/09	12/03/09	120309-LCDRC	42.3	0.00331	0.002 U	0.007 U	0.003 U	0.0223
2981-206	J195R0	SDG091809	09/18/09	09/10/09	12/03/09	120309-LCDRC	34.5	0.0125	0.002 U	0.00538	0.003 U	0.0299
2981-207	J195T2	SDG091809	09/18/09	09/14/09	12/03/09	120309-LCDRC	36.7	0.0163	0.002 U	0.007 U	0.003 U	0.0353
2981-207DUF	J195T2	SDG091809	09/18/09	09/14/09	12/03/09	120309-LCDRC	36.7	0.0163	0.002 U	0.007 U	0.00383	0.0292
2981-208	J195T3	SDG091809	09/18/09	09/14/09	12/03/09	120309-LCDRC	40.2	0.00621	0.002 U	0.007 U	0.003 U	0.0252
2981-209	J195Y0	SDG091809	09/18/09	09/15/09	12/03/09	120309-LCDRC	37.7	0.00839	0.002 U	0.007 U	0.003 U	0.0274
2981-210	J195X9	SDG091809	09/18/09	09/15/09	12/03/09	120309-LCDRC	32.2	0.0145	0.002 U	0.007 U	0.003 U	0.0335
2981-211	J19609	SDG091809	09/18/09	09/15/09	12/03/09	120309-LCDRC	32.9	0.00918	0.002 U	0.007 U	0.003 U	0.0282
2981-212	J19610	SDG091809	09/18/09	09/15/09	12/03/09	120309-LCDRC	38.7	0.00474	0.002 U	0.007 U	0.00446	0.0182
2981-213	J19629	SDG092309	09/23/09	09/16/09	12/03/09	120309-LCDRC	34.7	0.00764	0.002 U	0.007 U	0.00450	0.0211
2981-214	J19628	SDG092309	09/23/09	09/16/09	12/03/09	120309-LCDRC	28.9	0.0133	0.002 U	0.007 U	0.003 U	0.0323
2981-215	J19639	SDG092309	09/23/09	09/16/09	12/03/09	120309-LCDRC	23.9	0.00946	0.002 U	0.007 U	0.003 U	0.0285
2981-218	J19640	SDG092309	09/23/09	09/16/09	12/03/09	120309-LCDRC	29.7	0.00459	0.002 U	0.007 U	0.003 U	0.0236
2981-219	J19650	SDG092309	09/23/09	09/17/09	12/03/09	120309-LCDRC	36.0	0.00896	0.002 U	0.007 U	0.003 U	0.0280
2981-220	J19649	SDG092309	09/23/09	09/17/09	12/03/09	120309-LCDRC	29.2	0.0202	0.002 U	0.007 U	0.003 U	0.0392
2981-221	J19660	SDG092309	09/23/09	09/17/09	12/03/09	120309-LCDRC	32.0	0.0188	0.002 U	0.007 U	0.00385	0.0316
2981-222	J19659	SDG092309	09/23/09	09/17/09	12/03/09	120309-LCDRC	28.7	0.0375	0.002 U	0.007 U	0.003 U	0.0565

**QUALITY CONTROL SAMPLE RESULTS**

*Average 31.7*

**Method Blank**

Blank R1	SDG091109	09/11/09	12/02/09	120209-LCDRC	0.0006 U	0.001 U	0.002 U	0.003 U	NA
Blank R2	Multiple		12/03/09	120309-LCDRC	0.0006 U	0.001 U	0.002 U	0.003 U	NA

**NOTES: Arsenobetaine (AsB)**

Dimethylarsinic acid (DMA)

Monomethylarsonic acid (MMA)

Arsenate (V or As<sup>5-</sup>)

Arsenite (III or As<sup>3-</sup>)

Total Inorganic Arsenic = As<sup>3-5</sup>

Total As = Sum of AsB, DMA, MMA, and As<sup>3-5</sup>

Cal = Calculated Value

<sup>1</sup> 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

## QA/QC NARRATIVE

**PROJECT:** Washington Closures Hanford SDG091109, 091809, and 092309  
**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 in three shipments on 09/11/09, 09/18/09, and 09/23/09. 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:

<b>MSL Code:</b>	<b>SDG091109: 2981*186-202 select #s</b> <b>SDG091809: 2981*203-212</b> <b>SDG092309: 2981*213-222 select #s</b>
Description:	Freshwater Fish Homogenate
Collection dates	September 2009
Laboratory arrival date	09/11/09, 09/18/09, 09/23/09
Cooler temperature on arrival	3.7, 2.7, and 2.0°C, respectively
Extraction Dates:	12/01/09 and 12/02/09
Analyses Dates:	12/01/09 and 12/02/09

**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-1-037 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), monomethylarsonic 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<sup>3+5</sup>.

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

## QA/QC NARRATIVE

following formula: wet weight concentration = dry weight concentration \* % dry weight / 100.

NOTE: The data for arsenobetaine (AsB), dimethylarsinic acid (DMA), monomethylarsonic 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<sup>3+5</sup> 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 3-7 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 <sup>3+5</sup>	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. None of the arsenic species were detected in 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. Due to an error, the duplicate for analytical batch 120209-LCDRC was conducted on a Washington Closures Hanford sample that was not selected for total inorganic arsenic analyses. The value is reported for the purpose of meeting the quality control requirement. The sample did not contain detectable As<sup>3+5</sup>; therefore, precision was assessed using the matrix spike duplicates. Analytical precision was assessed using the matrix spike duplicates and were within the QC acceptance criterion of  $\leq 25\%$  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). Due to an error, the matrix spike and duplicate matrix spike for analytical batch 120209-LCDRC were conducted on a Washington Closures Hanford sample that was not selected for total inorganic arsenic analyses. The values are provided to demonstrate the quality control was within requirements for this analytical batch. The matrix spikes were within the QC acceptance criterion of 75-125%. The duplicate matrix spikes for analytical batch 120309-LCDRC were just outside the QC acceptance criterion (74% and 71%, respectively). The matrix spikes were reprocessed, but resulted in the same low recoveries. The LCS was within the QC criterion; therefore, the batch was reported. The data may be considered biased slightly low; however, the sample concentrations were all within three times the method detection limit. The data are not considered significantly impacted.

### 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  $\pm 25\%$  difference.

### REFERENCES:

- Francesconi, K.A. and Kuehnelt, D., 2004. Determination of arsenic species: A critical review of methods and application, 2000-2003. *Analyst*, 129: 373-395.
- Gong, Z., Lu, X., Ma, M., Watt, C., Le, C., 2002. Arsenic speciation analysis. *Talanta*, 58: 77-96
- Mandal, B.K., Ogra, Y., Suzuki, K.T., 2003. Speciation of arsenic in human nail and hair from arsenic-affected area by HPLC-inductively coupled argon plasma mass spectrometry. *Toxicol. Appl. Pharmacol.*, 189: 73-83.
- U.S. EPA, 2000. Method 1632, Revision A (1632A), Chemical Speciation of Arsenic in Water and Tissue by Hydride Generation Quartz Furnace atomic Absorption Spectrometry.

# SAMPLE LOGIN

Project Manager: Brandenberger  
Date Received: 9/11/2009  
Batch: 15  
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
J195T9	na	2981-185	other solid	Deep Freezer B-1	MeHg	09/03/09
J19476	na	2981-186	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J195V0	na	2981-187	other solid	Deep Freezer B-1	MeHg	09/03/09
J19477	na	2981-188	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J19487	na	2981-189	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J195V2	na	2981-190	other solid	Deep Freezer B-1	MeHg	09/03/09
J19486	na	2981-191	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J195V1	na	2981-192	other solid	Deep Freezer B-1	MeHg	09/03/09
J19497	na	2981-193	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J195V4	na	2981-194	other solid	Deep Freezer B-1	MeHg	09/08/09
J195V3	na	2981-195	other solid	Deep Freezer B-1	MeHg	09/08/09
J19496	na	2981-196	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J195V5	na	2981-197	other solid	Deep Freezer B-1	MeHg	09/08/09
J194B7	na	2981-198	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J195V6	na	2981-199	other solid	Deep Freezer B-1	MeHg	09/08/09
J194B8	na	2981-200	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J194C8	na	2981-201	other solid	Deep Freezer B-1	TIA,HCr	09/09/09
J194C9	na	2981-202	other solid	Deep Freezer B-1	TIA,HCr	09/09/09

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-850	Page 1 of 1			
Collector <b>M.F.dino</b>		Company Contact <b>JOAN KESSNER</b>		Telephone No. <b>375-4688</b>		Project Coordinator <b>KESSNER, JH</b>	Price Code <b>9K</b> <b>1/18/09</b>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location <b>STURGEON 17 FILLET</b>			SAF No. <b>RC-118</b>					
Ice Chest No. <b>WCH-DB-004</b>		Field Logbook No. <b>EL-1638</b>		COA <b>BESCRC6520</b>		Method of Shipment <b>FED EX</b>				
Shipped To <b>Battelle Marine Sciences</b>		Offsite Property No. <b>N/A</b>			Bill of Lading/Avi <b>FDX# 7979224885 U4</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <b>N/A</b>				Preservation	Freeze					
Special Handling and/or Storage <b>FREEZE "MATRIX COMPOSED OF FISH"</b>				Type of Container	P					
				No. of Container(s)	1					
				Volume	60mL					
SAMPLE ANALYSIS				Methyl Mercury by EPA 1630M; Mercury - 7473						
Sample No.	Matrix *	Sample Date	Sample Time							
<b>J195T9</b>	<b>2981-185</b>	<b>OTHER SOLID</b>	<b>9/3/09</b>	<b>1045</b>	<b>X</b>					
CHAIN OF POSSESSION										
Relinquished By/Removed From				Sign/Print Names				SPECIAL INSTRUCTIONS		Matrix *
Date/Time		Date/Time		Date/Time		Date/Time				
<b>M.F.dino</b>		<b>9/3/09 1045</b>		<b>ana</b>		<b>EAS LOCKED STORAGE 2</b>		<b>9/3/09 1045</b>		
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
<b>EAS LOCKED STORAGE 2</b>		<b>9/10/09</b>		<b>SHANNAN JOHNSON</b>		<b>9/10/09</b>				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
<b>SHANNAN JOHNSON</b>		<b>9/10/09</b>		<b>FDX</b>		<b>9/10/09</b>				
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time				
				<b>Shannon Johnson</b>		<b>9/10/09 1045</b>				
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-118-778	Page 1 of 1
Collector <b>M.F. dino</b>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <b>9K</b>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 17 FILLET		SAF No. RC-118	<b>11/8/09</b>		
Ice Chest No. <b>WCH-DB-001-4</b>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading/Air Bill No. <b>FDX# 797922488504</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J19476	2981.186	OTHER SOLID	9/3/09	1045	X	X	
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <b>M.F. dino</b>	Date/Time 9/3/09 1045	Received By/Stored In <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/3/09 1045	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>			<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Dryer Solids</li> <li>DL=Dryer Liquids</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/10/09	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09	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				
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-118-851	Page 1 of 1
Collector <i>M. F. Idino</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 17 CARCASS	SAF No. RC-118	Bill of Lading/Av. Bill # <b>FDX 797922488504</b>				
Ice Chest No. <i>WCH-08-001-4</i>	Field Logbook No. EL-1638	COA BESCRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation	Freeze				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P				
		No. of Container(s)	1				
		Volume	60mL				
SAMPLE ANALYSIS		Methyl Mercury by EPA 1630M; Mercury - 7473					
Sample No.	Matrix *	Sample Date	Sample Time				
J195V0 <i>2981.187</i>	OTHER SOLID	<i>9/3/09</i>	<i>1100</i>	<i>X</i>			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>M. F. Idino</i>	Date/Time <i>9/3/09 1100</i>	Received By/Stored In <i>EAS LOCKED STORAGE</i>	Date/Time <i>9/3/09 1100</i>	<small>in samples not shipped to lab.</small> 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 SL=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 <i>EAS LOCKED STORAGE</i>	Date/Time <i>9/10/09</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>9/10/09</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>9/10/09</i>	Received By/Stored In <i>EAS</i>	Date/Time <i>9/10/09</i>				
Relinquished By/Removed From	Date/Time	Received By/Stored In <i>Shannon Johnson</i>	Date/Time <i>09/10/09 1458</i>				
Relinquished By/Removed From	Date/Time	Received By/Stored In	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-118-779	Page 1 of 1
Collector <b>M. F. dino</b>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <b>9K</b> <b>N</b> <b>1/18/09</b>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 17 CARCASS	SAF No. RC-118					
Ice Chest No. <b>WCH-08-001-4</b>	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. <b>FED 797922488504</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation	Cool 4C	Freeze			
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G	G/P			
		No. of Container(s)	0	1			
		Volume	15mL	60mL			
SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time				
J19477 2981.188	OTHER SOLID	9/3/09	1100	X	X		
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <b>M. F. dino</b>	Date/Time 9/3/09 1100	Received By/Stored In <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/3/09 1100	50 samples for shipment to lab. Sampler unavailable to remove samples from controlled storage. Ship per removed samples from storage location taking custody of samples for shipment to lab.			S=Soil SE=Sediment SO=Solid SL=Sledge 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 <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/10/09 1017	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09 1000				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09	Received By/Stored In <b>EDV</b>	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In <b>EDV</b>	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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

WCH-EE-011

Collector **M. Fidino** Company Contact **JOAN KESSNER** Telephone No. **375-4688** Project Coordinator **KESSNER, JH** Price Code **9K** Data Turnaround **45 Days**

Project Designation **Columbia River Component of the RCBRA - Tissues** Sampling Location **STURGEON 18 CARCASS** SAF No. **RC-118**

Ice Chest No. **WCH-DB-001-4** Field Logbook No. **EL-1638** COA **BESCR6520** Method of Shipment **FED EX**

Shipped To **Battelle Marine Sciences** Offsite Property No. **N/A** Bill of Lading/Air Bill No. **FDX# 797922488504**

POSSIBLE SAMPLE HAZARDS/REMARKS N/A  Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"	Preservation	Cool 4C	Freeze										
	Type of Container	P/G	G/P										
	No. of Container(s)	0	1										
	Volume	15mL	60mL										

SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M								
-----------------	--	--	--	-------------------------	--------------------------------	--	--	--	--	--	--	--	--

Sample No.	Matrix *	Sample Date	Sample Time										
J19487 2981-189	OTHER SOLID	9/3/09	1430	X	X								

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS	Matrix *		
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time			01 samples for shipment to lab. Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody	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
M. Fidino	9/3/09 1430	EAS LOCKED STORAGE	9/3/09				
EAS LOCKED STORAGE	9/16/09	SHANNAN JOHNSON	9/16/09				
SHANNAN JOHNSON	9/16/09	FDX					
			9/11/09 1430				

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

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-853	Page 1 of 1	
Collector <b>M. F. dino</b>		Company Contact <b>JOAN KESSNER</b>		Telephone No. <b>375-4688</b>		Project Coordinator <b>KESSNER, JH</b>	Price Code <b>9K</b> <b>N</b> <b>4/183109</b>	Data Turnaround <b>45 Days</b>
Project Designation <b>Columbia River Component of the RCBRA - Tissues</b>		Sampling Location <b>STURGEON 18 CARCASS</b>		SAF No. <b>RC-118</b>				
Ice Chest No. <b>WCH-08-001-4</b>		Field Logbook No. <b>EL-1638</b>		COA <b>BESCR6520</b>		Method of Shipment <b>FED EX</b>		
Shipped To <b>Battelle Marine Sciences</b>		Offsite Property No. <b>N/A</b>		Bill of Materials <b>FD: 797922488504</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <b>N/A</b>				Preservation <b>Freeze</b>	Type of Container <b>P</b>	No. of Container(s) <b>1</b>	Volume <b>60mL</b>	Methyl Mercury by EPA 1630M; Mercury - 7473
Special Handling and/or Storage <b>FREEZE "MATRIX COMPOSED OF FISH"</b>								
SAMPLE ANALYSIS								
Sample No.	Matrix *	Sample Date	Sample Time					
J195V2 2981198	OTHER SOLID	9/3/09	1430	X				
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *
Relinquished By/Removed From <b>M. F. dino</b>		Date/Time <b>9/3/09 1430</b>		Received By/Stored In <b>EAS LOCKED STORAGE</b>		Date/Time <b>9/3/09</b>		S=Soil SE=Settlement 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 <b>EAS LOCKED STORAGE</b>		Date/Time <b>9/10/09</b>		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time <b>9/10/09</b>		
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <b>9/10/09</b>		Received By/Stored In <b>FD</b>		Date/Time <b>9/10/09</b>		
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		
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-118-788		Page 1 of 1				
Collector <b>M. Fidino</b>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <b>9K</b> <b>N</b> <b>MS 8/8/09</b>				
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 18 FILLET		SAF No. RC-118		Data Turnaround <b>45 Days</b>						
Ice Chest No. <b>WCH-03-001-4</b>		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 # <b>FDX#797922488504</b>								
POSSIBLE SAMPLE HAZARDS/REMARKS N/A					Preservation		Cool 4C		Freeze			
Special Handling and/or Storage <b>FREEZE "MATRIX COMPOSED OF FISH"</b>					Type of Container		P/G		G/P			
					No. of Container(s)		0		1			
					Volume		15mL		60mL			
SAMPLE ANALYSIS					Total Inorganic Arsenic		Chromium Hex in Solids - 1636M					
Sample No.		Matrix *		Sample Date		Sample Time						
J19486		2981.191		OTHER SOLID		9/3/09		1415		K K		
CHAIN OF POSSESSION					Sign/Print Names					SPECIAL INSTRUCTIONS		Matrix *
Relinquished By/Removed From <b>M. Fidino</b>		Date/Time 9/3/09 1415		Received By/Stored In <b>EAS LOCKED STORAGE 2</b>		Date/Time 9/3/09		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 Sl=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue Wl=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time 9/10/09		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time 9/10/09						
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time 9/10/09		Received By/Stored In <b>FDX</b>		Date/Time 9/10/09						
Relinquished By/Removed From		Date/Time		Received By/Stored In		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				

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-852	Page 1 of 1
Collector M. F. d'ino		Company Contact JOAN KESSNER		Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 9K	Data Turnaround 45 Days
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 18 FILLET		SAF No. RC-118	Method of Shipment FED EX		
Ice Chest No. WCH-09-001-4		Field Logbook No. EL-1638	COA BESCRC6520	Bill of Lading/Air Bill No. FDV 797922488504			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation	Freeze				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P				
		No. of Container(s)	1				
		Volume	60mL				
SAMPLE ANALYSIS		Methyl Mercury by EPA 1630M; Mercury - 7473					
Sample No.	Matrix *	Sample Date	Sample Time				
J195V1 2981.192	OTHER SOLID	9/3/09	1415	X			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From M. F. d'ino	Date/Time 9/3/09	Received By/Stored In EAS LOCKED STORAGE 2	Date/Time 9/3/09	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 9/10/09	Received By/Stored In SHANNAN JOHNSON	Date/Time 9/10/09				
Relinquished By/Removed From SHANNAN JOHNSON	Date/Time 9/10/09	Received By/Stored In FDV	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				
LABORATORY SECTION	Received By		Title		Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By		Date/Time		

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-799	Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>8/10/09</i>	Data Turnaround <b>45 Days</b>
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 19 CARCASS			SAF No. RC-118			
Ice Chest No. <i>WCH-08-001-4</i>		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. <b>FD 797922488504</b>			
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P		
				No. of Container(s)	0	1		
				Volume	15mL	60mL		
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M			
Sample No.	Matrix *	Sample Date	Sample Time					
<i>J19497 2981.193</i>	<i>OTHER SOLID</i>	<i>9.8.09</i>	<i>1340</i>	<i>X</i>	<i>X</i>			
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1340</i>		Received By/Stored In <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>1340</i>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9/10/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/10/09</i>		
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/10/09</i>		Received By/Stored In <i>FD</i>		Date/Time <i>9/10/09</i>		
Relinquished By/Removed From <i>FD</i>		Date/Time <i>9/10/09</i>		Received By/Stored In <i>FD</i>		Date/Time <i>9/10/09</i>		
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		
LABORATORY SECTION	Received By			Title			Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time	

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-855	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 19 CARCASS	SAF No. RC-118	<i>N</i> <i>MCS09</i>				
Ice Chest No. <i>WCH-08-001-4</i>	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. <b>FDY # 797922488504</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation	Freeze				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container	P				
		No. of Container(s)	1				
		Volume	60mL				
SAMPLE ANALYSIS		Methyl Mercury by EPA 1630M; Mercury - 7473					
Sample No.	Matrix *	Sample Date	Sample Time				
J195V4 <i>2981194</i>	OTHER SOLID	<i>9809</i>	<i>1340</i>	<i>X</i>			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1340</i> <i>9809</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1340</i> <i>9809</i>	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 SL=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 <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9/10/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9/10/09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/10/09</i>	Received By/Stored In <i>[Signature]</i>	Date/Time <i>9/10/09</i>				
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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-854	Page 1 of 1	
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>			
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 19 FILLET	SAF No. RC-118	Method of Shipment FED EX					
Ice Chest No. <i>WCH-DB-001-9</i>	Field Logbook No. EL-1638	COA BESRC6520	Bill of Materials <b>FDMA/11/09/922488504</b>					
Shipped To Battelle Marine Sciences	Offsite Property No. N/A							
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation	Freeze					
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container	P					
		No. of Container(s)	1					
		Volume	60mL					
SAMPLE ANALYSIS		Methyl Mercury by EPA 1630M; Mercury - 7473						
Sample No.	Matrix *	Sample Date	Sample Time					
J195V3 2981.195	OTHER SOLID	9.8.09	1230	X				
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS				Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time 9.8.09 1230	Received By/Stored In <b>EAS LOCKED STORAGE 2</b>	Date/Time 9.8.09 1230	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=Sludgement 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 <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/10/09 <i>(10)</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09 <i>(10)</i>					
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09 <i>(10)</i>	Received By/Stored In <b>FDX</b>	Date/Time					
Relinquished By/Removed From	Date/Time	Received By/Stored In <i>(Signature)</i>	Date/Time 9/11/09 1450					
Relinquished By/Removed From	Date/Time	Received By/Stored In	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				

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-856	Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>11/13/09</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 20 FILLET			SAF No. RC-118				
Ice Chest No. <i>WCH-08-001-4</i>		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 # <b>FDX#797922488504</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation Freeze					
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container P					
				No. of Container(s) 1					
				Volume 60mL					
SAMPLE ANALYSIS				Methyl Mercury by EPA 1630M; Mercury - 7473					
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J195V5 2981-197</i>	<i>OTHER SOLID</i>	<i>9-8-09</i>	<i>1545</i>	<i>X</i>					
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1545 9-8-09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>1545 9-8-09</i>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
<b>EAS LOCKED STORAGE 2</b>				<b>EAS LOCKED STORAGE 2</b>					
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>	
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>			
LABORATORY SECTION	Received By			Title			Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time		

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-808	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>418109</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 20 FILLET	SAF No. RC-118					
Ice Chest No. <i>WCH-08-001-4</i>	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 # <b>FDX# 797922488504</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J194B7 <i>2981.19E</i>	OTHER SOLID	<i>9.8.09</i>	<i>1545</i>	X	X		
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9.8.09</i>	Received By/Stored In <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>9.8.09</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab</p> <ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SI=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>W/-Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>9/10/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time <i>9/10/09</i>		
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <i>9/11/09</i>	Received By/Stored In <b>FDX</b>		Date/Time <i>9/11/09</i>		
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		
LABORATORY SECTION	Received By	Title				Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time	

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-857	Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 20 CARCASS			SAF No. RC-118		<i>1193109</i>	
Ice Chest No. <i>WCH-08-001-4</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX		
Shipped To Battelle Marine Sciences		Offsite Property No. N/A			Bill of Lading/Bill No. <i>FE 97922488504</i>			
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation <i>Freeze</i>	Type of Container <i>P</i>	No. of Container(s) <i>1</i>	Volume <i>60mL</i>	
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>								
SAMPLE ANALYSIS				Methyl Mercury by EPA 1631M; Mercury - i473				
Sample No.	Matrix *	Sample Date	Sample Time					
<i>J195V6 2981.199</i>	<i>OTHER SOLID</i>	<i>9.8.09</i>	<i>1600</i>	<i>X</i>				
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9.8.09</i>		Received By/Stored In <i>EAS Lock Storage</i>		Date/Time <i>1600</i>		
Relinquished By/Removed From <i>EAS Lock Storage</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>1600</i>		
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>FOX</i>		Date/Time		
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shannon Johnson</i>		Date/Time <i>09/11/09 1450</i>		
Relinquished By/Removed From		Date/Time		Received By/Stored In		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		

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-809	Page 1 of 1	
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 9K N JAD 5/10/09	Data Turnaround 45 Days			
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 20 CARCASS	SAF No. RC-118						
Ice Chest No. <i>WCH-DB-001-4</i>	Field Logbook No. EL-1638	COA BESRC6520	Method of Shipment FED EX					
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading # <b>FDX# 797922488504</b>						
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	Cool 4C	Freeze		
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"				Type of Container	P/G	G/P		
				No. of Container(s)	0	1		
				Volume	15mL	60mL		
				SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M	
Sample No.	Matrix *	Sample Date	Sample Time					
J194B8 2981-200	OTHER SOLID	9.8.09	1100	X	X			
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS		
Relinquished By/Removed From <i>Wendy West</i>	Date/Time 9.8.09	Received By/Stored In <i>Wendy West</i>	Date/Time 9.8.09	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 WJ=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/10/09	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09					
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09	Received By/Stored In <b>FDX</b>	Date/Time					
Relinquished By/Removed From	Date/Time	Received By/Stored In <i>Shannon Johnson</i>	Date/Time 09/11/09 1450					
Relinquished By/Removed From	Date/Time	Received By/Stored In	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-118-818	Page 1 of 1	
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>4481109</i>	Data Turnaround <b>45 Days</b>			
Project Destination Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 21 FILLET	SAF No. RC-118						
Ice Chest No. <i>WCH-08-001-4</i>	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 # <b>FDM# 797922488504</b>						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P		
				No. of Container(s)	0	1		
				Volume	15mL	60mL		
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M			
Sample No.	Matrix *	Sample Date	Sample Time					
J194C8 2981-201	OTHER SOLID	9.9.09	1045	X	X			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>10/5</i>	Received By/Stored In <i>Wendy West</i>		Date/Time <i>10/5</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>W1=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
EAS LOCKED STORAGE 2		<i>9.9.09</i>	EAS LOCKED STORAGE 2		<i>9.9.09</i>			
SHANNAN JOHNSON		<i>9/10/09</i>	SHANNAN JOHNSON		<i>9/10/09</i>			
SHANNAN JOHNSON		<i>9/10/09</i>	EDX					
			<i>Shannon Johnson</i>		<i>09/11/09 1430</i>			
LABORATORY SECTION	Received By	Title				Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time		

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-819	Page 1 of 1
Collector <i>Wendy Weir</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 21 CARCASS		SAF No. RC-118		Price Code <i>9K</i> <i>N</i> <i>AA 91109</i>	
Ice Chest No. <i>WCH-08-001-4</i>		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 # <i>FDX# 797922488504</i>			
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J194C9 <i>2981-202</i>	OTHER SOLID	<i>9.9.09</i>	<i>10:55</i>	X	X		
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy Weir</i>		Date/Time <i>9.9.09</i>		Received By/Stored In <i>EAS LOCKED STORAGE</i>		Date/Time <i>29.9.09</i>	
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>10/1/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>10/1/09</i>	
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>10/1/09</i>		Received By/Stored In <i>FDX</i>		Date/Time <i>10/1/09</i>	
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shanna Johnson</i>		Date/Time <i>09/11/09 1450</i>	
Relinquished By/Removed From		Date/Time		Received By/Stored In		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	

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Central File #: 2981

Sample No(s): 185-204

Project Manager: Brandenberger

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

Matrix: \_\_\_\_\_ WP# \_\_\_\_\_

Yes No

Navy-type Project (requires high-level sample tracking procedures)

USDA Soils (or overseas, including Hawaii and the U.S. Virgin Islands) See Compliance Agreement Checklist

Filter Samples: Amount Entire sample Half of sample

Freeze dry sample(s) - samples will be weighed and placed in Ultra-low temp freezer (Lab# 503)

Special instructions: \_\_\_\_\_

Sample Preservation Instructions: \_\_\_\_\_

\*\*See LIMS for archive/disposal information\*\*

**TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN**

Yes No N/A (Initial appropriate box when completed)

Custody seal present

Custody seal intact

Cooler(s) temperature (acceptable ranges = water: 4±2°C / solid: frozen) 3.7 °C  
(if multiple coolers, note temp. of each) \_\_\_\_\_ °C

Project Manager notified of any discrepancies or if temperature outside acceptable range?  
Comments/Remedy: \_\_\_\_\_

All chain of custody forms signed and dated?

Samples Filtered?

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

Container type: Other: Plastic Jars

Notes: \_\_\_\_\_

Completed By: [Signature]

Date/Time: 09/11/09 1450

**SAMPLE PRESERVATION**

- Sample preserved at MSL
- Sample 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)

If preservation necessary, record Acid Lot#

- Type:  0.2% HNO3 Notes: \_\_\_\_\_
- 0.5% HCl (Hg samples) Notes: \_\_\_\_\_
- Refrigerate Notes: \_\_\_\_\_
- Freeze Notes: Outside freezer - to be transferred to eq. vials & put in deep freez
- Other Notes: \_\_\_\_\_

Completed By: [Signature]

Date/Time: 09/11/09 1450

# SAMPLE LOGIN

Project Manager: Brandenberger  
 Date Received: 9/18/2009 ✓  
 Batch: 16  
 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
J19503 ✓	na	2981-203 ✓	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M ✓	09/10/09 ✓
J19504 ✓	na	2981-204	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/10/09
J195R1 ✓	na	2981-205	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/10/09
J195R0 ✓	na	2981-206	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/10/09
J195T2 ✓	na	2981-207	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/14/09 ✓
J195T3 ✓	na	2981-208	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/14/09
J195Y0 ✓	na	2981-209	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/15/09 ✓
J195X9 ✓	na	2981-210	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/15/09
J19609 ✓	na	2981-211	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/15/09
J19610 ✓	na	2981-212 ✓	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/15/09 ✓

*✓ J19503*

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-828		Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>ND 02609</i>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 22 FILLET		SAF No. RC-118		Data Turnaround <b>45 Days</b>				
Ice Chest No. <i>AFS-04-04</i>		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 # <b>FDX # 79794 1463127</b>						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>										
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Preservation		Cool °C	Freeze			
				Type of Container		P/G	G/P			
				No. of Container(s)		0	1			
				Volume		15mL	60mL			
SAMPLE ANALYSIS				Total Inorganic Arsenic		Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time							
J19503	<i>2981-203</i>	<i>9/10/09</i>	<i>1100</i>	X	X					
CHAIN OF POSSESSION										
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		SPECIAL INSTRUCTIONS		
<i>Wendy West</i>		<i>9/10/09</i>		<i>EAS LOCKED STORAGE</i>		<i>29/10/09</i>		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to let.</p>		
<i>EAS LOCKED STORAGE 2</i>		<i>9/17/09</i>		<i>SHANNAN JOHNSON</i>		<i>9/17/09</i>				
<i>SHANNAN JOHNSON</i>		<i>9/17/09</i>		<i>FDX</i>						
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		Matrix *		
								S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids I=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				

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-829		Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>4/22/09</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 22 CARCASS		SAF No. RC-118		Data Turnaround <b>45 Days</b>			
Ice Chest No. <i>AFS-04-041</i>		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 # <b>FDX# 97941463127</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>			Preservation	Cool 4C	Freeze				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>			Type of Container	P/G	G/P				
			No. of Container(s)	0	1				
			Volume	15mL	60mL				
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time						
J19504 <i>2981.204</i>	OTHER SOLID	<i>9/10/09</i>	<i>1130</i>	X	X				
CHAIN OF POSSESSION			Sign/Print Names			SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9/10/09</i>	Received By/Stored In <i>Wendy West</i>		Date/Time <i>9/10/09</i>	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 SL=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 <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9/17/09</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/17/09</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/17/09</i>	Received By/Stored In <i>FOX</i>		Date/Time				
Relinquished By/Removed From		Date/Time	Received By/Stored In <i>Shannon Johnson</i>		Date/Time <i>9/18/09 1230</i>				
Relinquished By/Removed From		Date/Time	Received By/Stored In		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			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-839	Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 23 CARCASS			SAF No. RC-118		<i>AD82709</i>	
Ice Chest No. <i>APS-04-041</i>		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. <b>FDX# 797941463127</b>			
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P		
				No. of Container(s)	0	1		
				Volume	15mL	60mL		
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M			
Sample No.	Matrix *	Sample Date	Sample Time					
<i>J195R1 2981.205</i>	<i>OTHER SOLID</i>	<i>9/10/09</i>	<i>15/5</i>	<i>X</i>	<i>X</i>			
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>15/5 9/10/09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>15/5 9/10/09</i>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SI=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WJ=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
EAS LOCKED STORAGE 2		<i>9/17/09 950</i>		SHANNAN JOHNSON		<i>9/17/09 950</i>		
SHANNAN JOHNSON		<i>9/17/09 950</i>		FDX				
				<i>Shannan Johnson</i>		<i>09/18/09 1230</i>		
								<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>
LABORATORY SECTION	Received By	Title			Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By			Date/Time			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-838	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 23 FILLET	SAF No. RC-118	N/A <i>11/18/09</i>				
Ice Chest No. <i>AFS-04-041</i>	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. <b>FDX# 797941463127</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A			Preservation	Cool +C	Freeze		
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"			Type of Container	P/G	G/P		
			No. of Container(s)	0	1		
			Volume	15mL	60mL		
SAMPLE ANALYSIS			Total Inorganic Arsenic	Chromium Hex in Solids - 1636M			
Sample No.	Matrix *	Sample Date	Sample Time				
J195R0 <i>2981-206</i>	OTHER SOLID	<i>9/10/09</i>	<i>1500</i>	X	X		
CHAIN OF POSSESSION			Sign/Print Names		SPECIAL INSTRUCTIONS		
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1500 9/10/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1500 9/10/09</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>		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	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9/17/09 950</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9/17/09 950</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/17/09 950</i>	Received By/Stored In <b>FDX</b>	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In <i>Shannan Johnson</i>	Date/Time <i>9/18/09 1230</i>				
Relinquished By/Removed From	Date/Time	Received By/Stored In	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			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-848	Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>OK</i> <i>N</i> <i>MD 25109</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 24 FILLET			SAF No. RC-118				
Ice Chest No. <i>APS-04-041</i>		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 N <b>FDX# 797941463127</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P			
				No. of Container(s)	0	1			
				Volume	15mL	60mL			
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J195T2 2981-207</i>	<i>OTHER SOLID</i>	<i>9/15/09</i> <i>9/15/09</i>	<i>1130</i>	<i>X</i>	<i>X</i>				
CHAIN OF POSSESSION				Sign/Print Names			SPECIAL INSTRUCTIONS	Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9/14/09 9:13 AM</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>9/14/09 9:13 AM</i>		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 Sl=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WJ=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>9/17/09 9:50</i>		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time <i>9/17/09 9:50</i>			
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <i>9/17/09 9:50</i>		Received By/Stored In <b>FDX</b>		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shannon Johnson</i>		Date/Time <i>09/18/09 1230</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		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		

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-849	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <del>9X</del> N M83109	Data Turnaround 45 Days		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 24 CARCASS	SAF No. RC-118					
Ice Chest No. <i>AFS-04-04</i>	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. <b>FDX# 797941463127</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation	Cool 4C	Freeze			
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G	G/P			
		No. of Container(s)	0	1			
		Volume	15mL	60mL			
SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time				
J195T3 <i>2981-205</i>	OTHER SOLID	<i>9-13-09 9:14:09</i>	<i>1200</i>	X	X		
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9-14-09 9:15:09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9-14-09 9:15:09</i>	<b>EAS LOCKED STORAGE 2</b> <b>SHANNAN JOHNSON</b> <b>FDX</b>  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 SL=Sludge W=Water O=Oil A=Air DS=Deum Solids DL=Deum Liquids T=Issue W=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9/17/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9/17/09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/17/09</i>	Received By/Stored In <b>FDX</b>	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In <i>Shannan Johnson</i>	Date/Time <i>09/18/09 1230</i>				
Relinquished By/Removed From	Date/Time	Received By/Stored In	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			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-879		Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>ND 8/09</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 25 CARCASS		SAF No. RC-118		Data Turnaround <b>45 Days</b>			
Ice Chest No. <i>APS-04-04/</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Air Bill No. <i>FRV 0797941463127</i>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Cool 4C	Freeze		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	G/P		
					No. of Container(s)	0	1		
					Volume	15mL	60mL		
					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M			
SAMPLE ANALYSIS									
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J195Y0</i>	<i>2981.209</i>	<i>OTHER SOLID</i>	<i>9.15.09</i>	<i>1130</i>	<i>X</i>	<i>X</i>			
CHAIN OF POSSESSION									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		SPECIAL INSTRUCTIONS	
<i>Wendy West</i>		<i>1130</i>		<i>Wendy West</i>		<i>1130</i>		Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.	
<i>EAS LOCKED STORAGE 2</i>		<i>9.15.09</i>		<i>Wendy West</i>		<i>9.15.09</i>			
<i>EAS LOCKED STORAGE 2</i>		<i>9.17.09</i>		<i>SHANNAN JOHNSON</i>		<i>9.17.09</i>			
<i>SHANNAN JOHNSON</i>		<i>9.17.09</i>		<i>FDX</i>		<i>9.17.09</i>			
<i>Shannon Johnson</i>		<i>09/15/09</i>		<i>1230</i>					
LABORATORY SECTION									
Received By	Title				Date/Time				
FINAL SAMPLE DISPOSITION	Disposal Method				Disposed By				
					Date/Time				

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-878	Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 25 FILLET			SAF No. RC-118		<i>1/3 9/09</i>		
Ice Chest No. <i>APS-04-041</i>		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 # <i>FDX 797941463127</i>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P			
				No. of Container(s)	0	1			
				Volume	15mL	60mL			
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J195X9 2781-210</i>	<i>OTHER SOLID</i>	<i>9.15.09</i>	<i>1100</i>	<i>X</i>	<i>X</i>				
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9.15.09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>9.15.09</i>		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for this event to lab.</p>	<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>Sl=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9/17/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/17/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/17/09</i>		Received By/Stored In <i>FDX</i>		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shannon Johnson</i>		Date/Time <i>9/18/09 1230</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		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		

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-888	Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <b>9K</b>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 26 FILLET		SAF No. RC-118		<i>N</i> <i>MS 9109</i>			
Ice Chest No. <b>AFS-04-041</b>		Field Logbook No. EL-1638		COA BESRC6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Materials Bill # <b>FDX# 797941463127</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Cool 4C	Freeze	Freeze		
Special Handling and/or Storage <b>FREEZE *MATRIX COMPOSED OF FISH*</b>					Preservation	P/G	P	G/P	
					Type of Container	P/G	P	G/P	
					No. of Container(s)	0	1	1	
					Volume	15mL	60mL	60mL	
SAMPLE ANALYSIS					Total Inorganic Arsenic	Methyl Mercury by EPA 1631M; Mercury - 7473	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time						
J19609	2781-211	9/15/09	1410	X	X	X			
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS			Matrix *	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		Perform Total Inorganic Arsenic out of Chromium Hex bottle.  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 W1=Wipe L=Liquid V=Vegetation X=Other
<i>Wendy West</i>		9/15/09		EAS LOCKED STORAGE 2		9/15/09			
<i>EAS LOCKED STORAGE 2</i>		9/17/09		SHANNAN JOHNSON		9/17/09			
<i>SHANNAN JOHNSON</i>		9/17/09		FDX		9/17/09			
				<i>Shannon Johnson</i>		9/18/09 1230			
LABORATORY SECTION	Received By			Title			Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time		

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-889	Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <b>9K</b> <i>N</i> <i>MA 9/09</i>	Data Turnaround <b>45 Days</b>
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 26 CARCASS		SAF No. RC-118				
Ice Chest No. <i>AFS-04-041</i>		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. <b>FDX#797941463127</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Cool 4C	Freeze	Freeze
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	P	G/P
					No. of Container(s)	0	1	1
					Volume	15mL	60mL	60mL
					Total Inorganic Arsenic	Methyl Mercury by EPA 1631M; Mercury - 7473	Chromium Hex in Solids - 1636M	
SAMPLE ANALYSIS								
Sample No.	Matrix *	Sample Date	Sample Time					
<i>J19610 2981212</i>	<i>OTHER SOLID</i>	<i>9.15.09</i>	<i>1430</i>	<i>X</i>	<i>X</i>	<i>X</i>		
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9.15.09</i>	Received By/Stored In <i>Wendy West</i>		Date/Time <i>9.15.09</i>	Perform Total Inorganic Arsenic out of Chromium Hex bottle.		S=Soil
<i>EAS LOCKED STORAGE 2</i>		<i>9/17/09</i>	<i>SHANNAN JOHNSON</i>		<i>9/17/09</i>			SE=Sediment
<i>SHANNAN JOHNSON</i>		<i>9/17/09</i>	<i>FDX</i>					SO=Solid
								SI=Sludge
								W=Water
								O=Oil
								A=Air
								DS=Drum Solids
								DL=Drum Liquids
								T=Tissue
								Wt=Wipe
								L=Liquid
								V=Vegetation
								X=Other
LABORATORY SECTION	Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By		Date/Time			

Central File #: 2981 Sample No(s): 203-212 Project Manager: Brandenberger

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

Matrix: \_\_\_\_\_ WP# \_\_\_\_\_

Yes No

Navy-type Project (requires high-level sample tracking procedures)

USDA Soils (or overseas, including Hawaii and the U.S. Virgin Islands) See Compliance Agreement Checklist

Filter Samples: Amount:  Entire sample  Half of sample

Freeze dry sample(s) - samples will be weighed and placed in Ultra-low temp freezer (Lab# 503)

Special instructions: \_\_\_\_\_

Sample Preservation Instructions: \_\_\_\_\_

\*\*See LIMS for archive/disposal information\*\*

**TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN**

Yes No N/A (Initial appropriate box when completed)

Custody seal present

Custody seal intact

Cooler(s) temperature (acceptable ranges = water: 4±2°C / solid: frozen) 2.7 °C

(if multiple coolers, note temp. of each) \_\_\_\_\_ °C

Project Manager notified of any discrepancies or if temperature outside acceptable range?  
Comments/Remedy: \_\_\_\_\_

All chain of custody forms signed and dated?

Samples Filtered?

Sample condition(s): Acceptable Other (explain): \_\_\_\_\_

Container type: Teflon Poly Glass Cap. Vial Other Plastic

Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 09/18/09 1225

**SAMPLE PRESERVATION**

Sample preserved at MSL

Sample 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)

**If preservation necessary, record Acid Lot#**

Type:  0.2% HNO3 Notes: \_\_\_\_\_

0.5% HCl (Hg samples) Notes: \_\_\_\_\_

Refrigerate Notes: \_\_\_\_\_

Freeze Notes: Deep freezer D-1

Other Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 09/18/09 1225

# SAMPLE LOGIN

Project Manager: Brandenberger  
 Date Received: 9/23/2009  
 Batch: 17  
 Login Designee: Mcgahan  
 Project: **Washington Closure Hanford**



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

Sponsor ID	Site Description	Battelle Code	Matrix	Storage Location	Requested Parameters	Collection Date
J19629	na	2981-213a & b	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M, Methyl Hg, Mercury-7473	09/16/09
J19628	na	2981-214a & b	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M, Methyl Hg, Mercury-7473	09/16/09
J19639	na	2981-215	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/16/09
J19698	na	2981-216	other solid	Deep Freezer C-1	Methyl Hg by EPA 1630M; Mercury-7473	09/16/09
J19699	na	2981-217	other solid	Deep Freezer C-1	Methyl Hg by EPA 1630M; Mercury-7473	09/16/09
J19640	na	2981-218	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/16/09
J19650	na	2981-219	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09
J19649	na	2981-220	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09
J19660	na	2981-221	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09
J19659	na	2981-222	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST					RC-118-899		Page 1 of 1			
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i>		Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 27 CARCASS			SAF No. RC-118		<i>NO 9809</i>					
Ice Chest No. <i>WCH-08-003-2</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX						
Shipped To Battelle Marine Sciences		Offsite Property No. N/A			Bill of Lading/Invoice No. <b>FDX# 796967152240</b>							
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	Freeze					
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	P	G/P					
				No. of Container(s)	0	1	1					
				Volume	15mL	60mL	60mL					
SAMPLE ANALYSIS				Total Inorganic Arsenic	Methyl Mercury by EPA 1630M: Mercury - 7473	Chromium Hex in Solids - 1636M						
Sample No.	Matrix *	Sample Date	Sample Time									
J19629 <i>2981-2/3a/b</i>	OTHER SOLID	<i>9/16/09</i>	<i>1115</i>	X	X	X						
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *				
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		Perform Total Inorganic Arsenic out of Chromium Hex bottle.  Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.				<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DLL=Drum Liquids</li> <li>T=Tissue</li> <li>W=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
<i>Wendy West</i>		<i>9/16/09</i>		<i>EAS LOCKED STORAGE 2</i>		<i>11/5</i>						
<i>Wendy West</i>		<i>9/16/09</i>		<i>Wendy West</i>		<i>9/16/09</i>						
<i>EAS LOCKED STORAGE 2</i>		<i>11/21/09</i>		<i>SHANNAN JOHNSON</i>		<i>9/27/09</i>						
<i>SHANNAN JOHNSON</i>		<i>9/21/09</i>		<i>SHANNAN JOHNSON</i>		<i>10/1/09</i>						
<i>SHANNAN JOHNSON</i>		<i>10/1/09</i>		<i>SHANNAN JOHNSON</i>		<i>10/1/09</i>						
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						
LABORATORY SECTION		Received By				Title				Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time		

<b>Washington Closure Hanford</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>				RC-118-898	Page 1 of 1			
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <b>9K</b> <i>N</i> <i>11/9/09</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sample Location STURGEON 27 FILLET			SAF No. RC-118					
Ice Chest No. <i>WCH-DB-003-2</i>		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. <b>FDX 796967152240</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>  Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Preservation	Cocci 4C	Freeze	Freeze			
				Type of Container	P/G	P	G/P			
				No. of Container(s)	0	1	1			
				Volume	15mL	60mL	60mL			
SAMPLE ANALYSIS				Total Inorganic Arsenic	Methyl Mercury by EPA 1630M; Mercury - 7473	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time							
J19628	<i>2981.214a,b</i>	<i>9/16/09</i>	<i>1102</i>	X	X	X				
CHAIN OF POSSESSION				Sign/Print Names			SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1/00</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>1/00</i>		Perform Total Inorganic Arsenic out of Chromium Hex bottle.  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 Wl=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>9/22/09</i>		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time <i>9/22/09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <i>9/22/09</i>		Received By/Stored In <b>FDX</b>		Date/Time <i>1002</i>				
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				
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-118-966	Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>N/A 9009</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 28 FILLET			SAF No. RC-118				
Ice Chest No. <i>WCH-DB-003-2</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A			Bill of Lading/Alt. Bill No. <b>FDX # 796967152240</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation Freeze					
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container P					
				No. of Container(s) 1					
				Volume 60mL					
SAMPLE ANALYSIS				Methyl Mercury by EPA 1630M; Mercury - 7473					
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J19698 2981-216</i>	<i>OTHER SOLID</i>	<i>9/16/09</i>	<i>1345</i>	<i>X</i>					
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1345</i> <i>9/16/09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>1345</i> <i>9/16/09</i>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>Sl=Sludge</li> <li>W = Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>W1=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
Relinquished By/Removed From <i>EAS LOCKED STORAGE</i>		Date/Time <i>2 9/22/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/22/09</i> <i>100</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/22/09</i> <i>100</i>		Received By/Stored In <i>FDX</i>		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shannon Johnson</i>		Date/Time <i>09/23/09 1252</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		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

<b>Washington Closure Hanford</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>				RC-118-967	Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>APD 9/10/09</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissucs		Sampling Location STURGEON 28 CARCASS			SAF No. RC-118				
Ice Chest No. <i>WCH-08-003-2</i>		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/BL No. <b>FDX 796967152240</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	Freeze:				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"				Type of Container	P				
				No. of Container(s)	1				
				Volume	60mL				
SAMPLE ANALYSIS				Methyl Mercury by EPA 1631M; Mercury - 7473					
Sample No.	Matrix *	Sample Date	Sample Time						
J19699 2981-217	OTHER SOLID	9/16/09	1400	X					
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time 9/16/09 1400		Received By/Stored In <i>Wendy West</i>		Date/Time 9/16/09 1400		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Solidment</li> <li>SO=Solid</li> <li>Sl=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>W=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time 9/22/09 100		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time 9/22/09 100			
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time 9/24/09 100		Received By/Stored In <b>FOV</b>		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>[Signature]</i>		Date/Time 09/23/09 1200			
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			
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-118-909	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Destination Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 28 CARCASS	SAF No. RC-118	Method of Shipment FED EX				
Ice Chest No. <i>WCH-08-003-2</i>	Field Logbook No. EL-1638	COA BESCR6520	Bill of Lading # <i>FDX# 796967152240</i>				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>	Preservation	Cool 4C	Freeze				
	Type of Container	P/G	G/P				
	No. of Container(s)	0	1				
	Volume	15mL	60mL				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>	Total Inorganic Arsenic	Chromium Hex in Solids - 1636M					
SAMPLE ANALYSIS							
Sample No.	Matrix *	Sample Date	Sample Time				
<i>J19640 2981-218</i>	<i>OTHER SOLID</i>	<i>9/16/09</i>	<i>1400</i>	<i>X</i>	<i>X</i>		
CHAIN OF POSSESSION			Sign/Print Names			SPECIAL INSTRUCTIONS	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
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1400 9/16/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1400 9/16/09</i>	EAS LOCKED STORAGE 2			
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>	Date/Time <i>5/22/10 100</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>100 9/22/09</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>100 9/22/09</i>	Received By/Stored In <i>FDX</i>	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In <i>[Signature]</i>	Date/Time <i>09/23/09 1250</i>				
Relinquished By/Removed From	Date/Time	Received By/Stored In	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		

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-919		Page 1 of 1	
Collector <i>Woody West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>MA 9909</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 29 CARCASS				SAF No. RC-118		Data Turnaround <b>45 Days</b>	
Ice Chest No. <i>WCH-08-063-2</i>		Field Logbook No. EL-1638		COA BESRCR6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A				Bill of Lading/Air Bill No. <b>FDX# 796967152240</b>			
POSSIBLE SAMPLE HAZARDS/REMARKS N/A					Preservation	Cool 4C	Freeze		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	G/P		
					No. of Container(s)	0	1		
					Volume	15mL	60mL		
SAMPLE ANALYSIS					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M			
Sample No.	Matrix *	Sample Date	Sample Time						
J19650 2981-219	OTHER SOLID	9/17/09	1215	X	X				
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS				
Relinquished By/Removed From <i>Woody West</i>		Date/Time 9/17/09		Received By/Stored In <i>Woody West</i>		Date/Time 9/17/09		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p> <p>Matrix *</p> <ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>Sl=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
Relinquished By/Removed From EAS LOCKED STORAGE 2		Date/Time 9/22/09		Received By/Stored In <i>J</i>		Date/Time 9/22/09			
Relinquished By/Removed From SHANNAN JOHNSON		Date/Time 9/22/09		Received By/Stored In <i>FDX</i>		Date/Time 100			
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			
LABORATORY SECTION	Received By			Title			Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time		

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-918		Page 1 of 1					
Collector <i>Woody Wait</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>09/22/09</i>					
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 29 FILLET		SAF No. RC-118		Data Turnaround <b>45 Days</b>							
Ice Chest No. <i>WCH-08-603-2</i>		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. <b>FDX# 796967152240</b>									
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation		Cool 4C		Freeze					
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container		P/G		G/P					
				No. of Container(s)		0		1					
				Volume		15mL		60mL					
SAMPLE ANALYSIS				Total Inorganic Arsenic		Chromium Hex in Solids - 1636M							
Sample No.		Matrix *		Sample Date		Sample Time							
<i>J19649 2981.220</i>		<i>OTHER SOLID</i>		<i>9/17/09</i>		<i>1200</i>		<i>X K</i>					
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS					
Relinquished By/Removed From <i>Woody Wait</i>		Date/Time <i>9/17/09</i>		Received By/Stored In <i>Woody Wait</i>		Date/Time <i>9/17/09</i>		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p> <p>Matrix *</p> <ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SI=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>					
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9/22/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/22/09</i>							
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/22/09</i>		Received By/Stored In <i>FDX</i>		Date/Time <i>1200</i>							
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shannon Johnson</i>		Date/Time <i>09/23/09 1250</i>							
Relinquished By/Removed From		Date/Time		Received By/Stored In		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-118-929		Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>1/2 99 04</i>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 30 CARCASS				SAF No. RC-118		Data Turnaround <b>45 Days</b>		
Ice Chest No. <i>WCH-08-003-2</i>		Field Logbook No. EL-1638		COA BESRCR6520		Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A				Bill of Lading/Trailer No. <b>FDX# 796967152240</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Cool AC	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	G/P			
					No. of Container(s)	0	1			
					Volume	15mL	60mL			
SAMPLE ANALYSIS					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time							
<i>J19660 2981-221</i>	<i>OTHER SOLID</i>	<i>9/17/09</i>	<i>1500</i>	<i>X</i>	<i>X</i>					
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1500 9/17/09</i>		Sign/Print Names <i>Wendy West</i>		Received By/Stored In <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>1500 9/17/09</i>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W = Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>100 9/22/09</i>		Sign/Print Names <i>SHANNAN JOHNSON</i>		Received By/Stored In <i>FDX</i>		Date/Time <i>100 9/22/09</i>		
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>100 9/22/09</i>		Sign/Print Names <i>FDX</i>		Received By/Stored In <i>FDX</i>		Date/Time <i>100 9/22/09</i>		
Relinquished By/Removed From		Date/Time		Sign/Print Names <i>Shannon Johnson</i>		Received By/Stored In <i>FDX</i>		Date/Time <i>1250 09/23/09</i>		
Relinquished By/Removed From		Date/Time		Sign/Print Names		Received By/Stored In		Date/Time		
Relinquished By/Removed From		Date/Time		Sign/Print Names		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-118-928	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>OK</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 30 FILLET		SAF No. RC-118		<i>MA9989</i>		
Ice Chest No. <i>WCH-DB-003-2</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading/Air Bill # <b>FDX # 796967152240</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>							
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>							
				Preservation	Cool 4C	Freeze	
				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J19659 <i>2981 222</i>	OTHER SOLID	<i>9/17/09</i>	<i>1445</i>	X	X		
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9/17/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9/17/09</i>	SPECIAL INSTRUCTIONS  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 Sl=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue Wl=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9/22/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9/22/09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/22/09</i>	Received By/Stored In <b>FDX</b>	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In <i>[Signature]</i>	Date/Time <i>09/23/09 1250</i>				
Relinquished By/Removed From	Date/Time	Received By/Stored In	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

Central File #: 2981

Sample No(s): 213-222

Project Manager: Brandenberger

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

Matrix: \_\_\_\_\_ WP# \_\_\_\_\_

Yes No

Navy-type Project (requires high-level sample tracking procedures)

USDA Soils (or overseas, including Hawaii and the U.S. Virgin Islands) See Compliance Agreement Checklist

Filter Samples: Amount: Entire sample: Half of sample

Freeze dry sample(s) - samples will be weighed and placed in Ultra-low temp freezer (Lab# 503)

Special instructions: \_\_\_\_\_

Sample Preservation Instructions: \_\_\_\_\_

**\*\*See LIMS for archive/disposal information\*\***

**TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN**

Yes No N/A (Initial appropriate box when completed)

Custody seal present

Custody seal intact

Cooler(s) temperature (acceptable ranges = water: 4±2°C / solid: frozen) 2.0 °C

(if multiple coolers, note temp. of each) \_\_\_\_\_ °C

Project Manager notified of any discrepancies or if temperature outside acceptable range?

Comments/Remedy: \_\_\_\_\_

All chain of custody forms signed and dated?

Samples Filtered?

Sample condition(s): Acceptable Other (explain): \_\_\_\_\_

Container type: Teflon ~~Roll~~ Glass Cap. Vial Other: \_\_\_\_\_

Notes: \_\_\_\_\_

Completed By: [Signature]

Date/Time: 09/23/09 1240

**SAMPLE PRESERVATION**

Sample preserved at MSL

Sample 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)

**If preservation necessary, record Acid Lot#**

Type:  0.2% HNO3 Notes: \_\_\_\_\_

0.5% HCl (Hg samples) Notes: \_\_\_\_\_

Refrigerate Notes: \_\_\_\_\_

Freeze Notes: Deep freeze C-1

Other Notes: \_\_\_\_\_

Completed By: [Signature]

Date/Time: 09/23/09 1240



# INORGANIC CHEMISTRY ANALYSIS DATA PACKAGE CONTENTS

Washington Closures Hanford  
Total and Methyl Mercury  
Fish Tissue Homogenate

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**BATTELLE MARINE SCIENCES LABORATORY**

1529 West Sequim Bay Road  
 Sequim, Washington 98382  
 (360) 681-4564

**Washington Closure Hanford**

SDG 091109 and SDG092309 Mercury Speciation in Biota  
 Dry Weight Concentrations (µg/g)

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Analysis Date	Analytical Batch ID	Percent Dry Wt	THg	MeHg
										µg/g dry wt.	µg/g dry wt.
<i>Method Detection Limit (MDL)</i>											
										0.002	0.001
2981-185	J195T9	SDG091109	09/11/09	09/03/09	11/23/09	112309HGDMA	10/15/09	101509MeA	26.4	0.398	0.393
2981-187	J195V0	SDG091109	09/11/09	09/03/09	11/23/09	112309HGDMA	10/15/09	101509MeA	32.2	0.165	0.154
2981-190	J195V2	SDG091109	09/11/09	09/03/09	11/23/09	112309HGDMA	10/15/09	101509MeA	43.1	0.116	0.0823
2981-192	J195V1	SDG091109	09/11/09	09/03/09	11/23/09	112309HGDMA	10/15/09	101509MeA	33.9	0.333	0.312
2981-194	J195V4	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	10/15/09	101509MeA	34.6	0.396	0.351
2981-195 R1	J195V3	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	10/15/09	101509MeA	26.8	0.848	0.892
2981-195 R2	J195V3	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	--	--	26.8	0.841	--
2981-197	J195V5	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	10/15/09	101509MeA	32.3	0.212	0.223
2981-199	J195V6	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	10/15/09	101509MeA	40.2	0.0962	0.0820
2981-213	J19629	SDG092309	09/23/09	09/16/09	11/23/09	112309HGDMA	10/15/09	101509MeA	34.7	0.0244	0.0267
2981-214R1	J19628	SDG092309	09/23/09	09/16/09	11/23/09	112309HGDMA	10/15/09	101509MeA	28.9	0.0465	0.0477
2981-214R2	J19628	SDG092309	09/23/09	09/16/09	--	--	10/15/09	101509MeA	28.9	--	0.0474
2981-216	J19698	SDG092309	09/23/09	09/16/09	11/23/09	112309HGDMA	10/15/09	101509MeA	24.5	0.334	0.392
2981-217	J19699	SDG092309	09/23/09	09/16/09	11/23/09	112309HGDMA	10/15/09	101509MeA	29.7	0.540	0.177
<b>QUALITY CONTROL SAMPLE RESULTS</b>										<i>Average % Dry Wt. 31.6</i>	
<b>Method Blank</b>											
Blank R1	Blank100609R1									0.002 U	0.001 U
<b>Standard Reference Material</b>											
DORM-3 R1	100609									0.373	0.355
<b>Certified Value</b>											
<b>Range</b>											
<b>% Recovery</b>											
<b>Blank Spike Results</b>											
LCS R1	OPR 100609R1									0.378	0.302
LCS R2	OPR 100609R2									--	0.293
<b>Spike Concentration</b>											
<b>% Rec</b>											
<b>% Rec</b>											
<b>Replicate Analysis Results</b>											
2981-195 R1	J195V3	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	10/15/09	101509MeA	26.8	0.848	0.892
2981-195 R2	J195V3	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	--	--	26.8	0.841	--
<b>RPD</b>											
<b>0.8%</b>											
2981-214R1	J19628	SDG092309	09/23/09	09/16/09			10/15/09	101509MeA	28.9	--	0.0477
2981-214R2	J19628	SDG092309	09/23/09	09/16/09			10/15/09	101509MeA	28.9	--	0.0474
<b>RPD</b>											
<b>0.5%</b>											
<b>Matrix Spike Accuracy</b>											
2981-185	J195T9	SDG091109	09/11/09	09/03/09	11/23/09	112309HGDMA	10/15/09	101509MeA	26.4	0.398	0.393
2981-185MS										--	1.98
2981-185MSD										--	2.13
<b>Spike Amount, MS</b>											
<b>Spike Amount, MSD</b>											
<b>% Recovery, MS</b>											
<b>% Recovery, MSD</b>											
<b>RPD</b>											
<b>5%</b>											

**BATTELLE MARINE SCIENCES LABORATORY**

1529 West Sequim Bay Road  
 Sequim, Washington 98382  
 (360) 681-4564

**Washington Closure Hanford**

SDG 091109 and SDG092309 Mercury Speciation in Biota  
 Dry Weight Concentrations (µg/g)

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Analysis Date	Analytical Batch ID	Percent Dry Wt	Mercury Concentration	
										THg µg/g dry wt.	MeHg µg/g dry wt.
<i>Method Detection Limit (MDL)</i>										0.002	0.001
2981-216	J19698	SDG092309	09/23/09	09/16/09			10/15/09	101509MeA	24.5	--	0.392
2981-216MS										--	2.24
2981-216MSD										--	2.05
<b>Spike Amount, MS</b>										--	1.87
<b>Spike Amount, MSD</b>										--	1.79
<b>% Recovery, MS</b>										--	99%
<b>% Recovery, MSD</b>										--	93%
<b>RPD</b>										--	6%
2981-213	J19629	SDG092309	09/23/09	09/16/09	11/23/09	112309HGDMA	10/15/09	101509MeA	34.7	0.0244	0.0267
2981-213MS										0.158	--
<b>Spike Amount, MS</b>										0.134	--
<b>% Recovery, MS</b>										100%	--

**NOTES:**

U Not detected at or above MDL shown

NS Not spiked

N Outside Method DQOs listed below:

	THg	MeHg
MS/MSD	80-120%	65-135%
SRM	80-120%	67-133%
OPR/LCS	80-120%	67-133%

\* Outside Method DQOs as stated below:

	THg	MeHg
DUP	≤ 25%	≤ 35%

**BATTELLE MARINE SCIENCES LABORATORY**

1529 West Sequim Bay Road  
 Sequim, Washington 98382  
 (360) 681-4564

**Washington Closure Hanford**  
 SDG 091109 and SDG092309 Mercury Speciation in Biota  
 Wet Weight Concentrations (µg/g)

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Analysis Date	Analytical Batch ID	Percent Dry Wt	Mercury Concentration	
										THg µg/g WET wt.	MeHg µg/g WET wt.
<i>Method Detection Limit (MDL)</i>										0.0006	0.0003
2981-185	J195T9	SDG091109	09/11/09	09/03/09	11/23/09	112309HGDMA	10/15/09	101509MeA	26.4	0.105	0.104
2981-187	J195V0	SDG091109	09/11/09	09/03/09	11/23/09	112309HGDMA	10/15/09	101509MeA	32.2	0.0531	0.0496
2981-190	J195V2	SDG091109	09/11/09	09/03/09	11/23/09	112309HGDMA	10/15/09	101509MeA	43.1	0.0500	0.0355
2981-192	J195V1	SDG091109	09/11/09	09/03/09	11/23/09	112309HGDMA	10/15/09	101509MeA	33.9	0.113	0.106
2981-194	J195V4	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	10/15/09	101509MeA	34.6	0.137	0.121
2981-195 R1	J195V3	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	10/15/09	101509MeA	26.8	0.227	0.239
2981-195 R2	J195V3	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	--	--	26.8	0.225	--
2981-197	J195V5	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	10/15/09	101509MeA	32.3	0.0685	0.0721
2981-199	J195V6	SDG091109	09/11/09	09/08/09	11/23/09	112309HGDMA	10/15/09	101509MeA	40.2	0.0387	0.0330
2981-213	J19629	SDG092309	09/23/09	09/16/09	11/23/09	112309HGDMA	10/15/09	101509MeA	34.7	0.00846	0.00927
2981-214R1	J19628	SDG092309	09/23/09	09/16/09	11/23/09	112309HGDMA	10/15/09	101509MeA	28.9	0.0134	0.0138
2981-214R2	J19628	SDG092309	09/23/09	09/16/09	--	--	10/15/09	101509MeA	28.9	--	0.0137
2981-216	J19698	SDG092309	09/23/09	09/16/09	11/23/09	112309HGDMA	10/15/09	101509MeA	24.5	0.0817	0.0959
2981-217	J19699	SDG092309	09/23/09	09/16/09	11/23/09	112309HGDMA	10/15/09	101509MeA	29.7	0.160	0.0527

**QUALITY CONTROL SAMPLE RESULTS**

*Average % Dry Wt. 31.6*

**Method Blank**

Blank R1	Blank100609R1									0.0006 U	0.0003 U
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## QA/QC NARRATIVE

**PROJECT:** Washington Closures Hanford – Total and Methylmercury SDGs 091109 and 092309  
**PARAMETER:** Total Mercury (THg) and Methylmercury (MeHg)  
**LABORATORY:** Pacific Northwest National Marine Sciences Laboratory (MSL), Sequim, Washington  
**MATRIX:** Fish Tissue Homogenate  
**SAMPLE CUSTODY AND PROCESSING:** A total of twelve homogenized tissue samples were received in two batches and identified for the quantification of total and methylmercury. Eight tissue samples were received on 09/11/09 and four on 09/23/09. All samples were received in good condition (i.e., no sample containers were broken or leaking) and cooler temperature was acceptable. The project was assigned a Battelle central file (CF) identification number (2981) and samples were entered into the MSL sample tracking and project management system.

### SAMPLE PROCESSING INFORMATION:

<b>Lab Sample IDs:</b>	<b>SDG 091109: 2981*185, 187, 190, 192, 194, 195, 197, 199 SDG 092309: 213, 214, 216, and 217</b>
Description:	Fish Tissue Homogenate
Collection date	09/03/09, 09/08/09, 09/16/09
Laboratory arrival date	09/11/09 and 09/23/09
Cooler temp. on arrival	3.7°C and 2.0°C, respectively
THg Analysis Date (TD-CVAAS, MSL-I-034)	11/23/09
MeHg Analysis Dates (CVAF, MSL-I-015)	10/15/09

**METHODS:** The fish tissue samples were freeze-dried and homogenized using a ball-mill prior to digestion according to Battelle standard operating procedure (SOP) MSL-C-003, Percent Dry Weight and Homogenizing Dry Sediment, Soil and Tissue.

#### Methods for THg:

Dried, homogenized samples were analyzed for total Hg using direct thermal decomposition atomic absorption spectrometry (TD-CVAAS) according to Battelle SOP MSL-I-034, Total Mercury in Tissue and Sediment by Thermal Decomposition, Amalgamation, and Atomic Absorption Spectrophotometry. This procedure is based on EPA Method 7473.

#### Methods for MeHg:

Approximately 0.1-0.2 g of each dried, homogenized sample was digested with potassium hydroxide (KOH) and methanol (MeOH) prior to analysis for MeHg. The MeHg is quantification using a cold vapor atomic fluorescence technique (CVAF) based upon the emission of 254 nm radiation by excited mercury (Hg) atoms in an inert gas stream. An aliquot of the digested sample is ethylated to form a volatile methyl-ethylmercury derivative, and then purged onto graphitized carbon traps as a means of preconcentration and interference removal. The sample is then isothermally chromatographed, pyrolytically broken down to elemental mercury, and detected using CVAF. This procedure is based on a peer-reviewed publication by Bloom (1989), which was also adapted into the draft EPA Method 1630, which was never promulgated.

All data were determined and reported in units of µg/g dry weight and also converted to units of µg/g wet weight using the following equation:

$$\text{Dry Weight Sample Concentration} \times (\% \text{ dry weight}/100) = \text{Wet Weight Concentration}$$

## QA/QC NARRATIVE

**HOLDING TIMES:** There are no specific holding times for MeHg, but the samples were analyzed within the 90 day holding time defined by EPA Method 1631revE for total Hg in water and the one year frozen holding time stated in the Appendix to Method 1631 for Total Mercury in Tissue, Sludge, Sediment, and Soil by Acid Digestion and BrCl Oxidation, EPA-821-R-01-013.

**DATA QUALITY CRITERIA (DQC):**

Analyte	Analytical Method	OPR or LCS Recovery	Range of MS/MSD Recovery	Replicate Precisions (RPD)	SRM Accuracy (PR)	Method Blank
THg	TD-CVAAS	80-120%	80-120%	≤25%	80%-120%	<5 x MDL
MeHg	CVAF Draft EPA Method 1630 mod	67-133%	65-135%	≤35%	67-133%	Max 0.1ng/L or Avg <0.05ng/L

RPD = Relative Percent Difference

PR = Percent Recovery

**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. Data were evaluated and flagged in accordance with the following criteria:

U Undetected at the MDL, MDL reported.

\* Duplicates outside the DQC

N Spikes and SRM outside the DQC

**METHOD BLANKS:** **Total Hg:** A minimum of one method blank(s) was prepared and analyzed with the tissue samples. The method blank(s) were less than the MDL and the MDL was inserted in the value field.

**MeHg:** A minimum of one method blank(s) was prepared and analyzed with the tissue samples. The method blank(s) were less than the MDL and the MDL was inserted in the value field.

**LABORATORY CONTROL SAMPLE (LCS) ACCURACY:** **Total Hg:** One laboratory control sample (OPR or LCS) was prepared and analyzed with the samples. The percent recovery was within the QC criterion of 80-120% recovery.

**MeHg:** Two ongoing precision and recovery samples (OPR) were prepared and analyzed with the samples for MeHg. The percent recoveries were within the QC criterion of 67-133%.

**MATRIX SPIKE (MS/MSD) ACCURACY:** **Total Hg:** A matrix spike was prepared and analyzed with this batch of samples. The matrix spike recovery was within the QC criterion of 80-120% recovery.

## QA/QC NARRATIVE

**MATRIX SPIKE  
(MS/MSD)  
ACCURACY:**

**MeHg:** A set of MS/MSD samples were prepared and analyzed for each SDG. The matrix spike recoveries for MeHg were within the QC criterion of 65-135% recovery.

**REPLICATE  
PRECISION:**

Reproducibility was assessed by a laboratory duplicate and duplicate matrix spikes for methylmercury. A laboratory duplicate was performed as a split of a sample carried through the preparation and analysis as two individual samples. Laboratory reproducibility was expressed as the relative percent difference (RPD) between the replicate results.

**Total Hg:** The RPD for the laboratory duplicate was within the QC criterion of  $\leq 25\%$  RPD.

**MeHg:** Both measures of precision were within the QC criterion of  $\leq 35\%$  RPD.

**STANDARD  
REFERENCE  
MATERIAL  
ACCURACY:**

Analytical accuracy was expressed as the percent recovery of the measured value relative to the certified or reference value of a SRM.

**Total Hg:** The SRM DORM-3 Dogfish tissue was used as the tissue matrix for verification of the total Hg sample digestion and analysis. The percent recovery was within the QC criterion of 80-120% recovery.

**MeHg:** The SRM DORM-3 Dogfish tissue was used to evaluate the accuracy for the MeHg extraction and analysis. The percent recovery was within the QC criterion of 67-133% recovery.

**REFERENCES:**

Bloom, N.S. 1989. "Determination of Picogram Levels of Methylmercury by Aqueous Phase Ethylation, Followed by Cryogenic Gas Chromatography with Cold Vapor Atomic Fluorescence Detection." *Can. J. Fish Aq. Sci.* 7:1131.

# SAMPLE LOGIN

Project Manager: Brandenberger  
 Date Received: 9/11/2009  
 Batch: 15  
 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
J195T9	na	2981-185	other solid	Deep Freezer B-1	MeHg	09/03/09
J19476	na	2981-186	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J195V0	na	2981-187	other solid	Deep Freezer B-1	MeHg	09/03/09
J19477	na	2981-188	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J19487	na	2981-189	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J195V2	na	2981-190	other solid	Deep Freezer B-1	MeHg	09/03/09
J19486	na	2981-191	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J195V1	na	2981-192	other solid	Deep Freezer B-1	MeHg	09/03/09
J19497	na	2981-193	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J195V4	na	2981-194	other solid	Deep Freezer B-1	MeHg	09/08/09
J195V3	na	2981-195	other solid	Deep Freezer B-1	MeHg	09/08/09
J19496	na	2981-196	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J195V5	na	2981-197	other solid	Deep Freezer B-1	MeHg	09/08/09
J194B7	na	2981-198	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J195V6	na	2981-199	other solid	Deep Freezer B-1	MeHg	09/08/09
J194B8	na	2981-200	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J194C8	na	2981-201	other solid	Deep Freezer B-1	TIA,HCr	09/09/09
J194C9	na	2981-202	other solid	Deep Freezer B-1	TIA,HCr	09/09/09



Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-851	Page 1 of 1
Collector <i>M. Fidino</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>JK</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 17 CARCASS		SAF No. RC-118	<i>483105</i>		
Ice Chest No. <i>WCH-08-001-4</i>	Field Logbook No. EL-1638	COA BESRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading/Air Bill No. <b>FDX 797922488504</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Freeze		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P		
				No. of Container(s)	1		
				Volume	60mL		
SAMPLE ANALYSIS				Methyl Mercury by EPA 1630M; Mercury - 7473			
Sample No.	Matrix *	Sample Date	Sample Time				
J195V0 <i>2981.187</i>	OTHER SOLID	<i>9/3/09</i>	<i>1100</i>	<i>X</i>			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>M. Fidino</i>	Date/Time <i>9/3/09 1100</i>	Received By/Stored In <i>EAS LOCKED STORAGE</i>	Date/Time <i>9/3/09 1100</i>	<i>2</i> samples for shipment to lab. 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 SL=Sludge W=Water O=Oil A=Air DS=Dry Solids DL=Dry Liquids T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <i>EAS LOCKED STORAGE</i>	Date/Time <i>9/14/09 1100</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>9/14/09 1100</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>9/11/09 1600</i>	Received By/Stored In <i>FDX</i>	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In <i>FDX</i>	Date/Time <i>09/11/09 1458</i>				
Relinquished By/Removed From	Date/Time	Received By/Stored In	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-118-779		Page 1 of 1	
Collector <b>M. F. dino</b>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <b>9K</b> <b>N</b> <b>MS 8/109</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 17 CARCASS		SAF No. RC-118		Data Turnaround <b>45 Days</b>			
Ice Chest No. <b>WCH-08-001-4</b>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Air Bill No. <b>FD 797922488504</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A					Preservation	Cool 4C	Freeze		
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"					Type of Container	P/G	G/P		
					No. of Container(s)	0	1		
					Volume	15mL	60mL		
SAMPLE ANALYSIS					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M			
Sample No.	Matrix *	Sample Date	Sample Time						
J19477 2981.188	OTHER SOLID	9/3/09	1100	X	X				
CHAIN OF POSSESSION									
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		SPECIAL INSTRUCTIONS	
M. F. dino		9/3/09 1100		EAS LOCKED STORAGE 2		9/3/09 1100		Matrix * S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W1=Wipe L=Liquid V=Vegetation X=Other	
EAS LOCKED STORAGE 2		9/10/09		SHANNAN JOHNSON		9/10/09			
SHANNAN JOHNSON		9/10/09		EDV					
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		in samples for shipment to lab. Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.	
EAS LOCKED STORAGE 2		9/10/09		EDV		9/10/09 1452			
SHANNAN JOHNSON		9/10/09		EDV					
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-118-853	Page 1 of 1
Collector M. F. D. I. N. O.		Company Contact JOAN KESSNER		Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <b>9K</b>	Data Turnaround <b>45 Days</b>
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 18 CARCASS		SAF No. RC-118		<b>N</b>	<b>4/83109</b>
Ice Chest No. <b>WCH-08-001-4</b>		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 # <b>FD. 797922488504</b>			
POSSIBLE SAMPLE HAZARDS/REMARKS N/A					Preservation	Freeze	
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"					Type of Container	P	
					No. of Container(s)	1	
					Volume	60mL	
SAMPLE ANALYSIS					Methyl Mercury by EPA 1630M; Mercury - 7473		
Sample No.	Matrix *	Sample Date	Sample Time				
J195V2 2981.190	OTHER SOLID	9/3/09	1430	X			
CHAIN OF POSSESSION					Sign/Print Names		SPECIAL INSTRUCTIONS
Relinquished By/Removed From M. F. D. I. N. O.		Date/Time 9/3/09 1430	Received By/Stored In EAS LOCKED STORAGE		Date/Time 9/3/09	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 WJ=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From EAS LOCKED STORAGE		Date/Time 9/10/09	Received By/Stored In SHANNAN JOHNSON		Date/Time 9/10/09		
Relinquished By/Removed From SHANNAN JOHNSON		Date/Time 9/10/09	Received By/Stored In [Signature]		Date/Time 9/11/09 1430		
Relinquished By/Removed From		Date/Time	Received By/Stored In		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-118-852	Page 1 of 1
Collector M. F. dino	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 9K	Data Turnaround 45 Days		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 18 FILLET	SAF No. RC-118	Method of Shipment FED EX				
Ice Chest No. WCH-09-001-4	Field Logbook No. EL-1638	COA BESCRC6520	Bill of Lading/Air Bill No. FDV 797922488504				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation	Freeze				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P				
		No. of Container(s)	1				
		Volume	60ml.				
SAMPLE ANALYSIS			Methyl Mercury by EPA 1631M, Mercury - 7473				
Sample No.	Matrix *	Sample Date	Sample Time				
J195V1 2981.192	OTHER SOLID	9/3/09	1415	X			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			
Relinquished By/Removed From M. F. dino		Date/Time 9/3/09		Received By/Stored In EAS LOCKED STORAGE 2		Date/Time 9/3/09	
Relinquished By/Removed From EAS LOCKED STORAGE		Date/Time 9/10/09		Received By/Stored In SHANNAN JOHNSON		Date/Time 9/10/09	
Relinquished By/Removed From SHANNAN JOHNSON		Date/Time 9/10/09		Received By/Stored In FDV		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	
LABORATORY SECTION	Received By	Title				Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time	

WCH-EE-011

<b>Washington Closure Hanford</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>				RC-118-855	Page 1 of 1
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>4/10/09</i>
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 19 CARCASS		SAF No. RC-118		Data Turnaround <b>45 Days</b>	
Ice Chest No. <i>WCH-08-001-4</i>		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. <b>FDY # 797922488506</b>			
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Freeze	
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"					Type of Container	P	
					No. of Container(s)	1	
					Volume	60mL	
SAMPLE ANALYSIS					Methyl Mercury by EPA 1631M; Mercury - 7473		
Sample No.	Matrix *	Sample Date	Sample Time				
J195V4 2981.194	OTHER SOLID	9/8/09	1340	X			
<b>CHAIN OF POSSESSION</b>				<b>Sign/Print Names</b>		<b>SPECIAL INSTRUCTIONS</b>	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time 1340 9/8/09		Received By/Stored In <i>Wendy West</i>		Date/Time 1346 9/8/09	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time 9/10/09		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time 9/10/09	
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time 9/10/09		Received By/Stored In <i>[Signature]</i>		Date/Time 09/10/09 1452	
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	
LABORATORY SECTION		Received By		Title		Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time	

- 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

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

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-854	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 19 FILLET		SAF No. RC-118	<i>MD 83109</i>		
Ice Chest No. <i>WCH-DB-001-9</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill # <i>FDY# 799922488504</i>			
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>			Preservation	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>			Type of Container	P			
			No. of Container(s)	1			
			Volume	60mL			
SAMPLE ANALYSIS				Methyl Mercury by EPA 1630M; Mercury - 7473			
Sample No.	Matrix *	Sample Date	Sample Time				
J195V3 <i>2981-195</i>	OTHER SOLID	<i>9.8.09</i>	<i>1230</i>	<i>X</i>			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9.8.09 1230</i>	Received By/Stored In <i>Wendy West</i>		Date/Time <i>9.8.09 1230</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p> <ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sludges</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WJ=Wgc</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
EAS LOCKED STORAGE 2		Date/Time <i>9/10/09</i>	SHANNAN JOHNSON		Date/Time <i>9/10/09</i>		
SHANNAN JOHNSON		Date/Time <i>9/10/09</i>	FDY		Date/Time		
		Date/Time <i>9/10/09</i>			Date/Time <i>9/10/09</i>		
		Date/Time			Date/Time		
LABORATORY SECTION	Received By		Title			Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By			Date/Time	

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-856	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 20 FILLET	SAF No. RC-118	Method of Shipment FED EX <i>11/23/09</i>				
Ice Chest No. <i>WCH-08-001-4</i>	Field Logbook No. EL-1638	COA BESRC6520	Method of Shipment FED EX Bill of Lading # <b>FDX#797922488504</b>				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation	Freeze				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container	P				
		No. of Container(s)	1				
		Volume	60mL				
SAMPLE ANALYSIS		Methyl Mercury by EPA 1630M; Mercury - 7473					
Sample No.	Matrix *	Sample Date	Sample Time				
J195V5 <i>2981-197</i>	OTHER SOLID	<i>9-8-09</i>	<i>1545</i>	X			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1545 9-8-09</i>		Received By/Stored In <b>EAS LOCKED STORAGE</b>		Date/Time <i>1545 9-8-09</i>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE</b>		Date/Time <i>9/11/09</i>		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time <i>9/12/09</i>	
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <i>9/11/09</i>		Received By/Stored In <i>FDX</i>		Date/Time	
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shannon Johnson</i>		Date/Time <i>09/11/09 HSD</i>	
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time	
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time	
LABORATORY SECTION				Received By			
FINAL SAMPLE DISPOSITION				Disposal Method			
				Title			
				Date/Time			
				Disposed By			
				Date/Time			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-857	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 20 CARCASS		SAF No. RC-118		<i>11/19/09</i>		
Ice Chest No. <i>WCH-08-001-4</i>	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 Number <b>FE 97922488504</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container P			
				No. of Container(s) 1			
				Volume 60mL			
SAMPLE ANALYSIS				Methyl Mercury by EPA 1631M; Mercury - 473			
Sample No.	Matrix *	Sample Date	Sample Time				
J195V6 2981.199	OTHER SOLID	9.8.09	1600	X			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time 1600		Received By/Stored In <i>EAS Locks</i>		Date/Time 1600	
Relinquished By/Removed From <i>EAS Locks</i>		Date/Time 9.8.09		Received By/Stored In <i>Wendy West</i>		Date/Time 29.8.09	
Relinquished By/Removed From SHANNAN JOHNSON		Date/Time 9/11/09		Received By/Stored In SHANNAN JOHNSON		Date/Time 10/11/09	
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	
LABORATORY SECTION		Received By		Title		Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time	

WCH-EE-011

Central File #: 2981

Sample No(s): 185-204

Project Manager: Brandenberger

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

Matrix: \_\_\_\_\_ WP# \_\_\_\_\_

Yes No

Navy-type Project (requires high-level sample tracking procedures)

USDA Soils (or overseas, including Hawaii and the U.S. Virgin Islands) See Compliance Agreement Checklist

Filter Samples: Approx. Entire sample Half of sample

Freeze dry sample(s) - samples will be weighed and placed in Ultra-low temp freezer (Lab# 503)

Special instructions: \_\_\_\_\_

Sample Preservation Instructions: \_\_\_\_\_

\*\*See LIMS for archive/disposal information\*\*

**TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN**

Yes No N/A (Initial appropriate box when completed)

Custody seal present

Custody seal intact

Cooler(s) temperature (acceptable ranges = water: 4±2°C / solid: frozen) 3.7 °C  
(if multiple coolers, note temp. of each) \_\_\_\_\_ °C

Project Manager notified of any discrepancies or if temperature outside acceptable range?  
Comments/Remedy: \_\_\_\_\_

All chain of custody forms signed and dated?

Samples Filtered?

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

Container type: Titan Poly Glass Gar/Wal Other Plastic Jars

Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 09/11/09 1450

**SAMPLE PRESERVATION**

Sample preserved at MSL

Sample 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)

If preservation necessary, record Acid Lot#

Type:  0.2% HNO3 Notes: \_\_\_\_\_

0.5% HCl (Hg samples) Notes: \_\_\_\_\_

Refrigerate Notes: \_\_\_\_\_

Freeze Notes: Outside freezer - to be transferred to per. viats & put in deep freez

Other Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 09/11/09 1450

# SAMPLE LOGIN

Project Manager: Brandenberger  
Date Received: 9/23/2009  
Batch: 17  
Login Designee: Mcgahan

Project: **Washington Closure Hanford**



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

Sponsor ID	Site Description	Battelle Code	Matrix	Storage Location	Requested Parameters	Collection Date
J19629	na	2981-213a & b	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M, Methyl Hg, Mercury-7473	09/16/09
J19628	na	2981-214a & b	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M, Methyl Hg, Mercury-7473	09/16/09
J19639	na	2981-215	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/16/09
J19698	na	2981-216	other solid	Deep Freezer C-1	Methyl Hg by EPA 1630M; Mercury-7473	09/16/09
J19699	na	2981-217	other solid	Deep Freezer C-1	Methyl Hg by EPA 1630M; Mercury-7473	09/16/09
J19640	na	2981-218	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/16/09
J19650	na	2981-219	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09
J19649	na	2981-220	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09
J19660	na	2981-221	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09
J19659	na	2981-222	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-899		Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>AD 9K09</i>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 27 CARCASS				SAF No. RC-118		Data Turnaround <b>45 Days</b>		
Ice Chest No. <i>WCH-08-003-2</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A				Bill of Lading/ <i>FDX</i> # <b>796967152240</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Cool 4C	Freeze	Freeze		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	P	G/P		
					No. of Container(s)	0	1	1		
					Volume	15mL	60mL	60mL		
SAMPLE ANALYSIS					Total Inorganic Arsenic	Methyl Mercury by EPA 1630M; Mercury - 7473	Chromium Hex in Solids - 1636M			
Sample No.	Matrix *	Sample Date	Sample Time							
<i>J19629 2981-23a6b</i>	OTHER SOLID	<i>9/16/09</i>	<i>1115</i>	<i>X</i>	<i>X</i>	<i>X</i>				
CHAIN OF POSSESSION										
Relinquished By/Removed From				Sign/Print Names				SPECIAL INSTRUCTIONS		Matrix *
<i>Wendy West</i>		Date/Time <i>1115 9/16/09</i>		<i>Wendy West</i>		Date/Time <i>1115 9/16/09</i>		Perform Total Inorganic Arsenic out of Chromium Hex bottle.  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
<i>EAS LOCKED STORAGE 2</i>		Date/Time <i>1122/09 100</i>		<i>SHANNAN JOHNSON</i>		Date/Time <i>9/27/09 100</i>				
<i>SHANNAN JOHNSON</i>		Date/Time <i>9/27/09 100</i>		<i>FOX</i>		Date/Time				
		Date/Time				Date/Time <i>09/23/09 1250</i>				
		Date/Time				Date/Time				
LABORATORY SECTION	Received By			Title			Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-898		Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <b>9K</b> <i>N</i> <i>11/19/09</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sample Location STURGEON 27 FILLET			SAF No. RC-118		Data Turnaround <b>45 Days</b>		
Ice Chest No. <i>WCH-08-003-2</i>		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. <b>FDX 796967152240</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	Freeze		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	P	G/P		
				No. of Container(s)	0	1	1		
				Volume	15mL	60mL	60mL		
				SAMPLE ANALYSIS	Total Inorganic Arsenic	Methyl Mercury by EPA 1630M; Mercury - 7473	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J19628</i>	<i>2981.214a,b</i>	<i>9/16/09</i>	<i>1100</i>	<i>X</i>	<i>X</i>	<i>X</i>			
CHAIN OF POSSESSION									
Relinquished By/Removed From		Date/Time		Sign/Print Names		Received By/Stored In		Date/Time	
<i>Wendy West</i>		<i>9/16/09</i>		<i>Wendy West</i>		<i>EAS LOCKED STORAGE 2</i>		<i>9/16/09</i>	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Received By/Stored In		Date/Time	
<i>EAS LOCKED STORAGE 2</i>		<i>9/22/09</i>		<i>SHANNAN JOHNSON</i>		<i>SHANNAN JOHNSON</i>		<i>9/22/09</i>	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Received By/Stored In		Date/Time	
<i>SHANNAN JOHNSON</i>		<i>9/22/09</i>		<i>FDX</i>		<i>FDX</i>		<i>10/1/09</i>	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Received By/Stored In		Date/Time	
<i>Wendy West</i>		<i>9/22/09</i>		<i>Wendy West</i>		<i>Wendy West</i>		<i>9/22/09</i>	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Received By/Stored In		Date/Time	
<i>Wendy West</i>		<i>9/22/09</i>		<i>Wendy West</i>		<i>Wendy West</i>		<i>9/22/09</i>	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Received By/Stored In		Date/Time	
<i>Wendy West</i>		<i>9/22/09</i>		<i>Wendy West</i>		<i>Wendy West</i>		<i>9/22/09</i>	
LABORATORY SECTION	Received By	Title	Date/Time	SPECIAL INSTRUCTIONS					
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time	Perform Total Inorganic Arsenic out of Chromium Hex bottle.					
Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.									

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-966	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>NA 9009</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 28 FILLET		SAF No. RC-118				
Ice Chest No. <i>WCH-DB-003-2</i>	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. <b>FDX # 796967152240</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation Freeze					
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container P					
		No. of Container(s) 1					
		Volume 60mL					
SAMPLE ANALYSIS		Methyl Mercury by EPA 1630M; Mercury - 7473					
Sample No.	Matrix *	Sample Date	Sample Time				
J19698 <i>2881-216</i>	OTHER SOLID	<i>9/16/09</i>	<i>1345</i>	<i>X</i>			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1345</i> <i>9/16/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1345</i> <i>9/16/09</i>	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 Sl=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue Wl=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <i>EAS LOCKED STORAGE</i>	Date/Time <i>9/22/09</i> <i>100</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>9/22/09</i> <i>100</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>9/22/09</i> <i>100</i>	Received By/Stored In <i>FDX</i>	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In <i>Shannon Johnson</i>	Date/Time <i>09/23/09 1252</i>				
Relinquished By/Removed From	Date/Time	Received By/Stored In	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			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-967		Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> Data Turnaround <i>45 Days</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 28 CARCASS			SAF No. RC-118		<i>N</i> <i>AP 9/09</i>		
Ice Chest No. <i>WCH-08-003-2</i>		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 B/L No. <i>FDX 796967152240</i>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation Freeze					
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container P					
				No. of Container(s) 1					
				Volume 60mL					
SAMPLE ANALYSIS				Methyl Mercury by EPA 1631M; Mercury - 7473					
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J19699 2981.217</i>	<i>OTHER SOLID</i>	<i>9/16/09</i>	<i>1400</i>	<i>X</i>					
CHAIN OF POSSESSION									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		SPECIAL INSTRUCTIONS	
<i>Wendy West</i>		<i>9/16/09 1400</i>		<i>EAS LOCKED STORAGE 2</i>		<i>9/16/09 1400</i>		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p> <p>Matrix *</p> <ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>Sl=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
<i>EAS LOCKED STORAGE 2</i>		<i>9/22/09 100</i>		<i>SHANNAN JOHNSON</i>		<i>9/22/09 100</i>			
<i>SHANNAN JOHNSON</i>		<i>9/22/09 100</i>		<i>FDX</i>					
				<i>Shannon Johnson</i>		<i>9/23/09 1200</i>			
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			
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): 213-222

Project Manager: Brandenberger

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

Matrix: \_\_\_\_\_ WP# \_\_\_\_\_

Yes No

Navy-type Project (requires high-level sample tracking procedures)

USDA Soils (or overseas, including Hawaii and the U.S. Virgin Islands) See Compliance Agreement Checklist

Filter Samples: Amount Entire sample Half of sample

Freeze dry sample(s) - samples will be weighed and placed in Ultra-low temp freezer (Lab# 503)

Special instructions: \_\_\_\_\_

Sample Preservation Instructions: \_\_\_\_\_

**\*\*See LIMS for archive/disposal information\*\***

**TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN**

Yes No N/A (Initial appropriate box when completed)

Custody seal present

Custody seal intact

Cooler(s) temperature (acceptable ranges = water: 4±2°C / solid: frozen) 2.0 °C

(if multiple coolers, note temp. of each) \_\_\_\_\_ °C

Project Manager notified of any discrepancies or if temperature outside acceptable range?

Comments/Remedy: \_\_\_\_\_

All chain of custody forms signed and dated?

Samples Filtered?

Sample condition(s): Acceptable Other (explain): \_\_\_\_\_

Container type: Teflon poly Glass Cap Vial Other: \_\_\_\_\_

Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 09/23/09 12:40

**SAMPLE PRESERVATION**

Sample preserved at MSL

Sample 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)

**If preservation necessary, record Acid Lot#**

Type:  0.2% HNO3 Notes: \_\_\_\_\_

0.5% HCl (Hg samples) Notes: \_\_\_\_\_

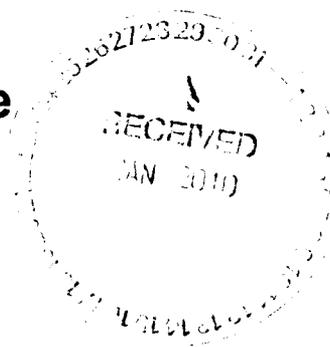
Refrigerate Notes: \_\_\_\_\_

Freeze Notes: Deep freeze C-1

Other Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 09/23/09 12:40

**Analytical Chemistry Data Package  
Inorganics Analysis**



**Project: Washington Closures Hanford  
Chromium VI Analysis of Tissue**

- SDG 081409 (b)
- SDG 082009
- SDG 091109
- SDG 091809
- SDG 092309
- SDG 093009

PNNL Project No. 56166  
MSL CF No. 2981



**Pacific Northwest**  
NATIONAL LABORATORY

Marine Sciences Laboratory  
1529 West Sequim Bay Road  
Sequim, WA 98382  
PM: Jill Brandenberger  
(360) 681-4564

SEQ091109

# INORGANIC CHEMISTRY ANALYSIS DATA PACKAGE CONTENTS

## Chromium VI Analysis in Tissue

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## Sample Custody Information

Laboratory Sample Log-In and Chain of Custody Forms for:

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SDG091109 .....	35
SDG091809 .....	55
SDG092309 .....	67
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**BATTELLE MARINE SCIENCES LABORATORY**

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 Sequim, Washington 98382  
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**Washington Closures Hanford**  
 Chromium VI Study in Fish Tissue

SDG081409(b), SDG082009, SDG091109, SDG091809, SDG092309, and SDG093009

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Percent Dry Wt	Cr VI	
								$\mu\text{g/g dry wt.}$	$\mu\text{g/g wet wt.}^1$
<i>Method Detection Limit (MDL)</i>								<i>0.471</i>	<i>0.127</i>
2981-133	J193L2	SDG081409	08/14/09	08/06/09	01/25/10	012510-LC'DRC	22.4	0.471 U	0.127 U
2981-134	J193L3	SDG081409	08/14/09	08/06/09	01/25/10	012510-LC'DRC	26.1	0.471 U	0.127 U
2981-135	J193M2	SDG081409	08/14/09	08/10/09	01/25/10	012510-LC'DRC	28.6	0.471 U	0.127 U
2981-136	J193M3	SDG081409	08/14/09	08/10/09	01/25/10	012510-LC'DRC	32.0	0.471 U	0.127 U
2981-137	J193N4	SDG081409	08/14/09	08/11/09	01/25/10	012510-LC'DRC	22.3	0.471 U	0.127 U
2981-137R2	J193N4DUP	SDG081409	08/14/09	08/11/09	01/25/10	012510-LC'DRC	22.3	0.485	0.108
2981-138	J193N5	SDG081409	08/14/09	08/11/09	01/25/10	012510-LC'DRC	25.6	0.471 U	0.127 U
2981-139	J19446	SDG082009	08/20/09	08/12/09	01/25/10	012510-LC'DRC	39.4	0.471 U	0.127 U
2981-140	J19447	SDG082009	08/20/09	08/17/09	01/25/10	012510-LC'DRC	40.9	0.471 U	0.127 U
2981-141	J19456	SDG082009	08/20/09	08/17/09	01/25/10	012510-LC'DRC	22.9	1.06	0.241
2981-142	J19457	SDG082009	08/20/09	08/17/09	01/25/10	012510-LC'DRC	26.2	0.471 U	0.127 U
2981-143	J19466	SDG082009	08/20/09	08/17/09	01/25/10	012510-LC'DRC	24.1	1.20	0.289
2981-144	J19467	SDG082009	08/20/09	08/17/09	01/25/10	012510-LC'DRC	29.1	0.471 U	0.127 U
2981-186	J19476	SDG091109	09/11/09	09/03/09	01/25/10	012510-LC'DRC	27.6	0.471 U	0.127 U
2981-188	J19477	SDG091109	09/11/09	09/03/09	01/25/10	012510-LC'DRC	30.2	0.471 U	0.127 U
2981-189	J19487	SDG091109	09/11/09	09/03/09	01/25/10	012510-LC'DRC	43.4	0.471 U	0.127 U
2981-191	J19486	SDG091109	09/11/09	09/03/09	01/25/10	012510-LC'DRC	34.0	0.471 U	0.127 U
2981-193	J19497	SDG091109	09/11/09	09/08/09	01/25/10	012510-LC'DRC	34.4	0.471 U	0.127 U
2981-196	J19496	SDG091109	09/11/09	09/08/09	01/25/10	012510-LC'DRC	26.6	0.654	0.174
2981-198	J194B7	SDG091109	09/11/09	09/08/09	01/25/10	012510-LC'DRC	32.6	0.472	0.154
2981-200	J194B8	SDG091109	09/11/09	09/08/09	01/25/10	012510-LC'DRC	39.1	0.471 U	0.127 U
2981-201	J194C8	SDG091109	09/11/09	09/09/09	01/22/10	012210-LC'DRC	25.6	0.471 U	0.127 U
2981-202	J194C9	SDG091109	09/11/09	09/09/09	01/22/10	012210-LC'DRC	32.6	0.471 U	0.127 U
2981-203	J19503	SDG091809	09/18/09	09/10/09	01/22/10	012210-LC'DRC	31.1	0.471 U	0.127 U
2981-204	J19504	SDG091809	09/18/09	09/10/09	01/22/10	012210-LC'DRC	37.9	0.471 U	0.127 U
2981-204 R2	J19504DUP	SDG091809	09/18/09	09/10/09	01/22/10	012210-LC'DRC	37.9	0.471 U	0.127 U
2981-205	J195R1	SDG091809	09/18/09	09/10/09	01/22/10	012210-LC'DRC	42.3	0.471 U	0.127 U
2981-206	J195R0	SDG091809	09/18/09	09/10/09	01/22/10	012210-LC'DRC	34.5	0.471 U	0.127 U
2981-207	J195T2	SDG091809	09/18/09	09/14/09	01/22/10	012210-LC'DRC	36.7	0.471 U	0.127 U
2981-208	J195T3	SDG091809	09/18/09	09/14/09	01/22/10	012210-LC'DRC	40.2	0.471 U	0.127 U
2981-209	J195Y0	SDG091809	09/18/09	09/15/09	01/22/10	012210-LC'DRC	37.7	0.471 U	0.127 U
2981-210	J195X9	SDG091809	09/18/09	09/15/09	01/22/10	012210-LC'DRC	32.2	0.471 U	0.127 U
2981-211	J19609	SDG091809	09/18/09	09/15/09	01/22/10	012210-LC'DRC	32.9	0.471 U	0.127 U
2981-212	J19610	SDG091809	09/18/09	09/15/09	01/22/10	012210-LC'DRC	38.7	0.471 U	0.127 U
2981-213	J19629	SDG092309	09/23/09	09/16/09	01/22/10	012210-LC'DRC	34.7	0.471 U	0.127 U
2981-214	J19628	SDG092309	09/23/09	09/16/09	01/22/10	012210-LC'DRC	28.9	0.497	0.143
2981-215	J19639	SDG092309	09/23/09	09/16/09	01/22/10	012210-LC'DRC	23.9	0.471 U	0.127 U
2981-218	J19640	SDG092309	09/23/09	09/16/09	01/22/10	012210-LC'DRC	29.7	0.471 U	0.127 U
2981-219	J19650	SDG092309	09/23/09	09/17/09	01/22/10	012210-LC'DRC	36.0	0.471 U	0.127 U
2981-220	J19649	SDG092309	09/23/09	09/17/09	01/22/10	012210-LC'DRC	29.2	0.471 U	0.127 U
2981-221	J19660	SDG092309	09/23/09	09/17/09	01/22/10	012210-LC'DRC	32.0	0.471 U	0.127 U
2981-222	J19659	SDG092309	09/23/09	09/17/09	01/22/10	012210-LC'DRC	28.7	0.582	0.167
2981-223	J195W5	SDG093009	09/30/09	09/21/09	01/26/10	012610-LC'DRC	21.7	0.471 U	0.127 U
2981-224	J195W6	SDG093009	09/30/09	09/21/09	01/26/10	012610-LC'DRC	25.7	0.471 U	0.127 U
2981-225	J195W7	SDG093009	09/30/09	09/21/09	01/26/10	012610-LC'DRC	19.3	0.902	0.174
2981-226	J195W8	SDG093009	09/30/09	09/24/09	01/26/10	012610-LC'DRC	21.4	1.13	0.242
2981-226R2	J195W8DUP	SDG093009	09/30/09	09/24/09	01/26/10	012610-LC'DRC	21.4	0.686	0.147
2981-227	J19666	SDG093009	09/30/09	09/24/09	01/26/10	012610-LC'DRC	22.2	0.911	0.202
2981-228	J19665	SDG093009	09/30/09	09/24/09	01/26/10	012610-LC'DRC	20.5	1.05	0.215

**QUALITY CONTROL SAMPLE RESULTS**

*Average 30.3*

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**Washington Closures Hanford**

Chromium VI Study in Fish Tissue

SDG081409(b), SDG082009, SDG091109, SDG091809, SDG092309, and SDG093009

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Percent Dry Wt	Cr VI µg/g dry wt.	Cr VI µg/g wet wt. <sup>1</sup>
<b>Method Detection Limit (MDL)</b>								0.471	0.127
<b>Method Blank</b>									
Blank R1					01/25/10	012510-LCDRC		0.471 U	0.127 U
Blank R2					01/22/10	012210-LCDRC		0.471 U	0.127 U
Blank R3					01/26/10	012610-LCDRC		0.471 U	0.127 U
<b>Laboratory Control Sample</b>									
LCS 1 Cr+6					01/25/10	012510-LCDRC		3.16	--
LCS 2 Cr+6					01/22/10	012210-LCDRC		3.06	--
LCS 3 Cr+6					01/26/10	012610-LCDRC		3.10	--
Spike Concentration								3.00	--
% Recovery								105%	--
% Recovery								102%	--
% Recovery								103%	--
<b>Replicate Analysis Results</b>									
2981-137	J193N4	SDG081409	08/14/09	08/11/09	01/25/10	012510-LCDRC	22.3	0.471 U	0.127 U
2981-137R2	J193N4DUP	SDG081409	08/14/09	08/11/09	01/25/10	012510-LCDRC	22.3	0.485	0.108
<b>RPD</b>								NA	NA
2981-204	J19504	SDG091809	09/18/09	09/10/09	01/22/10	012210-LCDRC	37.9	0.471 U	0.127 U
2981-204 R2	J19504DUP	SDG091809	09/18/09	09/10/09	01/22/10	012210-LCDRC	37.9	0.471 U	0.127 U
<b>RPD</b>								NA	NA
2981-226	J195W8	SDG093009	09/30/09	09/24/09	01/26/10	012610-LCDRC	21.4	1.13	0.242
2981-226R2	J195W8DUP	SDG093009	09/30/09	09/24/09	01/26/10	012610-LCDRC	21.4	0.686	0.147
<b>RPD</b>								NA <sup>2</sup>	NA <sup>2</sup>
MDLR2	New MDL				01/26/10	012610-LCDRC	30.3	1.52	0.460
MDLR3	New MDL				01/26/10	012610-LCDRC	30.3	1.45	0.439
MDLR4	New MDL				01/26/10	012610-LCDRC	30.3	1.49	0.451
MDLR5	New MDL				01/26/10	012610-LCDRC	30.3	1.37	0.414
MDLR6	New MDL				01/26/10	012610-LCDRC	30.3	1.62	0.490
MDLR7	New MDL				01/26/10	012610-LCDRC	30.3	1.56	0.474
MDLR8	New MDL				01/26/10	012610-LCDRC	30.3	1.57	0.476
Average =								1.51	0.458
Std. Dev. =								0.0846	0.0256
MDL(3.143xSD) =								0.266	0.0806
RSD								5.6%	5.6%
<b>Matrix Spike Accuracy</b>									
2981-133	J193L2	SDG081409	08/14/09	08/06/09	01/25/10	012510-LCDRC	22.4	0.471 U	0.127 U
2981-133 MS (Cr+6)								2.12	--
2981-133 MSD (Cr+6)								2.77	--
Spike Amount, MS								2.90	--
Spike Amount, MSD								2.83	--
% Recovery, MS								73% N	--
% Recovery, MSD								98%	--
RPD								27% *	--

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SDG081409(b), SDG082009, SDG091109, SDG091809, SDG092309, and SDG093009

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Percent Dry Wt	Cr VI	
								$\mu\text{g/g dry wt.}$	$\mu\text{g/g wet wt.}^1$
<b>Method Detection Limit (MDL)</b>								0.471	0.127
2981-203	J19503	SDG091809	09/18/09	09/10/09	01/22/10	012210-LCDRC	31.1	0.471 U	0.127 U
2981-203 MS (Cr+6)								2.95	--
2981-203 MSD (Cr+6)								3.26	--
Spike Amount, MS								3.14	--
Spike Amount, MSD								2.97	--
% Recovery, MS								94%	--
% Recovery, MSD								110%	--
<b>RPD</b>								10%	--
2981-223	J195W5	SDG093009	09/30/09	09/21/09	01/26/10	012610-LCDRC	21.7	0.471 U	0.127 U
2981-223 MS (Cr+6)								3.19	--
2981-223 MSD (Cr+6)								2.90	--
Spike Amount, MS								2.91	--
Spike Amount, MSD								2.94	--
% Recovery, MS								110%	--
% Recovery, MSD								99%	--
<b>RPD</b>								10%	--
<b>Standard Reference Material (Liquid)</b>									
SRM 2109					01/25/10	012510-LCDRC		0.111	--
SRM 2109					01/22/10	012210-LCDRC		NA	--
SRM 2109					01/26/10	012610-LCDRC		0.119	--
Certified Value (adjusted for dilution)								0.10	--
% Recovery								111%	--
% Recovery								NA	--
% Recovery								119%	--

**Qualifiers:**

- <sup>1</sup> Wet weight detection limit calculated using a percent dry weight of 26.9%.
- <sup>2</sup> Concentration less than 3 times MDL
- U Not detected at or above MDL, MDL reported in value field
- N Outside Method DQOs for Blank Spikes ( $\leq 15\%$ ) and MS/MSD ( $\leq 25\%$ ) results
- \* Outside Method DQOs for Duplicates ( $\leq 25\%$ )

## QA/QC NARRATIVE

**PROJECT:** Washington Closures Hanford SDG081409b (partial batch), SDG082009, SDG091109, SDG091809, SDG092309, and SDG093009

**PARAMETER:** Chromium Speciation - Hexavalent Chromium (Cr VI)

**LABORATORY:** Pacific Northwest National Laboratory (PNNL) operated by Battelle, Marine Sciences Laboratory (MSL), Sequim, Washington

**MATRIX:** Tissue Homogenate

**SAMPLE CUSTODY AND PROCESSING:** The samples addressed in this narrative were received in six separate shipments. Table 1 provides the details for the sample receipt and analysis. A total of 46 tissue samples were received at MSL. 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. This narrative addressed only part of the SDG081409 samples due to an analytical batch size of 20 samples. See note below for sample numbers addressed in this narrative.

**Table 1. Sample receipt, extraction, and analysis information.**

SDG:	081409b	082009	091109	091809	092309	093009
<b>MSL Sample IDs:</b>	2981*133-138	2981*139-144	2981*185-202 (select)	2981*203-212	2981*213-222	2981*223-228
<b>Collection Date:</b>	08/06/09 08/10/09 08/11/09	08/12/09 08/17/09	09/03/09 09/08/09 09/09/09	09/10/09 09/14/09 09/15/09	09/16/09 09/17/09	09/21/09 09/24/09
<b>Description:</b>	Fish Tissue	Fish Tissue	Fish Tissue	Fish Tissue	Fish Tissue	Fish Tissue
<b>Laboratory Arrival Date:</b>	08/14/09	08/20/09	09/11/09	09/18/09	09/23/09	09/30/09
<b>Cooler Temp.</b>	2.5°C	1.2°C	3.7°C	2.7°C	2.0°C	3.2°C
<b>Extraction Date:</b>	01/24/10	01/24/10	01/24/10 01/21/10	01/21/10	01/21/10	01/26/10
<b>Analysis Date:</b>	01/25/10	01/25/10	01/25/10 01/22/10	01/22/10	01/22/10	01/26/10

**METHODS:** The tissue homogenate was processed and analyzed for CrVI following a modification from the Environmental Protection Agency (EPA) Method 6800 Elemental and Speciated Isotope Dilution Mass Spectrometry. The modification occurs in the preparation method for the tissue matrix. The tissues were extracted for CrVI following adaptations from Wolf et al. (2007). The extracts were then analyzed following MSL standard operating procedure MSL-I-039 CHROMIUM SPECIATION USING HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY - INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY (HPLC-ICP-MS) IN AQUEOUS, SEDIMENT, AND TISSUE SAMPLES. The operation manual for chromium explicit SIDMS was provided by Applied Isotope Technologies and is briefly discussed in EPA Method 6800. Peaks are manually integrated for peak area and concentration is entered into the SIDMS software to conduct the isotopic dilution calculations.

Upon arrival at MSL, the wet tissue samples were stored at <-80°C until samples were lyophilized. Approximately 200 mg of dried, homogenized tissue was spiked with enriched isotopes of <sup>52</sup>Cr and <sup>53</sup>Cr to correct for interferences and potential interconversion between the oxidation states of Cr<sup>3+</sup> and Cr<sup>6+</sup>. The tissues were extracted using a Na<sub>2</sub>CO<sub>3</sub> and NaHCO<sub>3</sub> buffer, ultrasonication, and centrifugation. The extracts were then filtered through a 0.45µm Teflon syringe to removal particulates and analyzed by HPLC coupled with the ICP-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

**HOLDING TIMES:** Wet tissue samples were stored at  $\leq -80^{\circ}\text{C}$  upon arrival at MSL. Method 6800 does not provide a holding time for CrVI; however, it states that samples collected for speciation analysis must be isotopically spiked as soon as possible. Due to the lipid interference that occurred in the original method, the samples were isotopically spiked several months after collection. However, the storage of samples at  $\leq -80^{\circ}\text{C}$  sufficiently inhibits interconversion of the oxidation states over this period of time. The results are not considered significantly impacted by the delay in isotopically spiking the samples.

**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 ( $\mu\text{g/g}$ dry wt.)	Achieved MDL ( $\mu\text{g/g}$ wet wt.) <sup>1</sup>
CrVI	HPLC/ICP-DRC-MS	85-115%	75-125%	NA	$\leq 25\%$	0.471 $\mu\text{g/g}$	0.127 $\mu\text{g/g}$

NA Tissue standard reference materials certified for CrVI are not presently available.

<sup>1</sup> Dry Weight MDL converted to a wet weight MDL using a percent dry weight of 26.9%.

**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. Seven replicates of a fish tissue were used to generate the MDL for the dry weight concentration. The dry weight is then converted to a wet weight concentration using the average sample percent dry weight as discussed above. 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. Three analytical batches are reported with no detectable CrVI in 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. The LCS consists of reagents spiked with the isotopically enriched Cr VI and Cr III standards for <sup>52</sup>Cr and <sup>53</sup>Cr. The LCS samples were within the QC criterion of 85-115% recovery.

**REPLICATE PRECISION:** Laboratory duplicates were analyzed at a frequency of one each per 20 field samples or analytical batch. The samples selected for duplication were less than three times the MDL and not appropriate for evaluation of the data set precision. Precision was assessed using the matrix spike duplicates prepared with each analytical batch and with seven replicates of a fish tissue prepared with the third analytical batch.

**MATRIX SPIKE ACCURACY:** A set of matrix spike duplicates was prepared at a frequency of one each per 20 samples or analytical batch. The matrix spikes were within the QC acceptance criterion of 75-125%, except for one MS in batch 012510-LCDRC at 73%. Acceptable accuracy for Cr VI was demonstrated by the LCS and an aqueous SRM certified for Cr VI. Analytical precision was assessed using the matrix spike duplicates and was within the QC acceptance criterion of  $\leq 25\%$  RPD except for the one MS pair (27%). Acceptable precision was demonstrated on the seven replicate analyses on a non-SDG sample.

## QA/QC NARRATIVE

### STANDARD REFERENCE MATERIAL:

The aqueous NIST standard reference material (SRM) for Cr VI was used to verify the accuracy of the isotopic dilution method. This is not required in the method, but was added to confirm the quantification of the Cr VI species. Therefore, only two of the three batches contained an analysis of this standard with percent recoveries within 75-125% of the certified value for Cr VI.

### REFERENCES:

U.S. EPA, 2007. Method 6800, Revision 0 (February 2007), ELEMENTAL AND SPECIATED ISOTOPE DILUTION MASS SPECTROMETRY, Environmental Protection Agency.

Wolf, Ruth E., J.M. Morrison, and M.B. Goldhaber. (2007). Simultaneous determination of Cr(III) and Cr(VI) using reversed-phased ion-pairing liquid chromatography with dynamic reaction cell inductively coupled plasma mass spectrometry. *J. Anal. At. Spectrom.*, 22: 1051-1060. DOI: 10.1039/b704597b

# SAMPLE LOGIN

Project Manager: Brandenberger

Date Received: 8/14/2009

Batch: 11

Login Designee: Mcgahan

Project: **Washington Closure Hanford**



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

Sponsor ID	Site Description	Battelle Code	Matrix	Storage Location	Requested Parameters	Collection Date
J192F1	na	2981-123	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/04/09
J192F2	na	2981-124	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/04/09
J192H2	na	2981-125	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/04/09
J192H3	na	2981-126	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/04/09
J19304	na	2981-127	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/05/09
J19305	na	2981-128	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/05/09
J19314	na	2981-129	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/05/09
J19315	na	2981-130	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/05/09
J19325	na	2981-131	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/06/09
J19326	na	2981-132	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/06/09
J193L2	na	2981-133	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/06/09
J193L3	na	2981-134	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/06/09
J193M2	na	2981-135	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/10/09
J193M3	na	2981-136	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/10/09
J193N4	na	2981-137	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/11/09
J193N5	na	2981-138	other solid	Deep Freezer C-2	Total Inorganic Arsenic, Cr	08/11/09

<b>Washington Closure Hanford</b>		<b>CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST</b>			RC-118-668	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 9K N NA 72709	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 6 FILLET		SAF No. RC-118			
Ice Chest No. <i>EAS 1018 W5 678</i>	Field Logbook No. EL-1638	COA BESRC6520	Method of Shipment FED EX	FE 796850726969		
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading/Air Bill No. <i>CLASS</i>				

<b>POSSIBLE SAMPLE HAZARDS/REMARKS</b> N/A				Preservation	Cool 4C	Freeze														
<b>Special Handling and/or Storage</b> FREEZE "MATRIX COMPOSED OF FISH"				Type of Container	P/G	G/P														
				No. of Container(s)	0	1														
				Volume	15mL	60mL														
<b>SAMPLE ANALYSIS</b>				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M															
Sample No.	Matrix *	Sample Date	Sample Time																	
J192F1	<i>281.123</i>	OTHER SOLID	<i>8/4/09</i>	<i>1000</i>	X	X														

<b>CHAIN OF POSSESSION</b>				<b>SPECIAL INSTRUCTIONS</b>				Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1000</i>	Received By/Stored In <i>EAS LOCK STORAGE</i>	Date/Time <i>1000</i>	sampler unavailable to relinquish samples from EAS Refrigerator. EAS Justodian removed samples for shipping on <i>8/30/09</i>				S=Soil SE=Seawater SO=Solid SH=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 <i>EAS LOCK STORAGE</i>	Date/Time <i>8/4/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>8/4/09</i>					
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>8/25/09</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>8/25/09</i>					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time <i>08/24/09 1330</i>					
Relinquished By/Removed From	Date/Time	Received By/Stored In	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

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-669		Page 1 of 1	
Collector <i>Wendy Wast</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>72709</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 6 CARCASS		SAF No. RC-118		Data Turnaround <b>45 Days</b>			
Ice Chest No. <i>GLCS 028</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Air Bill No. <b>FDX 796859726969</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation		Cool 4C	Freeze				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container		P/G	G/P				
		No. of Container(s)		0	1				
		Volume		15mL	60mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic		Chromium Hex in Solids - 1636M					
Sample No.	Matrix *	Sample Date	Sample Time						
J192F2 <i>2981-124</i>	OTHER SOLID	<i>8/4/09</i>	<i>1145</i>	<i>X</i>	<i>X</i>				
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		<p>sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on <i>8/13/09</i></p> <ul style="list-style-type: none"> <li>S=Soil</li> <li>Ss=Sediment</li> <li>SO=Solid</li> <li>Sl=Sledge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>W=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
<i>Wendy Wast</i>		<i>1145</i>		<i>EAS LOCKED STORAGE</i>		<i>1145</i>			
<i>Wendy Wast</i>		<i>8/4/09</i>		<i>Wendy Wast</i>		<i>8/4/09</i>			
<i>EAS LOCKED STORAGE</i>		<i>100</i>		<i>SHANNAN JOHNSON</i>		<i>8/13/09 1000</i>			
<i>SHANNAN JOHNSON</i>		<i>8/13/09 1000</i>		<i>EDY</i>					
<i>SHANNAN JOHNSON</i>		<i>8/4/09 1300</i>		<i>EDY</i>					
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			
LABORATORY SECTION		Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time			

WCH-EE-011

Collector *Wendy West* Company Contact **JOAN KESSNER** Telephone No. **375-4688** Project Coordinator **KESSNER, JH** Price Code **9K** Data Turnaround **45 Days**

Project Designation **Columbia River Component of the RCBRA - Tissues** Sampling Location **STURGEON 7 FILLET** SAF No. **RC-118**

Ice Chest No. **ELWS 028** Field Logbook No. **EL-1638** COA **BESRC6520** Method of Shipment **FED EX**

Shipped To **Battelle Marine Sciences** Offsite Property No. **N/A** Bill of Lading # **FDX # 796859726969**

POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>	Preservation	Cool 4C	Freeze								
	Special Handling and/or Storage <b>FREEZE "MATRIX COMPOSED OF FISH"</b>	Type of Container	P/G	G/P							
		No. of Container(s)	0	1							
		Volume	15mL	60mL							

SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M
Sample No.	Matrix *	Sample Date	Sample Time		

J192H2	2981-125	OTHER SOLID	8/4/09	1500	X	X													

CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS	Matrix *	
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					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
<i>Wendy West</i>	1500	<i>Wendy West</i>	1500	<b>EAS LOCKED STORAGE</b>				
<b>EAS LOCKED STORAGE</b>	2 8/13/09	<i>Shannan Johnson</i>	8/13/09					
<b>SHANNAN JOHNSON</b>	8/13/09 1000	<i>EDU</i>	8/13/09					
		<i>Shannan Johnson</i>	8/13/09					
		<i>Shannan Johnson</i>	8/13/09					

sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/13/09

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

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-679	Page 1 of 1	
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 9K N AS 8309	Data Turnaround 45 Days			
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 7 CARCASS	SAF No. RC-118						
Ice Chest No. <i>GWS 028</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX					
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading/Invoice No. <b>FDX 796859726969</b>						
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation	Cool 4C	Freeze				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G	G/P				
		No. of Container(s)	0	1				
		Volume	15mL	60mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M					
Sample No.	Matrix *	Sample Date	Sample Time					
J192H3 <i>2381.126</i>	OTHER SOLID	<i>8/4/09</i>	<i>1510</i>	X	X			
CHAIN OF POSSESSION		Sign/Print Names			SPECIAL INSTRUCTIONS			
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1510 8/4/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1510 8/4/09</i>	<b>EAS LOCKED STORAGE</b> <b>SHANNAN JOHNSON</b> <i>FDX</i> sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on <i>8/15/09</i>			Matrix *	
Relinquished By/Removed From <b>EAS LOCKED STORAGE</b>	Date/Time <i>1000 2/15/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>8/15/09 1000</i>					S=Soil SE=Sediment SO=Solid SI=Sludge W=Water O=Oil A=Air DS=Dry Solids DL=Dry Liquids T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>8/15/09 1000</i>	Received By/Stored In <i>FDX</i>	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					
LABORATORY SECTION	Received By	Title			Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By			Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-688	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 8 FILLET		SAF No. RC-118	<i>118309</i>			
Ice Chest No. <i>GW81028</i>	Field Logbook No. EL-1638	COA BESRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading Air Bill No. <b>FDA: 796859726969</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J19304 <i>2281-127</i>	OTHER SOLID	<i>8/5/09</i>	<i>0930</i>	X	X		
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>8/5/09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>8/5/09</i>	
<b>EAS LOCKED STORAGE 2</b>				<b>EAS LOCKED STORAGE 2</b>			
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>8/13/09</i>		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time <i>8/13/09 1000</i>	
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <i>8/13/09 1000</i>		Received By/Stored In <b>EDY</b>		Date/Time <i>8/13/09 1300</i>	
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	
LABORATORY SECTION	Received By	Title				Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time	

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian retrieved samples for shipping on *8/13/09*

Matrix \*

- S-Soil
- SE-Sediment
- SO-Solid
- SI-Sludge
- W-Water
- O-Oil
- A-Air
- DS-Dry Solids
- DL-Dry Liquids
- T-Tissue
- W1-Wipe
- L-Liquid
- V-Vegetation
- X-Other

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-689	Page 1 of 1	
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>			
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 8 CARCASS	SAF No. RC-118		<i>N</i>				
Ice Chest No. <i>GLWS 028</i>	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. <b>FDX 796859726969</b>						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation	Cool 4C	Freeze				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container	P/G	G/P				
		No. of Container(s)	0	1				
		Volume	15mL	60mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M					
Sample No.	Matrix *	Sample Date	Sample Time					
J19305 <i>2981-12E</i>	OTHER SOLID	<i>8/5/09</i>	<i>1000</i>	<i>X</i>	<i>X</i>			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1000 8/5/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1000 8/5/09</i>	<p>sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on <i>8/13/09</i>.</p>			<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Soil/Sediment</li> <li>SO=Soil/Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Trace</li> <li>Wj=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
<b>EAS LOCKED STORAGE</b>		<b>EAS LOCKED STORAGE 2</b>						
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>1000 8/13/09</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>1000 8/13/09</i>					
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>1000 8/13/09</i>	Received By/Stored In <i>FDX</i>	Date/Time <i>1000 8/13/09</i>					
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>1000 8/13/09</i>	Received By/Stored In <i>FDX</i>	Date/Time <i>1000 8/13/09</i>					
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>1000 8/13/09</i>	Received By/Stored In <i>FDX</i>	Date/Time <i>1000 8/13/09</i>					
Relinquished By/Removed From	Date/Time	Received By/Stored In	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				

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-698	Page 1 of 1				
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>1/1 8309</i>	Data Turnaround <b>45 Days</b>			
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 9 FILLET				SAF No. RC-118					
Ice Chest No. <i>GWS 028</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX					
Shipped To Battelle Marine Sciences		Offsite Property No. N/A				Bill of Lading/Air Bill No. <b>FDX 796859726969</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A					Preservation	Cool 4C	Freeze				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"					Type of Container	P/G	G/P				
					No. of Container(s)	0	1				
					Volume	15mL	60mL				
SAMPLE ANALYSIS					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M					
Sample No.	Matrix *	Sample Date	Sample Time								
J19314 <i>2781-129</i>	OTHER SOLID	<i>8/5/09</i>	<i>1300</i>	<i>X</i>	<i>X</i>						
CHAIN OF POSSESSION											
Relinquished By/Removed From		Date/Time		Sign/Print Names		Received By/Stored In		Date/Time		SPECIAL INSTRUCTIONS	Matrix * S=Soil SE=Settlement SO=Solid SF=Sludge W=Water O=Oil A=Air DS=Dryer Solids DL=Dryer Liquids T=Tissue W1=Wipe L=Liquid V=Vegetation X=Other
<i>Wendy West</i>		<i>1300 8/5/09</i>		<i>Wendy West</i>		EAS LOCKED STORAGE 2		<i>1300 8/5/09</i>			
EAS LOCKED STORAGE		<i>1000 8/13/09</i>		<i>Shannan Johnson</i>		SHANNAN JOHNSON		<i>1300 8/13/09</i>			
SHANNAN JOHNSON		<i>1000 8/13/09</i>		<i>FDX</i>		FDX		<i>1300 8/13/09</i>			
				<i>Shannan Johnson</i>				<i>1300 8/13/09</i>			
LABORATORY SECTION											
Received By	Title	Date/Time									
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time								

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-699		Page 1 of 1			
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>110 8309</i>			
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 9 CARCASS			SAF No. RC-118		Data Turnaround <b>45 Days</b>				
Ice Chest No. <i>GLDS 028</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX					
Shipped To Battelle Marine Sciences		Offsite Property No. N/A			Bill of Lading B/L No. <b>FD 796859726969</b>						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation		Cool 4C		Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container		P/G		G/P			
				No. of Container(s)		0		1			
				Volume		15mL		60mL			
				Total Inorganic Arsenic		Chromium Hex in Solids - 1636M					
SAMPLE ANALYSIS											
Sample No.		Matrix *		Sample Date		Sample Time					
<i>J19315 2281-130</i>		<i>OTHER SOLID</i>		<i>8/5/09</i>		<i>1400</i>		<i>X X</i>			
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS			
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1400 8/5/09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>1400 8/5/09</i>		<p>Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on <i>8/15/09</i>.</p> <p>Matrix *</p> <ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SI=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Dry Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WJ=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>			
Relinquished By/Removed From <b>EAS LOCKED STORAGE</b>		Date/Time <i>1000 8/18/09</i>		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time <i>8/18/09 1000</i>					
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <i>8/18/09 1000</i>		Received By/Stored In <i>EDJ</i>		Date/Time					
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>EDJ</i>		Date/Time <i>8/14/09 1300</i>					
Relinquished By/Removed From		Date/Time		Received By/Stored In		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	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-708	Page 1 of 1	
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>915</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 10 FILLET	SAF No. RC-118	<div style="text-align: right;"><i>8309</i></div>					
Ice Chest No. <i>GLAS 028</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX					
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading/Air Bill No. <b>FDX 796859726969</b>						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>			Preservation	Cool 4C	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>			Type of Container	P/G	G/P			
			No. of Container(s)	0	1			
			Volume	15mL	60mL			
SAMPLE ANALYSIS			Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time					
<i>J19325 2981-131</i>	OTHER SOLID	<i>8/16/09</i>	<i>0900</i>	<i>X</i>	<i>X</i>			
CHAIN OF POSSESSION			Sign/Print Names		SPECIAL INSTRUCTIONS			
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>0910</i>	Received By/Stored In <i>EAS LOCKED STORAGE</i>	Date/Time <i>0900</i>	<p>Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on <i>8/16/09</i></p>				Matrix *
Relinquished By/Removed From <i>EAS LOCKED STORAGE</i>	Date/Time <i>8/13/09</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>8/13/09</i>					
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>8/13/09 1000</i>	Received By/Stored In <i>FDX</i>	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					
LABORATORY SECTION	Received By	Title		Date/Time				
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time				

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-709	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>91</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 10 CARCASS		SAF No. RC-118		<i>MS 8309</i>		
Ice Chest No. <i>GLAS 028</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A		Bill of Lading # <b>FD 796859726969</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J19326 <i>2981-132</i>	OTHER SOLID	<i>8/16/09</i>	<i>1030</i>	X	X		
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>8/16/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>8/16/09</i>	<b>EAS LOCKED STORAGE 2</b>  <b>SHANNAN JOHNSON</b>  Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on <i>8/15/09</i>		S=Soil SE=Sediment SO=Solid SP=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 <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>8/15/09</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>8/15/09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>8/15/09 1000</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>8/15/09</i>				
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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-718	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>OK</i> <i>N</i> <i>105609</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 11 FILLET		SAF No. RC-118				
Ice Chest No. <i>GLWS 028</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading/Air Bill No. <b>FD 796859726969</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
<i>J193L2 2981-133</i>	<i>OTHER SOLID</i>	<i>8/16/09</i>	<i>1420</i>	<i>X</i>	<i>X</i>		
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>8/16/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>8/16/09</i>	<b>EAS LOCKED STORAGE</b>  <b>SHANNAN JOHNSON</b>  Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on <i>8/13/09</i>		S=Soil SE=Sludge SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Trash W1=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From <b>EAS LOCKED STORAGE</b>	Date/Time <i>8/16/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>8/16/09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>8/13/09 1000</i>	Received By/Stored In <i>[Signature]</i>	Date/Time <i>8/13/09 1000</i>				
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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-719		Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> Data Turnaround <i>45 Days</i>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON II CARCASS				SAF No. RC-118		<i>NO 8/09</i>		
Ice Chest No. <i>GLWS 028</i>		Field Logbook No. EL-1638		COA BESRCR6520		Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Invoice No. <b>PDX # 796859726969</b>						
POSSIBLE SAMPLE HAZARDS/REMARKS N/A					Preservation	Cool 4C	Freeze			
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"					Type of Container	P/G	G/P			
					No. of Container(s)	0	1			
					Volume	15mL	60mL			
					SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time							
J193L3 <i>2781.134</i>	OTHER SOLID	<i>8/16/09</i>	<i>1430</i>	X	X					
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>8/16/09</i>		Sign/Print Names <i>Wendy West</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>8/16/09</i>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SI=Silt/clay</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Timber</li> <li>W1=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>8/15/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>8/15/09</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>8/15/09 1000</i>		Received By/Stored In <i>EDV</i>		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Dr. K. H. ...</i>		Date/Time <i>08/14/09 1300</i>				
Relinquished By/Removed From		Date/Time		Received By/Stored In		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		

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-728		Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>1/19/09</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 12 FILLET		SAF No. RC-118		Data Turnaround <b>45 Days</b>			
Ice Chest No. <i>GLWS 028</i>		Field Logbook No. EL-1638		COA BESRCRC6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading # <b>FDX 796859726969</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation		Cool 4C	Freeze				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container		P/G	G/P				
		No. of Container(s)		0	1				
		Volume		15mL	60mL				
		SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J193M2 2281-135</i>	<i>OTHER SOLID</i>	<i>8/10/09</i>	<i>1130</i>	<i>X</i>	<i>X</i>				
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS			
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>8/10/09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>8/10/09</i>		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>	
Relinquished By/Removed From <i>EAS LOCKED STORAGE</i>		Date/Time <i>8/13/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>8/13/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>8/13/09</i>		Received By/Stored In <i>FDX</i>		Date/Time <i>8/13/09</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>[Signature]</i>		Date/Time <i>8/14/09 1300</i>			
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 *	
LABORATORY SECTION		Received By				Title			
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By			
						Date/Time			
						Date/Time			



Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-738	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <b>9K</b>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 13 FILLET		SAF No. RC-118	<i>11/26/09</i>		
Ice Chest No. <i>GWS 028</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading/ <b>FDX# 796859726969</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J193N4 <i>2281-137</i>	OTHER SOLID	<i>8/11/09</i>	<i>0900</i>	X	X		
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>8/11/09 0900</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>8/11/09</i>	EAS LOCKED STORAGE 2		Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment in lab.	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>8/13/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>8/13/09 0000</i>	FDX			
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>8/13/09 1000</i>	Received By/Stored In <i>[Signature]</i>	Date/Time <i>08/11/09 1330</i>				
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			Matrix *	
LABORATORY SECTION		Received By	Title		Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method	Disposed By		Date/Time		



LOG-IN CHECKLIST

Reference SOP# MSL-A-001

Central File #: 2981 Sample No(s): 113-122 Project Manager: Brandenberger

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

Matrix: \_\_\_\_\_ WP# \_\_\_\_\_

Yes No

Navy-type Project (requires high-level sample tracking procedures)

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: \_\_\_\_\_

Date To Archive: \_\_\_\_\_ Date To Dispose: \_\_\_\_\_

**TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN**

Yes No N/A Indicate in Appropriate Box

Was a custody seal present?

Was the custody seal intact? Each sample has a custody seal that was intact. jmk 8/6/09

Was cooler(s) temperature(s) within acceptable range of  $4 \pm 2^\circ\text{C}$  or frozen? 2.1  $^\circ\text{C}$   
(if multiple coolers, note temp. of each) \_\_\_\_\_  $^\circ\text{C}$

Was 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: Teflon Poly Glass Cap. Vial  Other: Plastic jars

Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 08/06/09 1430

**SAMPLE PRESERVATION**

Sample(s) were preserved at MSL

Sample(s) were preserved prior to arrival at MSL (noted on CaC / 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)

If preservation necessary, record Acid Lot#

Type:  0.2% HNO3 Notes: \_\_\_\_\_

0.5% HCl (Hg samples) Notes: \_\_\_\_\_

Refrigerate/Freeze Notes: \_\_\_\_\_

Other Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 08/06/09 1430

Storage Shelf: \_\_\_\_\_

# SAMPLE LOGIN

Project Manager: Brandenberger

Date Received: 8/20/2009

Batch: 12

Login Designee: Csuslick

Project: **Washington Closure Hanford**



Manne Sciences Laboratory  
1528 West Sequim Bay Road  
Sequim, Washington 98382  
PH: (360) 681-4565

Sponsor ID	Site Description	Battelle Code	Matrix	Storage Location	Requested Parameters	Collection Date
J19446	-	2981-139	TISS	Deep Freezer, Walkin	Total Inorganic As, Hexachrome	12-Aug-09
J19447	-	2981-140	TISS	Deep Freezer, Walkin	Total Inorganic As, Hexachrome	17-Aug-09
J19456	-	2981-141	TISS	Deep Freezer, Walkin	Total Inorganic As, Hexachrome	17-Aug-09
J19457	-	2981-142	TISS	Deep Freezer, Walkin	Total Inorganic As, Hexachrome	17-Aug-09
J19466	-	2981-143	TISS	Deep Freezer, Walkin	Total Inorganic As, Hexachrome	17-Aug-09
J19467	-	2981-144	TISS	Deep Freezer, Walkin	Total Inorganic As, Hexachrome	17-Aug-09

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-748		Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>4081009</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 14 FILLET		SAF No. RC-118		Data Turnaround <b>45 Days</b>			
Ice Chest No. <i>WCH-08-062</i>		Field Logbook No. EL-1638		COA BESRC6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Air Bill No. <b>FDX# 797863010890</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation		Cool 4C	Freeze				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container		P/G	G/P				
		No. of Container(s)		0	1				
		Volume		15mL	60mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic		Chromium Hex in Solids - 1636M					
Sample No.	Matrix *	Sample Date	Sample Time						
J19446 <i>2981-139</i>	<i>OTHER SOLID</i>	<i>8/12/09</i>	<i>0930</i>	<i>X</i>	<i>X</i>				
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>8/12/09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>8/12/09</i>		<p>Matrix *</p> <p>S=Soil SE=Seiment SO=Solid SL=Sledge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W=Wipe L=Liquid V=Vegetation X=Other</p> <p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody</p>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>8/19/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>8/19/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>8/19/09</i>		Received By/Stored In <i>FDX</i>		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shannan Battelle MSL</i>		Date/Time <i>8/20/09 1450</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		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			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-749	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 14 CARCASS	SAF No. RC-118	<i>AD 8/10/09</i>				
Ice Chest No. <i>WCH-08-042</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading # <b>FDX 797863010890</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation	Cool 4C	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container	P/G	G/P			
		No. of Container(s)	0	1			
		Volume	15mL	60mL			
SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time				
J19447	<i>2981-140</i>	<i>8/17/09</i>	<i>1010</i>	<i>X</i>	<i>X</i>		
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>8/17/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>8/17/09</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>			<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Settlement</li> <li>SO=Solid</li> <li>Sl=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
<b>EAS LOCKED STORAGE</b>		<b>EAS LOCKED STORAGE</b>					
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>8/19/09</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>8/19/09</i>				
<b>SHANNAN JOHNSON</b>		<b>FDX</b>					
Relinquished By/Removed From	Date/Time	Received By/Stored In <i>Joan Kessner MSL</i>	Date/Time <i>8/20/09 1450</i>				
Relinquished By/Removed From	Date/Time	Received By/Stored In	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			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-758		Page 1 of 1			
Collector <i>Mason Fidino</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>915</i> <i>N</i> <i>1/18/09</i>			
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 15 FILLET		SAF No. RC-118		Data Turnaround <b>45 Days</b>					
Ice Chest No. <i>WCH-08-062</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX					
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Air Bill No. <b>FDX 797863010890</b>							
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation		Cool 4C		Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container		P/G		G/P			
				No. of Container(s)		0		1			
				Volume		15mL		60mL			
SAMPLE ANALYSIS				Total Inorganic Arsenic		Chromium Hex in Solids - 1636M					
Sample No.		Matrix *	Sample Date	Sample Time							
<i>J19456 2981-141</i>		<i>OTHER SOLID</i>	<i>8-17-09</i>	<i>1145</i>	<i>X</i>	<i>X</i>					
CHAIN OF POSSESSION											
Relinquished By/Removed From			Date/Time			Sign/Print Names			SPECIAL INSTRUCTIONS		
<i>Mason Fidino</i>			<i>8-17-09 1145</i>			<i>Shannon Johnson</i>			<p>Matrix *</p> <p>S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Dry Solid DL=Dry Liquid T=Tissue W=Wipe L=Liquid V=Vegetation X=Other</p> <p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>		
<i>EAS LOCKED STORAGE 2</i>			<i>8/19/09 1245</i>			<i>SHANNAN JOHNSON</i>					
<i>SHANNAN JOHNSON</i>			<i>8/19/09 1245</i>			<i>FDX</i>					
LABORATORY SECTION		Received By		Title				Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By				Date/Time			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-759	Page 1 of 1		
Collector <i>Mason Fidino</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>95</i> <i>N</i> <i>MD 81009</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 15 CARCASS			SAF No. RC-118				
Ice Chest No. <i>WCH-08-062</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A			Bill of Lading/Air Bill No. <b>FDX 797863010890</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P			
				No. of Container(s)	0	1			
				Volume	15mL	60mL			
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids 1636M				
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J19457 2981-142</i>	<i>OTHER SOLID</i>	<i>8-17-09</i>	<i>1200</i>	<i>X</i>	<i>X</i>				
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS			
Relinquished By/Removed From <i>Mason Fidino</i>		Date/Time <i>8-17-09 1200</i>		Received By/Stored In <i>EA LOCKED STORAGE</i>		Date/Time <i>8-17-09 1200</i>		Matrix * S=Soil SE=Sediment SO=Solid Sl=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W1=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From <i>EA LOCKED STORAGE</i>		Date/Time <i>2 SJ 8/19/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>8/19/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>8/19/09</i>		Received By/Stored In <i>FDX</i>		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Joan Kessner</i>		Date/Time <i>8/20/09 1450</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		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			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-768	Page 1 of 1													
Collector M. F. dino		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <b>9K</b> N 4041009	Data Turnaround <b>45 Days</b>												
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 16 FILLET			SAF No. RC-118															
Ice Chest No. WCH-08-062		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. <b>FDX # 797863010090</b>															
POSSIBLE SAMPLE HAZARDS/REMARKS N/A					Preservation	Cool 4C	Freeze													
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"					Type of Container	P/G	G/P													
					No. of Container(s)	0	1													
					Volume	15mL	60mL													
SAMPLE ANALYSIS					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M														
Sample No.	Matrix *	Sample Date	Sample Time																	
J19466	2981-143	OTHER SOLID	8-17-09	1435	X	X														
CHAIN OF POSSESSION					Sign/Print Names			SPECIAL INSTRUCTIONS					Matrix *							
Relinquished By/Removed From M. F. dino		Date/Time 8-17-09 1435		Received By/Stored In EAS LOCKED STORAGE		Date/Time 8-17-09 1435		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>					<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SI=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>W=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>							
Relinquished By/Removed From EAS LOCKED STORAGE		Date/Time 1245 2/10/09		Received By/Stored In SHANNAN JOHNSON		Date/Time 1245 2/10/09														
Relinquished By/Removed From SHANNAN JOHNSON		Date/Time 1245 8/16/09		Received By/Stored In FDX		Date/Time														
Relinquished By/Removed From		Date/Time		Received By/Stored In Joan KESSNER MSL		Date/Time 8/21/09 1450														
Relinquished By/Removed From		Date/Time		Received By/Stored In		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													

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-769	Page 1 of 1
Collector M.F.d:nd		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 16 CARCASS		SAF No. RC-118		Price Code 9K N 11881009	
Ice Chest No. WCH-08-0162		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX	
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Air Bill of Lading FDX # 797863010890			
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J19467	298144	OTHER SOLID	8-17-09	1500	X	X	
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From M.F.d:nd		Date/Time 8-17-09 1500		Received By/Stored In EAS LOCKED STORAGE		Date/Time 8-17-09 1500	
Relinquished By/Removed From EAS LOCKED STORAGE		Date/Time 8/19/09 1245		Received By/Stored In SHANNAN JOHNSON		Date/Time 8/19/09	
Relinquished By/Removed From SHANNAN JOHNSON		Date/Time 8/19/09		Received By/Stored In FDX		Date/Time	
Relinquished By/Removed From		Date/Time		Received By/Stored In Battelle MSL		Date/Time 8/20/09 1450	
Relinquished By/Removed From		Date/Time		Received By/Stored In		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	

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LOG-IN CHECKLIST

Reference SOP# MSL-A-001

Central File #: 2981

Sample No(s): 139-144

Project Manager: JB

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

Matrix: \_\_\_\_\_ WP# \_\_\_\_\_

Yes No

Navy-type Project (requires high-level sample tracking procedures)

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: \_\_\_\_\_

Date To Archive: \_\_\_\_\_ Date To Dispose: \_\_\_\_\_

**TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN**

Yes No N/A Indicate in Appropriate Box

Was a custody seal present? *each jar had intact custody seal*

Was the custody seal intact? *1 ice intact*

Was cooler(s) temperature(s) within acceptable range of 4±2°C or frozen? 1.2 °C

(if multiple coolers, note temp. of each)

Was 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:  Teflon  Poly  Glass  Cop. Vial  Other: \_\_\_\_\_

Notes: temp on - should be frozen

Completed By: [Signature] Date/Time: 8/20/09 1450

**SAMPLE PRESERVATION**

Sample(s) were preserved at MSL freeze

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)

If preservation necessary, record Acid Lot#

Type:  0.2% HNO3 Notes: \_\_\_\_\_

0.5% HCl (Hg samples) Notes: \_\_\_\_\_

Refrigerate/Freeze Notes: delivered to KIC for splitting; better freezing

Other Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 8/20/09 1500

Storage Shelf: deep freezer / walkin

# SAMPLE LOGIN

Project Manager: Brandenberger  
Date Received: 9/11/2009  
Batch: 15  
Login Designee: Mcgahan

Project: **Washington Closure Hanford**



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

Sponsor ID	Site Description	Battelle Code	Matrix	Storage Location	Requested Parameters	Collection Date
J195T9	na	2981-185	other solid	Deep Freezer B-1	MeHg	09/03/09
J19476	na	2981-186	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J195V0	na	2981-187	other solid	Deep Freezer B-1	MeHg	09/03/09
J19477	na	2981-188	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J19487	na	2981-189	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J195V2	na	2981-190	other solid	Deep Freezer B-1	MeHg	09/03/09
J19486	na	2981-191	other solid	Deep Freezer B-1	TIA,HCr	09/03/09
J195V1	na	2981-192	other solid	Deep Freezer B-1	MeHg	09/03/09
J19497	na	2981-193	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J195V4	na	2981-194	other solid	Deep Freezer B-1	MeHg	09/08/09
J195V3	na	2981-195	other solid	Deep Freezer B-1	MeHg	09/08/09
J19496	na	2981-196	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J195V5	na	2981-197	other solid	Deep Freezer B-1	MeHg	09/08/09
J194B7	na	2981-198	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J195V6	na	2981-199	other solid	Deep Freezer B-1	MeHg	09/08/09
J194B8	na	2981-200	other solid	Deep Freezer B-1	TIA,HCr	09/08/09
J194C8	na	2981-201	other solid	Deep Freezer B-1	TIA,HCr	09/09/09
J194C9	na	2981-202	other solid	Deep Freezer B-1	TIA,HCr	09/09/09

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-850	Page 1 of 1
Collector M.F.dino	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code 9K	Data Turnaround 45 Days	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 17 FILLET		SAF No. RC-118	11/8/09		
Ice Chest No. WCH-DB-004	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading/ <b>FDX# 7979224885 U4</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation Freeze	Type of Container P	No. of Container(s) 1	Volume 60mL		
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"							
SAMPLE ANALYSIS		Methyl Mercury by EPA 1630M, Mercury - 7473					
Sample No.	Matrix *	Sample Date	Sample Time				
J195T9 2981.185	OTHER SOLID	9/3/09	1045	X			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From M.F.dino	Date/Time 9/3/09 1045	Received By/Stored In EAS LOCKED STORAGE 2	Date/Time 9/3/09 1045	SPECIAL INSTRUCTIONS 01 samples for shipment to lab. Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody			S=Soil SE=Seawater SO=Solid SH=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W1=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From EAS LOCKED STORAGE 2	Date/Time 9/10/09	Received By/Stored In SHANNAN JOHNSON	Date/Time 9/10/09				
Relinquished By/Removed From SHANNAN JOHNSON	Date/Time 9/10/09	Received By/Stored In FDX	Date/Time 9/10/09				
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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-778	Page 1 of 1
Collector <b>M.F. Dino</b>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <b>9K</b>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 17 FILLET	SAF No. RC-118	AB 8/10/09				
Ice Chest No. <b>WCH-DB-001-4</b>	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. <b>FDX # 797922488504</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation	Cool 4C	Freeze			
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G	G/P			
		No. of Container(s)	0	1			
		Volume	15mL	60mL			
SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time				
J19476 2981-186	OTHER SOLID	9/3/09	1045	X	X		
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <b>M.F. Dino</b>	Date/Time 9/3/09 1045	Received By/Stored In <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/3/09 1045	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Seaweed</li> <li>SO=Solid</li> <li>SI=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/10/09	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09	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				
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-118-851	Page 1 of 1
Collector <i>M. F. d'ino</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>215</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 17 CARCASS		SAF No. RC-118	<i>483105</i>		
Ice Chest No. <i>WCH-08-001-4</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading/Air Bill <b>FDX 797922488504</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	Freeze		
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"				Type of Container	P		
				No. of Container(s)	1		
				Volume	60mL		
SAMPLE ANALYSIS					Methyl Mercury by EPA 1630M; Mercury - 7473		
Sample No.	Matrix *	Sample Date	Sample Time				
J195V0 <i>2981.187</i>	OTHER SOLID	<i>9/3/07</i>	<i>1100</i>	<i>X</i>			
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS	
Relinquished By/Removed From <i>M. F. d'ino</i>	Date/Time <i>9/3/07 1100</i>	Received By/Stored In <i>EAS LOCKED STORAGE</i>	Date/Time <i>9/3/07 1100</i>				
Relinquished By/Removed From <i>EAS LOCKED STORAGE</i>	Date/Time <i>9/10/07 1100</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>9/10/07 1100</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>9/10/07 1600</i>	Received By/Stored In <i>FDX</i>	Date/Time <i>9/10/07 1458</i>				
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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-779	Page 1 of 1	
Collector <b>M. Fedino</b>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <b>9K</b>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 17 CARCASS		SAF No. RC-118	N/A 8/109				
Ice Chest No. <b>WCH-08-001-4</b>	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. <b>FED 797922488504</b>						
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation	Cool 4C	Freeze				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G	G/P				
		No. of Container(s)	0	1				
		Volume	15mL	60mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M					
Sample No.	Matrix *	Sample Date	Sample Time					
J19477 2981-188	OTHER SOLID	9/3/09	1100	X	X			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS				
Relinquished By/Removed From <b>M. Fedino</b>	Date/Time 9/3/09 1100	Received By/Stored In <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/3/09 1100	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>				Matrix *
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/10/09	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09					S-Soil
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time 9/10/09	Received By/Stored In <b>EDY</b>	Date/Time 9/10/09					SE-Sediment
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					SO-Solid
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					SI-Sludge
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					W - Water
LABORATORY SECTION	Received By	Title		Date/Time				O-Oil
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time				A-Air

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-789		Page 1 of 1				
Collector <i>M. Fidino</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>AND 8109</i>				
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 18 CARCASS				SAF No. RC-118		Data Turnaround <b>45 Days</b>				
Ice Chest No. <i>WCH-DB-001-4</i>		Field Logbook No. EL-1638		COA BESRC6520		Method of Shipment FED EX						
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Air Bill No. <b>FDX# 797922488504</b>								
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Cool 4C	Freeze					
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	G/P					
					No. of Container(s)	0	1					
					Volume	15mL	60mL					
SAMPLE ANALYSIS					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M						
Sample No.	Matrix *	Sample Date	Sample Time									
<i>J19487 2981-189</i>	<i>OTHER SOLID</i>	<i>9/13/09</i>	<i>1430</i>	<i>X</i>	<i>X</i>							
CHAIN OF POSSESSION												
Relinquished By/Removed From <i>M. Fidino</i>					Sign/Print Names <i>EAS LOCKED STORAGE</i>							
Date/Time <i>9/13/09 1430</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>			Date/Time <i>9/13/09</i>		SPECIAL INSTRUCTIONS					
Relinquished By/Removed From <i>EAS LOCKED STORAGE</i>					Received By/Stored In <i>SHANNAN JOHNSON</i>							
Date/Time <i>9/16/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>			Date/Time <i>9/16/09</i>		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>					
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>					Received By/Stored In <i>SHANNAN JOHNSON</i>							
Date/Time <i>9/16/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>			Date/Time <i>9/16/09</i>					Matrix *		
Relinquished By/Removed From					Received By/Stored In							
Date/Time		Received By/Stored In			Date/Time		S=Soil					
Relinquished By/Removed From					Received By/Stored In					SE=Sediment		
Date/Time		Received By/Stored In			Date/Time		SO=Solid					
Relinquished By/Removed From					Received By/Stored In					SI=Sludge		
Date/Time		Received By/Stored In			Date/Time		W=Water					
Relinquished By/Removed From					Received By/Stored In					O=Oil		
Date/Time		Received By/Stored In			Date/Time		A=Air					
Relinquished By/Removed From					Received By/Stored In					DS=Drum Solids		
Date/Time		Received By/Stored In			Date/Time		DL=Drum Liquids					
Relinquished By/Removed From					Received By/Stored In					T=Tissue		
Date/Time		Received By/Stored In			Date/Time		W1=Wipe					
Relinquished By/Removed From					Received By/Stored In					L=Liquid		
Date/Time		Received By/Stored In			Date/Time		V=Vegetation					
Relinquished By/Removed From					Received By/Stored In					X=Other		
LABORATORY SECTION	Received By				Title				Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method				Disposed By				Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-853	Page 1 of 1
Collector M. F. Dindo	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code 9K	Data Turnaround 45 Days	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 18 CARCASS		SAF No. RC-118	4/83/09		
Ice Chest No. WCH-08-001-4	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading # FD: 797922488504				
POSSIBLE SAMPLE HAZARDS/REMARKS N/A							
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"							
SAMPLE ANALYSIS							
Sample No.	Matrix *	Sample Date	Sample Time	Freeze			
J195V2 2981.190	OTHER SOLID	9/3/09	1430	X			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From M. F. Dindo 9/3/09 1430	Date/Time	Received By/Stored In EAS LOCKED STORAGE 9/3/09	Date/Time	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=Seaweed SO=Solid SI=Sludge W=Water O=Oil A=Air DS=Dredge Solids DL=Drum Leachate T=Tissue WI=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From EAS LOCKED STORAGE 9/10/09	Date/Time	Received By/Stored In SHANNAN JOHNSON 9/10/09	Date/Time				
Relinquished By/Removed From SHANNAN JOHNSON 9/11/09	Date/Time	Received By/Stored In [Signature] 9/11/09	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				
LABORATORY SECTION	Received By	Title			Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By			Date/Time		

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-788		Page 1 of 1	
Collector <b>M. F. idino</b>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <b>9K</b> <i>N</i> <i>MS 8/19/09</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 18 FILLET		SAF No. RC-118		Data Turnaround <b>45 Days</b>			
Ice Chest No. <b>WCH-03-001-4</b>		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. <b>FDX#797922488504</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation		Cool 4C	Freeze				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container		P/G	G/P				
		No. of Container(s)		0	1				
		Volume		15mL	60mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic		Chromium Hex in Solids - 1636M					
Sample No.	Matrix *	Sample Date	Sample Time						
J19486	2981.191	9/3/09	1415	X	X				
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS			
Relinquished By/Removed From <b>M. F. idino</b>		Date/Time 9/3/09 1415		Received By/Stored In <b>EAS LOCKED STORAGE 2</b>		Date/Time 9/3/09		Matrix * S=Soil SE=Sediment SO=Solid SI=Sludge W=Water O=Oil A=Air DS=Drain Solids DI=Drum Liquids T=Tissue W=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time 9/10/09		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time 9/10/09			
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time 9/10/09		Received By/Stored In <b>FDX</b>		Date/Time 9/10/09			
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		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	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-852	Page 1 of 1
Collector M. F. dino		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code 9K 11/21/09
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 18 FILLET		SAF No. RC-118		Data Turnaround 45 Days	
Ice Chest No. WCH-08-001-4		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX	
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Air Bill No. FDV 797922488504			
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation		Freeze			
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container		P			
		No. of Container(s)		1			
		Volume		60mL			
SAMPLE ANALYSIS				Methyl Mercury by EPA 1630M, Mercury - 7473			
Sample No.	Matrix *	Sample Date	Sample Time				
J195V1 2981.192	OTHER SOLID	9/3/09	1415	X			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From M. F. dino	Date/Time 9/3/09 1415	Received By/Stored In EAS LOCKED STORAGE	Date/Time 9/3/09 1415	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=Sequestrant SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Dry Solids DL=Dry Liquids T=Tissue W=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From EAS LOCKED STORAGE	Date/Time 9/10/09	Received By/Stored In SHANNAN JOHNSON	Date/Time 9/10/09				
Relinquished By/Removed From SHANNAN JOHNSON	Date/Time 9/10/09	Received By/Stored In FDV	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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-799		Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>81109</i>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 19 CARCASS		SAF No. RC-118		Data Turnaround <b>45 Days</b>				
Ice Chest No. <i>WCH-08-001-4</i>		Field Logbook No. EL-1638		COA BESRCR6520		Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Air Bill No. <b>FD 797922488504</b>						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Cool #C	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	G/P			
					No. of Container(s)	0	1			
					Volume	15mL	60mL			
SAMPLE ANALYSIS					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time							
<i>J19497</i>	<i>2981-193</i>	<i>9-8-09</i>	<i>1340</i>	<i>X</i>	<i>X</i>					
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1340</i>		Received By/Stored In <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>1340</i>		Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Sludge</li> <li>SI=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Timber</li> <li>Wl=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9/10/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>10/1/09</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/10/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>10/1/09</i>				
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				
LABORATORY SECTION	Received By			Title			Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time			

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-854	Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 19 FILLET			SAF No. RC-118		<i>AD 83109</i>		
Ice Chest No. <i>WCH-DB-001-9</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A			BIN # <i>FDX 797922488504</i>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Freeze				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P				
				No. of Container(s)	1				
				Volume	60mL				
SAMPLE ANALYSIS				Methyl Mercury by EPA 1630M; Mercury - 7473					
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J195V3 2981.195</i>	<i>OTHER SOLID</i>	<i>9.8.09</i>	<i>1230</i>	<i>X</i>					
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9.8.09 1230</i>		Received By/Stored In <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9.8.09 1230</i>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Solid</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Dry Solids</li> <li>DL=Dry Liquids</li> <li>T=Tissue</li> <li>W=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9/10/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/10/09</i>			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/10/09</i>		Received By/Stored In <i>FDX</i>		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		<p><i>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</i></p>	
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			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-798		Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>1/1 81109</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 19 FILLET			SAF No. RC-118		Data Turnaround <b>45 Days</b>		
Ice Chest No. <i>WCH-08-001-4</i>		Field Logbook No. EL-1638		COA BESRC6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A			Bill of Lading/Carrier Bill No. <b>FDX#797922488504</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation		Cool 4C	Freeze		
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"				Type of Container		P/G	G/P		
				No. of Container(s)		0	1		
				Volume		15mL	60mL		
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time						
J19496 2981.196	OTHER SOLID	9.8.09	1230	X	X				
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time 1230 9.8.09		Received By/Stored In <i>Wendy West</i>		Date/Time 1230 9.8.09		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p> <ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SC=Sludge</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>Wl=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
Relinquished By/Removed From EAS LOCKED STORAGE 2		Date/Time 9/10/09 160		Received By/Stored In SHANNAN JOHNSON		Date/Time 9/10/09 160			
Relinquished By/Removed From SHANNAN JOHNSON		Date/Time 9/10/09		Received By/Stored In <i>[Signature]</i>		Date/Time 09/11/09 1450			
Relinquished By/Removed From		Date/Time		Received By/Stored In		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

Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 20 FILLET	SAF No. RC-118	<i>11/23/09</i>		
Ice Chest No. <i>WCH-08-001-4</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX		

Shipped To  
Battelle Marine Sciences

Offsite Property No.  
N/A

Bill of Lading # **FDX#797922488504**

POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>  Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>	Preservation	Freeze																		
	Type of Container	P																		
	No. of Container(s)	1																		
	Volume	60mL																		

SAMPLE ANALYSIS		Methyl Mercury by EPA 1630M; Mercury - 7473																		
-----------------	--	---------------------------------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Sample No.	Matrix *	Sample Date	Sample Time																	
J195V5 2981-197	OTHER SOLID	9.8.09	1545	X																

CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS										Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1545</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1545</i>	<b>EAS LOCKED STORAGE</b> 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=Seawater 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
<b>EAS LOCKED STORAGE</b>	<i>9.8.09</i>	<b>EAS LOCKED STORAGE</b>	<i>9.8.09</i>											
<b>SHANNAN JOHNSON</b>	<i>9/12/09</i>	<b>SHANNAN JOHNSON</b>	<i>9/12/09</i>											
<b>SHANNAN JOHNSON</b>	<i>9/12/09</i>	<b>SHANNAN JOHNSON</b>	<i>9/12/09</i>											
<b>SHANNAN JOHNSON</b>	<i>9/12/09</i>	<b>SHANNAN JOHNSON</b>	<i>9/12/09</i>											

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

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-808		Page 1 of 1			
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>MA 8/10/09</i>			
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 20 FILLET				SAF No. RC-118		Data Turnaround <b>45 Days</b>			
Ice Chest No. <i>WCH-08-001-4</i>		Field Logbook No. EL-1638		COA BESRC6520		Method of Shipment FED EX					
Shipped To Battelle Marine Sciences		Offsite Property No. N/A				Bill of Lading # <b>FDX# 797922488504</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation		Cool 4C	Freeze						
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container		P/G	G/P						
		No. of Container(s)		0	1						
		Volume		15mL	60mL						
SAMPLE ANALYSIS		Total Inorganic Arsenic		Chromium Hex in Solids - 1636M							
Sample No.	Matrix *	Sample Date	Sample Time								
J194B7 2981.198	OTHER SOLID	9.8.09	1545	X	X						
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS					
Relinquished By/Removed From <i>Wendy West</i>		Date/Time 9.8.09		Received By/Stored In <i>Wendy West</i>		Date/Time 1545		<p><b>EAS LOCKED STORAGE 2 9.8.09</b></p> <p><b>SHANNAN JOHNSON</b></p> <p><b>FDX</b></p> <p><i>Shannon Johnson</i> 9/11/09 1450</p> <p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>		<p>Matrix *</p> <p>S=Soil</p> <p>SE=Sediment</p> <p>SO=Soil</p> <p>Sl=Sludge</p> <p>W=Water</p> <p>Oil=Oil</p> <p>A=Air</p> <p>DS=Dredge Solids</p> <p>DL=Dredge Liquids</p> <p>T=Tissue</p> <p>W/W=Wipe</p> <p>L=Liquid</p> <p>V=Vegetation</p> <p>X=Other</p>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time 9/10/09		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time 1800					
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time 9/11/09		Received By/Stored In <b>FDX</b>		Date/Time 1000					
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					
LABORATORY SECTION		Received By				Title				Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-857	Page 1 of 1
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 20 CARCASS			SAF No. RC-118	<i>11/9/09</i>	
Ice Chest No. <i>WCH-08-001-4</i>		Field Logbook No. EL-1638	COA BESRC6520		Method of Shipment FED EX		
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading # <b>97922488504</b>			
POSSIBLE SAMPLE HAZARDS/REMARKS N/A							
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"				Preservation	Freeze		
				Type of Container	P		
				No. of Container(s)	1		
				Volume	60mL		
SAMPLE ANALYSIS					Methyl Mercury by EPA 1631M; Mercury - 1473		
Sample No.	Matrix *	Sample Date	Sample Time				
J195V6 2981.199	OTHER SOLID	9.8.09	1600	X			
CHAIN OF POSSESSION							
Relinquished By/Removed From		Date/Time		Sign/Print Names		SPECIAL INSTRUCTIONS	
<i>Wendy West</i>		1600		<i>EAS Lock Storage</i>		Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment in lab	
<i>Wendy West</i>		9.8.09		<i>Wendy West</i>			
<i>EAS LOCK STORAGE</i>		9/10/09		<i>SHANNAN JOHNSON</i>			
<i>SHANNAN JOHNSON</i>		9/10/09		<i>SHANNAN JOHNSON</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time	
				<i>FDX</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time	
				<i>FDX</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		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-118-809		Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>11/15/09</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 20 CARCASS				SAF No. RC-118		Data Turnaround <b>45 Days</b>	
Ice Chest No. <i>WCH-DB-001-4</i>		Field Logbook No. EL-1638		COA BESRC6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A				Bill of Lading # <b>FDX# 797922488504</b>			
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Cool 4C	Freeze		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	G/P		
					No. of Container(s)	0	1		
					Volume	15mL	60mL		
SAMPLE ANALYSIS					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M			
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J194B8 2981-200</i>	<i>OTHER SOLID</i>	<i>9.8.09</i>	<i>1100</i>	<i>X</i>	<i>X</i>				
CHAIN OF POSSESSION									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		SPECIAL INSTRUCTIONS	
<i>Wendy West</i>		<i>9.8.09</i>		<i>Wendy West</i>		<i>1100</i>		<p><b>EAS LOCKED STORAGE 2</b></p> <p><b>SHANNAN JOHNSON</b></p> <p><b>FDX</b></p> <p><i>09/11/09 1450</i></p> <p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab</p>	
<i>EAS LOCKED STORAGE 2</i>		<i>11/10/09</i>		<i>SHANNAN JOHNSON</i>		<i>10/1/09</i>			
<i>SHANNAN JOHNSON</i>		<i>9/10/09</i>		<i>FDX</i>		<i>10/1/09</i>			
LABORATORY SECTION	Received By	Title	Date/Time						
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time						

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Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-818	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 21 FILLET	SAF No. RC-118	Bill of Lading # <i>FDX 797922488504</i>				
Ice Chest No. <i>WCH-08-001-4</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation	Cool 4C	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container	P/G	G/P			
		No. of Container(s)	0	1			
		Volume	15mL	60mL			
SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time				
J194C8 2781-201	OTHER SOLID	9.9.09	1045	X	X		
CHAIN OF POSSESSION		Sign/Print Names			SPECIAL INSTRUCTIONS		
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>10/5</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>10/5</i>	<p>SAMPLER UNAVAILABLE TO REMOVE SAMPLES FROM CONTROLLED STORAGE. SHIPPER REMOVED SAMPLES FROM STORAGE LOCATION TAKING CUSTODY OF SAMPLES FOR SHIPMENT TO LAB.</p>		Matrix * S=Soil SE=Sludge/Sediment SO=Soil SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Timber WJ=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9.9.09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9.9.09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/10/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9/10/09</i>				
Relinquished By/Removed From	Date/Time	Received By/Stored In	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-118-819	Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>9/11/09</i>	Data Turnaround <b>45 Days</b>
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 21 CARCASS				SAF No. RC-118		
Ice Chest No. <i>WCH-08-001-4</i>		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 <b>FDX# 797922488504</b>		
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation	Cool -4C	Freeze				
Special Handling and/or Storage <i>FREEZE *MATRIX COMPOSED OF FISH*</i>		Type of Container	P/G	G/P				
		No. of Container(s)	0	1				
		Volume	15mL	60mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic	Chromium Hex in Solids - 1636M					
Sample No.	Matrix *	Sample Date	Sample Time					
<i>J194C9 2981-202</i>	<i>OTHER SOLID</i>	<i>9.9.09</i>	<i>10:55</i>	<i>X</i>	<i>X</i>			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS				Matrix *
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>				<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Spills</li> <li>DL=Drum Leaks</li> <li>T=Tissue</li> <li>WJ=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
<i>Wendy West</i>	<i>9.9.09 10:55</i>	<i>Wendy West</i>	<i>9.9.09 10:55</i>					
<i>EAS LOCKED STORAGE 2</i>	<i>9/10/09</i>	<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>					
<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>	<i>FDX</i>	<i>9/10/09</i>					
<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>	<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					
<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>	<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					
<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>	<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					
<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>	<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>					
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time					
<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>	<i>SHANNAN JOHNSON</i>	<i>9/10/09</i>					
LABORATORY SECTION	Received By		Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By		Date/Time			

Central File #: 2981

Sample No(s): 185-204

Project Manager: Brandenberger

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

Matrix: \_\_\_\_\_ WP# \_\_\_\_\_

Yes No

Navy-type Project (requires high-level sample tracking procedures)

USDA Soils (or overseas, including Hawaii and the U.S. Virgin Islands) See Compliance Agreement Checklist

Filter Samples: Aluminum Entire sample Half of sample

Freeze dry sample(s) - samples will be weighed and placed in Ultra-low temp freezer (Lab# 503)

Special instructions: \_\_\_\_\_

Sample Preservation Instructions: \_\_\_\_\_

**\*\*See LIMS for archive/disposal information\*\***

**TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN**

Yes No N/A (Initial appropriate box when completed)

Custody seal present

Custody seal intact

Cooler(s) temperature (acceptable ranges = water: 4±2°C / solid: frozen) 3.7 °C  
(if multiple coolers, note temp. of each) \_\_\_\_\_ °C

Project Manager notified of any discrepancies or if temperature outside acceptable range?  
Comments/Remedy: \_\_\_\_\_

All chain of custody forms signed and dated?

Samples Filtered?

Sample condition(s): Acceptable ~~Other (specify)~~

Container type: ~~Other~~ ~~Plastic Jars~~ Plastic Jars

Notes: \_\_\_\_\_

Completed By: [Signature]

Date/Time: 09/11/09 1450

**SAMPLE PRESERVATION**

Sample preserved at MSL

Sample 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)

If preservation necessary, record Acid Lot#

Type:  0.2% HNO3 Notes: \_\_\_\_\_

0.5% HCl (Hg samples) Notes: \_\_\_\_\_

Refrigerate Notes: \_\_\_\_\_

Freeze Notes: Outside freezer - to be transferred to per. vials & put in deep freez

Other Notes: \_\_\_\_\_

Completed By: [Signature]

Date/Time: 09/11/09 1450

# SAMPLE LOGIN

Project Manager: Brandenberger  
 Date Received: 9/18/2009 ✓  
 Batch: 16  
 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
J19503 ✓	na	2981-203 ✓	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M ✓	09/10/09 ✓
J19504 ✓	na	2981-204	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/10/09
J195R1 ✓	na	2981-205	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/10/09
J195R0 ✓	na	2981-206	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/10/09
J195T2 ✓	na	2981-207	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/14/09 ✓
J195T3 ✓	na	2981-208	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/14/09
J195Y0 ✓	na	2981-209	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/15/09 ✓
J195X9 ✓	na	2981-210	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/15/09
J19609 ✓	na	2981-211	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/15/09
J19610 ✓	na	2981-212 ✓	other solid	Deep Freezer D-1	Total Inorganic As, Cr Hex in Solids 1636M	09/15/09 ✓

✓ 9/25/11/18/09

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-828		Page 1 of 1			
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>OK</i> <i>N</i> <i>NO 0269</i>			
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 22 FILLET		SAF No. RC-118		Data Turnaround <b>45 Days</b>					
Ice Chest No. <i>AFS-04-041</i>		Field Logbook No. EL-1638		COA BESRCR6520		Method of Shipment FED EX					
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading # <i>FDX # 797941463127</i>							
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation		Cool °C		Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container		P/G		G/P			
				No. of Container(s)		0		1			
				Volume		15mL		60mL			
SAMPLE ANALYSIS				Total Inorganic Arsenic		Chromium Hex in Solids - 1636M					
Sample No.		Matrix *	Sample Date	Sample Time							
<i>J19503 281-203</i>		<i>OTHER SOLID</i>	<i>9/10/09</i>	<i>1100</i>	<i>X</i>	<i>X</i>					
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS				Matrix *			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		<p><i>EAS LOCKED STORAGE 2</i></p> <p><i>SHANNAN JOHNSON</i></p> <p><i>FDX</i></p> <p><i>09/15/09 1230</i></p> <p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to let.</p>			
<i>Wendy West</i>		<i>1100</i>		<i>Wendy West</i>		<i>1100</i>					
<i>EAS LOCKED STORAGE 2</i>		<i>9/17/09</i>		<i>SHANNAN JOHNSON</i>		<i>9/17/09</i>					
<i>SHANNAN JOHNSON</i>		<i>9/17/09</i>		<i>FDX</i>							
LABORATORY SECTION		Received By		Title		Date/Time					
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time					

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-829		Page 1 of 1					
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>OK</i> <i>N</i> <i>4/20/09</i>		Data Turnaround <b>45 Days</b>			
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 22 CARCASS				SAF No. RC-118							
Ice Chest No. <i>AFS-04-041</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX							
Shipped To Battelle Marine Sciences		Offsite Property No. N/A				Bill of Lading # <i>FDX# 97941463127</i>							
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Cool +C	Freeze						
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	G/P						
					No. of Container(s)	0	1						
					Volume	15mL	60mL						
SAMPLE ANALYSIS					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M							
Sample No.	Matrix *	Sample Date	Sample Time										
J19504 <i>2981-204</i>	OTHER SOLID	<i>9/10/09</i>	<i>1130</i>	<i>X</i>	<i>X</i>								
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS					Matrix *			
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9/10/09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>9/10/09</i>		<p><b>EAS LOCKED STORAGE 2</b></p> <p><b>SHANNAN JOHNSON</b></p> <p><b>FOX</b></p> <p><i>9/18/09 1230</i></p> <p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>				<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WL=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>9/17/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/17/09</i>							
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <i>9/17/09</i>		Received By/Stored In <i>FOX</i>		Date/Time							
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/18/09 1230</i>							
Relinquished By/Removed From		Date/Time		Received By/Stored In		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			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-839	Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 23 CARCASS			SAF No. RC-118		<i>APR 27 09</i>	
Ice Chest No. <i>APS-04-041</i>		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. <b>FDX# 797941463127</b>			
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P		
				No. of Container(s)	0	1		
				Volume	15mL	60mL		
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M			
Sample No.	Matrix *	Sample Date	Sample Time					
<i>J195R1 2981.205</i>	<i>OTHER SOLID</i>	<i>9/10/09</i>	<i>15/5</i>	<i>X</i>	<i>X</i>			
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9/10/09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>9/10/09</i>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SL=Substrate</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>W1=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>9/17/09</i>		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time <i>9/17/09</i>		
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <i>9/17/09</i>		Received By/Stored In <b>FDX</b>		Date/Time		
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shannon Johnson</i>		Date/Time <i>09/18/09 1230</i>		
Relinquished By/Removed From		Date/Time		Received By/Stored In		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

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-838	Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 23 FILLET		SAF No. RC-118		<i>N</i> <i>11/92709</i>			
Ice Chest No. <i>AFS-04-041</i>		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. <b>FDX# 797941463127</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool +C	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P			
				No. of Container(s)	0	1			
				Volume	15mL	60mL			
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
				Sample No.	Matrix *	Sample Date	Sample Time		
<i>J195R0</i>	<i>2981-206</i>	OTHER SOLID	<i>9/10/09</i>	<i>1500</i>	<i>X</i>	<i>X</i>			
CHAIN OF POSSESSION				Signature/Print Names		SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1500 9/10/09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>1500 9/10/09</i>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SI=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>W=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>9/17/09</i>		Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time <i>950</i>			
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <i>9/17/09</i>		Received By/Stored In <b>FDX</b>		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shannon Johnson</i>		Date/Time <i>09/18/09 1230</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		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		

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-848	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>AKD 23109</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 24 FILLET		SAF No. RC-118			
Ice Chest No. <i>AFS-04-041</i>	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) <b>FDX# 797941463127</b>			
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool +C	Freeze	
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J195T2 <i>2981-207</i>	OTHER SOLID	<i>9-15-09</i> <i>9-15-09</i>	<i>1130</i>	X	X		
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Sign/Print Names <i>Wendy West</i>		Received By/Stored In <i>Wendy West</i>			<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Settlement</li> <li>SO=Solid</li> <li>Sl=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Dream Solids</li> <li>DL=Dream Liquids</li> <li>T=Tissue</li> <li>Wl=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Date/Time <i>1130</i> <i>9-14-09-9:15 AM</i>		Date/Time <i>1130</i> <i>9-15-09-9:45 AM</i>		Date/Time <i>1130</i> <i>9-15-09-9:13 AM</i>			
EAS LOCKED STORAGE 2		EAS LOCKED STORAGE 2		EAS LOCKED STORAGE 2			
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Sign/Print Names <i>SHANNAN JOHNSON</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>			
Date/Time <i>9/17/09</i> <i>9:50</i>		Date/Time <i>9/17/09</i> <i>9:50</i>		Date/Time <i>9/17/09</i> <i>9:50</i>			
Relinquished By/Removed From		Sign/Print Names		Received By/Stored In			
Date/Time		Date/Time		Date/Time			
Relinquished By/Removed From		Sign/Print Names		Received By/Stored In			
Date/Time		Date/Time		Date/Time			
Relinquished By/Removed From		Sign/Print Names		Received By/Stored In			
Date/Time		Date/Time		Date/Time			
LABORATORY SECTION	Received By	Title				Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-849	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <del>9K</del> N MS83109	Data Turnaround 45 Days	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 24 CARCASS		SAF No. RC-118			
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Air Bill No. <b>FDX# 797941463127</b>			
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J195T3 <i>2981-208</i>	OTHER SOLID	<i>9-13-09 9:40A</i>	1200	X	X		
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9-14-09 9:15 AM</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9-14-09 9:15 AM</i>	EAS LOCKED STORAGE 2		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p> <p>Matrix *</p> <ul style="list-style-type: none"> <li>S-Soil</li> <li>SE-Sediment</li> <li>SO-Solid</li> <li>SI-Sludge</li> <li>W-Water</li> <li>O-Oil</li> <li>A-Air</li> <li>DS-Drum Solids</li> <li>DL-Drum Liquids</li> <li>T-Tissue</li> <li>W-Wipe</li> <li>L-Liquid</li> <li>V-Vegetation</li> <li>X-Other</li> </ul>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9-17-09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9-17-09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9-17-09</i>	Received By/Stored In <b>FDX</b>	Date/Time <i>9-17-09</i>				
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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-879		Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>ND8109</i>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 25 CARCASS				SAF No. RC-118		Data Turnaround <b>45 Days</b>		
Ice Chest No. <i>APS-04-04</i>		Field Logbook No. EL-1638		COA BESRCR6520		Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A				Bill of Lading/Air Bill No. <i>FRW 797941463157</i>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Cool 4C	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	G/P			
					No. of Container(s)	0	1			
					Volume	15mL	60mL			
					Total Inorganic Arsenic		Chromium Hex in Solids - 1636M			
SAMPLE ANALYSIS										
Sample No.	Matrix *	Sample Date	Sample Time							
<i>J195Y0</i>	<i>2981 209</i>	<i>OTHER SOLID</i>	<i>9.15.09</i>	<i>1130</i>	<i>X</i>	<i>X</i>				
CHAIN OF POSSESSION					SIGN/PRINT NAMES				SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1130</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>1130</i>		SAMPLER UNAVAILABLE TO REMOVE SAMPLES FROM CONTROLLED STORAGE. SHIPPER REMOVED SAMPLES FROM STORAGE LOCATION TAKING CUSTODY OF SAMPLES FOR SHIPMENT TO LAB.		Matrix *
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9.15.09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9.15.09</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9.17.09</i>		Received By/Stored In <i>FRW</i>		Date/Time <i>9.17.09</i>				
Relinquished By/Removed From <i>FRW</i>		Date/Time <i>9.17.09</i>		Received By/Stored In <i>FRW</i>		Date/Time <i>9.17.09</i>				
Relinquished By/Removed From <i>FRW</i>		Date/Time <i>9.17.09</i>		Received By/Stored In <i>FRW</i>		Date/Time <i>9.17.09</i>				
Relinquished By/Removed From <i>FRW</i>		Date/Time <i>9.17.09</i>		Received By/Stored In <i>FRW</i>		Date/Time <i>9.17.09</i>				
Relinquished By/Removed From <i>FRW</i>		Date/Time <i>9.17.09</i>		Received By/Stored In <i>FRW</i>		Date/Time <i>9.17.09</i>				
Relinquished By/Removed From <i>FRW</i>		Date/Time <i>9.17.09</i>		Received By/Stored In <i>FRW</i>		Date/Time <i>9.17.09</i>				
Relinquished By/Removed From <i>FRW</i>		Date/Time <i>9.17.09</i>		Received By/Stored In <i>FRW</i>		Date/Time <i>9.17.09</i>				
LABORATORY SECTION	Received By	Title	Date/Time							
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time							

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-878		Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>OK</i> <i>N</i> <i>1/29/09</i>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 25 FILLET				SAF No. RC-118		Data Turnaround <b>45 Days</b>		
Ice Chest No. <i>AFS-04-041</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading # <i>FDX# 797941463127</i>						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Cool 4C	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	G/P			
					No. of Container(s)	0	1			
					Volume	15mL	60mL			
SAMPLE ANALYSIS					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
Sample No.	Matrix *	Sample Date	Sample Time							
<i>J195X9</i>	<i>2781-210</i>	<i>OTHER SOLID</i>	<i>9.15.09</i>	<i>1100</i>	<i>X</i>	<i>X</i>				
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS				Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9.15.09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>9.15.09</i>		<p><i>EAS LOCKED STORAGE 2</i></p> <p><i>SHANNAN JOHNSON</i></p> <p><i>SHANNAN JOHNSON</i></p> <p><i>FOY</i></p> <p><i>Shannon Johnson 9/18/09 1230</i></p> <p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Seaweed</li> <li>SO=Solid</li> <li>SI=Sediment</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WJ=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9.15.09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9.15.09</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/17/09</i>		Received By/Stored In <i>FOY</i>		Date/Time <i>9.15.09</i>				
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shannon Johnson</i>		Date/Time <i>9/18/09</i>				
Relinquished By/Removed From		Date/Time		Received By/Stored In		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				

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-888	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 26 FILLET		SAF No. RC-118		<i>MS 9109</i>		
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading # <i>FDX#797941463127</i>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	Freeze
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	P	G/P
				No. of Container(s)	0	1	1
				Volume	15mL	60mL	60mL
SAMPLE ANALYSIS				Total Inorganic Arsenic	Methyl Mercury by EPA 1631M Mercury- 7473	Chromium Hex in Solids - 1636M	
Sample No.	Matrix *	Sample Date	Sample Time				
J19609 <i>2981-211</i>	OTHER SOLID	<i>9/15/09</i>	<i>1410</i>	X	X	X	
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9/15/09 1410</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9/15/09 1410</i>	EAS LOCKED STORAGE 2		Perform Total Inorganic Arsenic out of Chromium Hex bottle.	
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>	Date/Time <i>9/17/09 950</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>9/17/09 950</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>9/17/09 950</i>	Received By/Stored In <i>EDY</i>	Date/Time <i>9/17/09 950</i>				
Relinquished By/Removed From <i>EDY</i>	Date/Time <i>9/18/09 1230</i>	Received By/Stored In <i>EDY</i>	Date/Time <i>9/18/09 1230</i>				
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				
LABORATORY SECTION	Received By	Title				Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-889	Page 1 of 1			
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>NA 9/09</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 26 CARCASS			SAF No. RC-118					
Ice Chest No. <i>AFS-04-041</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A			Bill of Lading/Air Bill No. <b>FDX# 797941463127</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	P	G/P			
				No. of Container(s)	0	1	1			
				Volume	15mL	60mL	60mL			
				SAMPLE ANALYSIS	Total Inorganic Arsenic	Methyl Mercury by EPA 1631M, Mercury - 7473	Chromium Hex in Solids - 1636M			
Sample No.	Matrix *	Sample Date	Sample Time							
<i>J19610 2981212</i>	<i>OTHER SOLID</i>	<i>9.15.09</i>	<i>1430</i>	<i>X</i>	<i>X</i>	<i>X</i>				
CHAIN OF POSSESSION				Sign/Print Names			SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9.15.09 1430</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>9.15.09 1430</i>		Perform Total Inorganic Arsenic out of Chromium Hex bottle.  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=Seaweed SO=Soled SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Teaser WJ=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9/17/09 950</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/17/09 950</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/17/09 950</i>		Received By/Stored In <i>FDX</i>		Date/Time				
Relinquished By/Removed From		Date/Time		Received By/Stored In <i>Shannon Johnson</i>		Date/Time <i>09/18/09 1230</i>				
Relinquished By/Removed From		Date/Time		Received By/Stored In		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			

Central File #: 2981 Sample No(s): 203-212 Project Manager: Brandenberger

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

Matrix: \_\_\_\_\_ WP# \_\_\_\_\_

Yes No

Navy-type Project (requires high-level sample tracking procedures)

USDA Soils (or overseas, including Hawaii and the U.S. Virgin Islands) See Compliance Agreement Checklist

Filter Samples: Amounts Entire sample Half of sample

Freeze dry sample(s) - samples will be weighed and placed in Ultra-low temp freezer (Lab# 503)

Special instructions: \_\_\_\_\_

Sample Preservation Instructions: \_\_\_\_\_

\*\*See LIMS for archive/disposal information\*\*

**TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN**

Yes No N/A (Initial appropriate box when completed)

Custody seal present

Custody seal intact

Cooler(s) temperature (acceptable ranges = water: 4±2°C / solid: frozen) 2.7 °C  
(if multiple coolers, note temp. of each) \_\_\_\_\_ °C

Project Manager notified of any discrepancies or if temperature outside acceptable range?  
Comments/Remedy: \_\_\_\_\_

All chain of custody forms signed and dated?

Samples Filtered?

Sample condition(s): Acceptable Other (explain): \_\_\_\_\_

Container type: Teflon Poly Glass Cap. Vial Other Plastic

Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 09/18/09 1225

**SAMPLE PRESERVATION**

Sample preserved at MSL

Sample 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)

**If preservation necessary, record Acid Lot#**

Type:  0.2% HNO3 Notes: \_\_\_\_\_

0.5% HCl (Hg samples) Notes: \_\_\_\_\_

Refrigerate Notes: \_\_\_\_\_

Freeze Notes: Deep freezer D-1

Other Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 09/18/09 1225

## SAMPLE LOGIN

Project Manager: Brandenberger

Date Received: 9/23/2009

Batch: 17

Login Designee: Mcgahan

Project: **Washington Closure Hanford**



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

Sponsor ID	Site Description	Battelle Code	Matrix	Storage Location	Requested Parameters	Collection Date
J19629	na	2981-213a & b	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M, Methyl Hg, Mercury-7473	09/16/09
J19628	na	2981-214a & b	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M, Methyl Hg, Mercury-7473	09/16/09
J19639	na	2981-215	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/16/09
J19698	na	2981-216	other solid	Deep Freezer C-1	Methyl Hg by EPA 1630M; Mercury-7473	09/16/09
J19699	na	2981-217	other solid	Deep Freezer C-1	Methyl Hg by EPA 1630M; Mercury-7473	09/16/09
J19640	na	2981-218	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/16/09
J19650	na	2981-219	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09
J19649	na	2981-220	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09
J19660	na	2981-221	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09
J19659	na	2981-222	other solid	Deep Freezer C-1	Total Inorganic As, Cr Hex in Solids 1636M	09/17/09

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-899	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 27 CARCASS		SAF No. RC-118		<i>AD 9/29/09</i>		
Ice Chest No. <i>WCH-08-003-2</i>	Field Logbook No. EL-1638	COA BESRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading/Tracking # <b>FDX# 796967152240</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	Freeze
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	P	G/P
				No. of Container(s)	0	1	1
				Volume	15mL	60mL	60mL
SAMPLE ANALYSIS				Total Inorganic Arsenic	Methyl Mercury by EPA 1630M; Mercury - 7473	Chromium Hex in Solids - 1636M	
Sample No.	Matrix *	Sample Date	Sample Time				
J19629 <i>2981-2/3a6h</i>	OTHER SOLID	<i>9/16/09</i>	<i>1115</i>	X	X	X	
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>11/5</i> <i>9/16/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>11/5</i> <i>9/16/09</i>	Perform Total Inorganic Arsenic out of Chromium Hex bottle.			
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>11/21/09</i> <i>100</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>11/21/09</i> <i>100</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/21/09</i> <i>100</i>	Received By/Stored In <i>FDX</i>	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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-898	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code 9K	Data Turnaround 45 Days	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 27 FILLET		SAF No. RC-118	<i>N</i> <i>4/19/09</i>		
Ice Chest No. <i>WCH-08-003-2</i>	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. <b>FDA 796967152240</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	Freeze
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	P	G/P
				No. of Container(s)	0	1	1
				Volume	15mL	60mL	60mL
SAMPLE ANALYSIS				Total Inorganic Arsenic	Methyl Mercury by EPA 1630M, Mercury - 7473	Chromium Hex in Solids - 1636M	
Sample No.	Matrix *	Sample Date	Sample Time				
J19628 <i>2981-214a,b</i>	OTHER SOLID	<i>9/16/09</i>	<i>1100</i>	X	X	X	
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9/16/09</i>	Received By/Stored In <i>Wendy West</i>		Perform Total Inorganic Arsenic out of Chromium Hex bottle.		
EAS LOCKED STORAGE 2		<i>9/22/09</i>	SHANNAN JOHNSON		Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.		
SHANNAN JOHNSON		<i>9/22/09</i>	FDX				
			<i>9/23/09</i>				
LABORATORY SECTION	Received By	Title				Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-908	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 91	Data Turnaround 45 Days		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 28 FILLET	SAF No. RC-118	Method of Shipment FED EX				
Ice Chest No. <i>WCH-08-003-2</i>	Field Logbook No. EL-1638	COA BESCR6520	Bill of Lading # <b>FDX# 796967152240</b>				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J19639	<i>2981.215</i>	<i>9/10/09</i>	<i>1345</i>	<i>X</i>	<i>X</i>		
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9/10/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9/10/09</i>	<p>SAMPLER UNAVAILABLE TO REMOVE SAMPLES FROM CONTROLLED STORAGE. SHIPPER REMOVED SAMPLES FROM STORAGE LOCATION TAKING CUSTODY OF SAMPLES FOR SHIPMENT TO LAB</p>			<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SP=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>W=Waste</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9/22/09</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>9/22/09</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>9/22/09</i>	Received By/Stored In <i>FDV</i>	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				
LABORATORY SECTION	Received By	Title			Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By			Date/Time		

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-966	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 28 FILLET		SAF No. RC-118	<i>N/A 91009</i>		
Ice Chest No. <i>WCH-08-003-2</i>	Field Logbook No. EL-1638	COA BESRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading/Alc. Bill No. <b>FDX # 796967152240</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>							
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Preservation	Freeze		
				Type of Container	P		
				No. of Container(s)	1		
				Volume	60mL		
SAMPLE ANALYSIS				Methyl Mercury by EPA 1630M; Mercury - 7473			
Sample No.	Matrix *	Sample Date	Sample Time				
J19698	<i>2981-216</i>	<i>9/16/09</i>	<i>1345</i>	<i>X</i>			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9/16/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9/16/09</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>			<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Timber</li> <li>W=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
<b>EAS LOCKED STORAGE</b>							
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>9/23/09</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>9/23/09</i>				
<b>FDX</b>							
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				
LABORATORY SECTION	Received By	Title			Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By			Date/Time		

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-967	Page 1 of 1
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 28 CARCASS			SAF No. RC-118	<i>N</i> <i>AP 91004</i>	
Ice Chest No. <i>WCH-08-063-2</i>		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/Trailer No. <b>FDX 796967152240</b>			
POSSIBLE SAMPLE HAZARDS/REMARKS N/A					Preservation	Freez.	
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"					Type of Container	P	
					No. of Container(s)	1	
					Volume	60mL	
					Methyl Mercury by EPA 1630M. Mercury - 7473		
SAMPLE ANALYSIS							
Sample No.	Matrix *	Sample Date	Sample Time				
J19699	2981-217	9/16/09	1400	X			
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS		Matrix *
Relinquished By/Removed From <i>Wendy West</i>		Date/Time 1400 9/16/09	Received By/Stored In <i>Wendy West</i>		Date/Time 1400 9/16/09	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p> <p>S=Soil SE=Seawater SO=Solid SL=Sledge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue WT=Wipe L=Liquid V=Vegetation X=Other</p>	
Relinquished By/Removed From EAS LOCKED STORAGE 2		Date/Time 9/22/09	Received By/Stored In <i>Shannan Johnson</i>		Date/Time 100 9/22/09		
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time 9/22/09	Received By/Stored In <i>FOX</i>		Date/Time 100		
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		
LABORATORY SECTION	Received By		Title		Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By		Date/Time		

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-909		Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>91</i> <i>N</i> <i>MA9809</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 28 CARCASS		SAF No. RC-118		Data Turnaround <b>45 Days</b>			
Ice Chest No. <i>WCH-08-003-2</i>		Field Logbook No. EL-1638		COA BESCR6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading # <i>FDX# 796967152240</i>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze			
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P			
				No. of Container(s)	0	1			
				Volume	15mL	60mL			
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M				
				Sample No.	Matrix *	Sample Date	Sample Time		
<i>J19640</i>	<i>2981-218</i>	<i>OTHER SOLID</i>	<i>9/11/09</i>	<i>1400</i>	<i>X</i>	<i>X</i>			
CHAIN OF POSSESSION									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		Matrix *	
<i>Wendy West</i>		<i>9/11/09 1400</i>		<i>EAS LOCKED STORAGE 2</i>		<i>9/11/09 1400</i>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE= Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tar</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
<i>EAS LOCKED STORAGE 2</i>		<i>9/21/09 100</i>		<i>SHANNAN JOHNSON</i>		<i>9/22/09 100</i>			
<i>SHANNAN JOHNSON</i>		<i>9/22/09 100</i>		<i>FDX</i>					
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
				<i>09/23/09 1252</i>					
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
LABORATORY SECTION	Received By	Title	Date/Time	SPECIAL INSTRUCTIONS					
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>					

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-919	Page 1 of 1
Collector <i>Woody West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 29 CARCASS		SAF No. RC-118	<i>MA 9909</i>		
Ice Chest No. <i>WCH-08-003-2</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading/Air Bill No. <b>FDX# 796967152240</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J19650 2981-219	OTHER SOLID	9/17/09	1215	X	X		
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Woody West</i>		Date/Time 9/17/09	Sign/Print Names <i>Woody West</i>		Date/Time 9/17/09	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 9/22/09	SHANNAN JOHNSON		Date/Time 9/22/09	SE=Seawater SO=Solid SI=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue Wl=Wipe L=Liquid V=Vegetation X=Other	
Relinquished By/Removed From SHANNAN JOHNSON		Date/Time 9/22/09	FDX		Date/Time 10/1/09		
Relinquished By/Removed From		Date/Time			Date/Time		
Relinquished By/Removed From		Date/Time			Date/Time		
Relinquished By/Removed From		Date/Time			Date/Time		
LABORATORY SECTION	Received By	Title				Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-918	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 29 FILLET		SAF No. RC-118	<i>9/22/09</i>		
Ice Chest No. <i>WCH-08-603-2</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX		Bill of Lading/Air Bill # <b>FDX# 796967152240</b>		
Shipped To Battelle Marine Sciences		Offsite Property No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Cool 4C	Freeze	
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G	G/P	
				No. of Container(s)	0	1	
				Volume	15mL	60mL	
SAMPLE ANALYSIS				Total Inorganic Arsenic	Chromium Hex in Solids - 1636M		
Sample No.	Matrix *	Sample Date	Sample Time				
J19649 2981.220	OTHER SOLID	9/17/09	1200	X	K		
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9/17/09</i>	Received By/Stored In <i>Wendy West</i>		Date/Time <i>9/17/09</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p> <ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Seaweed</li> <li>SO=Solid</li> <li>SI=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Spills</li> <li>DL=Drum Leaks</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
EAS LOCKED STORAGE 2		Date/Time <i>9/22/09</i>	SHANNAN JOHNSON		Date/Time <i>9/22/09</i>		
SHANNAN JOHNSON		Date/Time <i>9/22/09</i>	FDX		Date/Time <i>1200</i>		
		Date/Time			Date/Time		
		Date/Time	<i>Shannan Johnson 09/23/09 1250</i>		Date/Time		
		Date/Time			Date/Time		
LABORATORY SECTION	Received By	Title				Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-929	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 30 CARCASS	SAF No. RC-118	<i>N</i> <i>8/29/09</i>				
Ice Chest No. <i>WCH-08-003-2</i>	Field Logbook No. EL-1638	COA BESRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading # <b>FDX# 796967152240</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>			Preservation	Cool 4C	Freeze		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>			Type of Container	P/G	G/P		
			No. of Container(s)	0	1		
			Volume	15mL	60mL		
SAMPLE ANALYSIS			Total Inorganic Arsenic	Chromium Hex in Solids 1636M			
Sample No.	Matrix *	Sample Date	Sample Time				
J19660 <i>2981-221</i>	OTHER SOLID	<i>9/17/09</i>	<i>1500</i>	<i>X</i>	<i>X</i>		
CHAIN OF POSSESSION			Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9/17/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9/17/09</i>	EAS LOCKED STORAGE 2		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>	<ul style="list-style-type: none"> <li>S - Soil</li> <li>SE - Sediment</li> <li>SO - Solid</li> <li>SL - Sludge</li> <li>W - Water</li> <li>O - Oil</li> <li>A - Air</li> <li>DS - Drum Solids</li> <li>DL - Drum Liquids</li> <li>T - Tissue</li> <li>WI - Waste</li> <li>L - Liquid</li> <li>V - Vegetation</li> <li>X - Other</li> </ul>
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9/22/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9/22/09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/22/09</i>	Received By/Stored In <b>FDX</b>	Date/Time <i>10/10</i>				
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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-928		Page 1 of 1						
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>44999</i>		Data Turnaround <b>45 Days</b>				
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 30 FILLET				SAF No. RC-118								
Ice Chest No. <i>WCH-DB-003-2</i>		Field Logbook No. EL-1638		COA BESRC6520		Method of Shipment FED EX								
Shipped To Battelle Marine Sciences		Offsite Property No. N/A				Bill of Lading/Air Bill # <b>FDX # 796967152240</b>								
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>					Preservation	Cool 4C	Freeze							
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G	G/P							
					No. of Container(s)	0	1							
					Volume	15mL	60mL							
SAMPLE ANALYSIS					Total Inorganic Arsenic	Chromium Hex in Solids - 1636M								
Sample No.	Matrix *	Sample Date	Sample Time											
<i>J19659298/222</i>	<i>OTHER SOLID</i>	<i>9/17/09</i>	<i>1445</i>	<i>X</i>	<i>X</i>									
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS					Matrix *				
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9/17/09 1445</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>9/17/09 1445</i>		<p>SAMPLER UNAVAILABLE TO REMOVE SAMPLES FROM CONTROLLED STORAGE. SHIPPER REMOVED SAMPLES FROM STORAGE LOCATION TAKING CUSTODY OF SAMPLES FOR SHIPMENT TO LAB.</p>					<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Timber</li> <li>W1=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
EAS LOCKED STORAGE 2		Date/Time <i>9/22/09 100</i>		SHANNAN JOHNSON		Date/Time <i>9/22/09 100</i>								
SHANNAN JOHNSON		Date/Time <i>9/22/09 100</i>		FDX		Date/Time								
		Date/Time		<i>Shannon Johnson</i>		Date/Time <i>09/23/09 1250</i>								
		Date/Time				Date/Time								
		Date/Time				Date/Time								
LABORATORY SECTION	Received By				Title				Date/Time					
FINAL SAMPLE DISPOSITION	Disposal Method				Disposed By				Date/Time					

LOG-IN CHECKLIST

Central File #: 2981

Sample No(s): 213-222

Project Manager: Brandenberger

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

Matrix: \_\_\_\_\_ WP# \_\_\_\_\_

- Yes  No Navy-type Project (requires high-level sample tracking procedures)
- Yes  No USDA Soils (or overseas, including Hawaii and the U.S. Virgin Islands) See Compliance Agreement Checklist
- Yes  No Filter Samples: Amounts    Entire sample    Half of sample
- Yes  No Freeze dry sample(s) - samples will be weighed and placed in Ultra-low temp freezer (Lab# 503)
- Yes  No Special instructions: \_\_\_\_\_

Sample Preservation Instructions: \_\_\_\_\_  
\*\*See LIMS for archive/disposal information\*\*

**TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN**

(Initial appropriate box when completed)

- Yes  No  N/A Custody seal present
- Yes  No  N/A Custody seal intact
- Yes  No  N/A Cooler(s) temperature (acceptable ranges = water: 4±2°C / solid: frozen) 2.0 °C  
(if multiple coolers, note temp. of each) \_\_\_\_\_ °C
- Yes  No  N/A Project Manager notified of any discrepancies or if temperature outside acceptable range?  
Comments/Remedy: \_\_\_\_\_
- Yes  No  N/A All chain of custody forms signed and dated?
- Yes  No  N/A Samples Filtered?

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

Container type: Teflon    Poly    Glass    Cap    Vial    Other

Notes: \_\_\_\_\_

Completed By: [Signature]

Date/Time: 09/23/09 1240

**SAMPLE PRESERVATION**

- Sample preserved at MSL
- Sample 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)

If preservation necessary, record Acid Lot#

- Type:  0.2% HNO3      Notes: \_\_\_\_\_
- 0.5% HCl (Hg samples)      Notes: \_\_\_\_\_
- Refrigerate      Notes: \_\_\_\_\_
- Freeze      Notes: Deep freeze C-1
- Other      Notes: \_\_\_\_\_

Completed By: [Signature]

Date/Time: 09/23/09 1240

# SAMPLE LOGIN

Project Manager: Brandenberger  
 Date Received: 9/30/2009  
 Batch: 18  
 Login Designee: Mcgahan



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

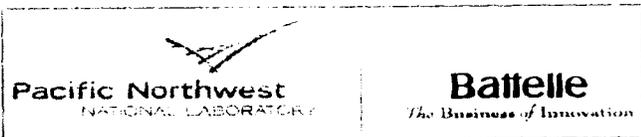
Project: **Washington Closure Hanford**

Sponsor ID	Site Description	Battelle Code	Matrix	Storage Location	Requested Parameters	Collection Date
J195W5 ✓	na	2981-223 ✓	other solid	Deep Freezer B-1	Total Inorganic Cr Hex in Solids 1636M	09/21/09 ✓
J195W6 ✓	na	2981-224	other solid	Deep Freezer B-1	Total Inorganic Cr Hex in Solids 1636M	09/21/09
J195W7 ✓	na	2981-225	other solid	Deep Freezer B-1	Total Inorganic Cr Hex in Solids 1636M	09/21/09
J195W8 ✓	na	2981-226	other solid	Deep Freezer B-1	Total Inorganic Cr Hex in Solids 1636M	09/24/09 ✓
J19666 ✓	na	2981-227	other solid	Deep Freezer B-1	Total Inorganic Cr Hex in Solids 1636M	09/24/09
J19665 ✓	na	2981-228 ✓	other solid	Deep Freezer B-1	✓ Total Inorganic Cr Hex in Solids 1636M	09/24/09
J19752 ✓	na	2981-229 ✓	other solid	Deep Freezer B-1	✓ Total Inorganic As	09/24/09 ✓
J19751 ✓	na	2981-230	other solid	Deep Freezer B-1	Total Inorganic As	09/24/09
J18X99 ✓	na	2981-231	other solid	Deep Freezer B-1	Total Inorganic As	09/24/09
J18X96 ✓	na	2981-232	other solid	Deep Freezer B-1	Total Inorganic As	09/24/09
J18XJ3 ✓	na	2981-233	other solid	Deep Freezer B-1	Total Inorganic As	09/24/09
J18XC9 ✓	na	2981-234	other solid	Deep Freezer B-1	Total Inorganic As	09/24/09
J18XB0 ✓	na	2981-235	other solid	Deep Freezer B-1	Total Inorganic As	09/24/09
J18XF3 ✓	na	2981-236 ✓	other solid	Deep Freezer B-1	Total Inorganic As	09/24/09 ✓

1/1/09  
10/1/07

# SAMPLE LOGIN

Project Manager: Brandenberger  
Date Received: 9/30/2009  
Batch: 18  
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
J18XF2 ✓	na	2981-237 ✓	other solid	Deep Freezer B-1	Total Inorganic As	0924/09 ✓
J18XF1 ✓	na	2981-238	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18XC6 ✓	na	2981-239	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18XJ1 ✓	na	2981-240	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18XD0 ✓	na	2981-241	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18XJ2 ✓	na	2981-242	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18X97 ✓	na	2981-243	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18XC7 ✓	na	2981-244 ✓	other solid	Deep Freezer B-1	Total Inorganic As	0925/09 ✓
J18XF5 ✓	na	2981-245	other solid	Deep Freezer B-1	Total Inorganic As	0925/09
J18XJ5 ✓	na	2981-246	other solid	Deep Freezer B-1	Total Inorganic As	0925/09
J18XC8 ✓	na	2981-247	other solid	Deep Freezer B-1	Total Inorganic As	0925/09
J18X98 ✓	na	2981-248	other solid	Deep Freezer B-1	Total Inorganic As	0925/09
J18XF4 ✓	na	2981-249	other solid	Deep Freezer B-1	Total Inorganic As	0925/09
J19XJ4 ✓	na	2981-250 ✓	other solid	Deep Freezer B-1	Total Inorganic As	0925/09 ✓



Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			RC-118-867		Page 1 of 1				
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>1283109</i>		Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location STURGEON 18 VISCERA			SAF No. RC-118						
Ice Chest No. <i>AFS-04-041</i>		Field Logbook No. EL-1638		COA BESRC6520		Method of Shipment FED EX					
Shipped To Battelle Marine Sciences		Offsite Property No. N/A			Bill of Lading (AV) # <b>FDX# 796986356875</b>						
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation		Freeze					
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container		G/P					
				No. of Container(s)		1					
				Volume		60mL					
SAMPLE ANALYSIS					Chromium Hex in Solids - 1636M						
Sample No.		Matrix *		Sample Date		Sample Time					
<i>J195W6 2081-224</i>		<i>OTHER SOLID</i>		<i>9/21/09</i>		<i>1500</i>		<i>K</i>			
CHAIN OF POSSESSION				Sign/Print Names				SPECIAL INSTRUCTIONS			
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1500 9/21/09</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>1500 9/21/09</i>		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>			
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>1045 9/29/09</i>		Received By/Stored In <i>CLIFTON JOHNSON</i>		Date/Time <i>1045 9/29/09</i>					
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <i>1045 9/29/09</i>		Received By/Stored In <i>EDY</i>		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					
LABORATORY SECTION		Received By				Title				Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-868	Page 1 of 1
Collector <b>Rylie Barron</b>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <b>9K</b>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 19 VISCERA	SAF No. RC-118	N 1/8 83109				
Ice Chest No. <b>APS-04-041</b>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading # <b>FDX 796986356875</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation	Freeze				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	G/P				
		No. of Container(s)	1				
		Volume	60mL				
SAMPLE ANALYSIS		Chromium Hex in Solids - 1636M					
Sample No.	Matrix *	Sample Date	Sample Time				
J195W7 <b>2981-225</b>	OTHER SOLID	9/21/09	1620	X			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <b>Rylie Barron</b>	Date/Time 9/21/09 1620	Received By/Stored In <b>Rylie Barron</b>	Date/Time 9/21/09 1620	SPECIAL INSTRUCTIONS  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 SH=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Timber Wt=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <b>EAS LOCKED STORAGE</b>	Date/Time 9/29/09 1645	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time 9/29/09 1645				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time 9/29/09 1645	Received By/Stored In <b>FDX</b>	Date/Time				
Relinquished By/Removed From	Date/Time	Received By/Stored In <b>Shannon Johnson</b>	Date/Time 9/30/09 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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-869	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 20 VISCERA		SAF No. RC-118	<i>11/13/09</i>			
Ice Chest No. <i>AFS-04-041</i>	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/ <i>FDX</i> <b>796986356875</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation	Freeze				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container	G/P				
		No. of Container(s)	1				
		Volume	60mL				
SAMPLE ANALYSIS			Chromium Hex in Solids 1636M				
Sample No.	Matrix *	Sample Date	Sample Time				
J195W8 <i>2981-226</i>	OTHER SOLID	<i>9/24/09</i>	<i>1745</i>	<i>X</i>			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9/24/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9/24/09</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>			<ul style="list-style-type: none"> <li>S-Soil</li> <li>SE-Sediment</li> <li>SO-Solid</li> <li>SL-Sludge</li> <li>W-Water</li> <li>O-Oil</li> <li>A-Air</li> <li>DS-Drum Solids</li> <li>DL-Drum Liquids</li> <li>T-Tissue</li> <li>W-Wipe</li> <li>L-Liquid</li> <li>V-Vegetation</li> <li>X-Other</li> </ul>
EAS LOCKED STORAGEZ		SHANNAN JOHNSON					
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>9/29/09</i>	Received By/Stored In <i>FDX</i>	Date/Time <i>10/27</i>				
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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-935	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>1109909</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location STURGEON 27 VICERA		SAF No. RC-118				
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. EL-1638	COA BESRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading # <b>FDX# 796986356875</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>		Preservation	Freeze				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container	G/P				
		No. of Container(s)	1				
		Volume	60mL				
SAMPLE ANALYSIS		Chromium Hex in Solids - 1636M					
Sample No.	Matrix *	Sample Date	Sample Time				
J19666 <i>2981-227</i>	OTHER SOLID	<i>9/24/09</i>	<i>1800</i>	X			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9/24/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9/24/09</i>	<p><b>EAS LOCKED STORAGE 2</b></p> <p><b>SHANNAN JOHNSON</b></p> <p><b>SHANNAN JOHNSON</b></p> <p><b>FDX</b></p> <p><b>9/30/09 1500</b></p> <p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab</p>			<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Trash</li> <li>Wj=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9/29/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9/29/09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/29/09</i>	Received By/Stored In <b>FDX</b>	Date/Time <i>9/29/09</i>				
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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-934	Page 1 of 1		
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH	Price Code <i>9K</i> <i>N</i> <i>448909</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location <i>28 Apr 99</i> STURGEON VICERA			SAF No. RC-118				
Ice Chest No. <i>AFS-04-041</i>		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 # <i>FDX 796986356875</i>				
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	Freeze				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	G/P				
				No. of Container(s)	1				
				Volume	60mL				
SAMPLE ANALYSIS				Chromium Hex in Solids - 1636M					
Sample No.	Matrix *	Sample Date	Sample Time						
<i>J19665 2981-228</i>	<i>OTHER SOLID</i>	<i>9/24/09</i>	<i>1810</i>	<i>X</i>					
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>8/10</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>18/10</i>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Seaweed</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tissue</li> <li>WL=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
EAS LOCKED STORAGE2		<i>9/24/09</i>		EAS LOCKED STORAGE2		<i>9/24/09</i>			
SHANNAN JOHNSON		<i>9/29/09</i>		SHANNAN JOHNSON		<i>9/29/09</i>			
SHANNAN JOHNSON		<i>9/29/09</i>		FDX		<i>1045</i>			
SHANNAN JOHNSON		<i>9/29/09</i>		SHANNAN JOHNSON		<i>1500</i>			
SHANNAN JOHNSON		<i>9/29/09</i>		SHANNAN JOHNSON		<i>1500</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment in lab</p>	
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			
LABORATORY SECTION	Received By			Title			Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time		

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-1079	Page 1 of 1
Collector <i>Wendy West</i>	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-WAL 6 CARCASS		SAF No. RC-118		<i>MD 91709</i>		
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. EL-1638	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading # <b>FDA# 796986356875</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A		Preservation	Cool +C				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G				
		No. of Container(s)	1				
		Volume	15mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic					
Sample No.	Matrix *	Sample Date	Sample Time				
J19752 <i>2981-229</i>	OTHER SOLID	<i>9/24/09</i>	<i>1130</i>	<i>X</i>			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9/24/09 1130</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>9/24/09 1130</i>	
EAS LOCKED STORAGE		EAS LOCKED STORAGE		EAS LOCKED STORAGE		EAS LOCKED STORAGE	
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/29/09 7145</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/29/09 1245</i>	
SHANNAN JOHNSON		SHANNAN JOHNSON		SHANNAN JOHNSON		SHANNAN JOHNSON	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>9/29/09 1500</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>9/29/09 1500</i>	
Relinquished By/Removed From		Date/Time		Received By/Stored In		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	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-1078	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>OK</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 100SA-WAL 6 FILLET		SAF No. RC-118		<i>MS 91709</i>		
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. EL-1638	COA BESRCR6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences	Offsite Property No. N/A		Bill of Lading # <b>FDX 796986356879</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS N/A			Preservation	Cool #C			
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"			Type of Container	P/G			
			No. of Container(s)	1			
			Volume	15mL			
SAMPLE ANALYSIS			Total Inorganic Arsenic				
Sample No.	Matrix *	Sample Date	Sample Time				
J19751 <i>2981-230</i>	OTHER SOLID	<i>9/24/09</i>	<i>1115</i>	<i>X</i>			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>11/5</i>		Received By/Stored In <i>Wendy West</i>		Date/Time <i>11/5</i>	
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9/29/09</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/29/09</i>	
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/29/09</i>		Received By/Stored In <i>FDX</i>		Date/Time <i>10/15</i>	
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	
LABORATORY SECTION				Received By		Title	
FINAL SAMPLE DISPOSITION				Disposal Method		Disposed By	
						Date/Time	
						Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-199	Page 1 of 1	
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>OK</i> <i>N</i> <i>JLD 5/16/09</i>	Data Turnaround <b>45 Days</b>		
Project Destination Columbia River Component of the RCBRA - Tissues		Sampling Location 100SA-WALA-FILLET		SAF No. RC-118				
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESCRC6520	Method of Shipment FED EX					
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading # <b>PDX#796986356879</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation	Cool 4C			
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"				Type of Container	P/G			
				No. of Container(s)	1			
				Volume	15mL			
SAMPLE ANALYSIS				Total Inorganic Arsenic				
Sample No.	Matrix *	Sample Date	Sample Time					
J18X99 <i>2281-231</i>	OTHER SOLID	<i>9/24/09</i>	<i>1400</i>	<i>X</i>				
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *	
Relinquished By/Removed From <i>Wendy West</i>		Date/Time <i>1400</i> <i>9/24/09</i>	Sign/Print Names <i>Wendy West</i>		Date/Time <i>1400</i> <i>9/24/09</i>	<p><b>EAS LOCKED STORAGE 2</b></p> <p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SH=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Times</li> <li>W=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>		Date/Time <i>1645</i> <i>9/29/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>		Date/Time <i>1045</i> <i>9/29/09</i>			
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>		Date/Time <i>1045</i> <i>9/29/09</i>	Received By/Stored In <b>EDJ</b>		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			
LABORATORY SECTION	Received By	Title			Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By			Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-196	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 100SA-WALI-FILLET	SAF No. RC-118	Date <i>1/25/07</i>				
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESCRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading No. <b>FDX#796986356875</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation	Cool 4C				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G				
		No. of Container(s)	1				
		Volume	15mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic					
Sample No.	Matrix *	Sample Date	Sample Time				
J18X96 <i>2981-232</i>	OTHER SOLID	<i>9/24/09</i>	<i>1300</i>	X			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1300</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1300</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment in lab</p>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Seaweed</li> <li>SO=Sludg</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Dried Seeds</li> <li>DL=Dried Liquids</li> <li>T=Tissue</li> <li>W=Wage</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE</b>	Date/Time <i>12/9/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>1/21/09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/24/09</i>	Received By/Stored In <b>FDX</b>	Date/Time <i>1300</i>				
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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-253	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code 9K	Data Turnaround 45 Days	
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 300SA-WAL3, CARCASS		SAF No. RC-118		<i>N</i> <i>4051909</i>		
Ice Chest No. AFS-04-041	Field Logbook No. EL-1633	COA BESCRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading/Alt # <b>FDX # 796986356875</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS							
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				
J18XJ3 2981-233	OTHER SOLID	9/24/09	1045	X			
CHAIN OF POSSESSION							
Sign/Print Names				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time 1045	Received By/Stored In <i>Wendy West</i>	Date/Time 1045	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 W1=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/24/09	Received By/Stored In <b>EAS LOCKED STORAGE 2</b>	Date/Time 9/24/09				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time 1045	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time 1045				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time 9/24/09	Received By/Stored In <b>FDX</b>	Date/Time 1045				
Relinquished By/Removed From <i>[Signature]</i>	Date/Time 9/24/09	Received By/Stored In <i>[Signature]</i>	Date/Time 1045				
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				
LABORATORY SECTION	Received By	Title				Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-219	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i>	Data Turnaround <i>45 Days</i>	
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 100SA-WAL4-CARCASS		SAF No. RC-118		<i>4451809</i>		
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESCRC6520	Method of Shipment FED EX		Bill of Lading/ <i>FDX# 796986356875</i>		
Shipped To Battelle Marine Sciences		Offsite Property No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation	Cool 4C		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G		
				No. of Container(s)	1		
				Volume	15mL		
				Total Inorganic Arsenic			
SAMPLE ANALYSIS							
Sample No.	Matrix *	Sample Date	Sample Time				
J18XC9 <i>2981-234</i>	OTHER SOLID	<i>9/24/09</i>	<i>1430</i>	<i>X</i>			
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9/24/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9/24/09</i>	EAS LOCKED STORAGE 2		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>	
Relinquished By/Removed From EAS LOCKED STORAGE 2	Date/Time <i>9/29/09</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>9/29/09</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>9/29/09</i>	Received By/Stored In <i>FDX</i>	Date/Time <i>10/4</i>				
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			Matrix *	
LABORATORY SECTION		Received By	Title		Date/Time		
FINAL SAMPLE DISPOSITION		Disposal Method		Disposed By		Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-200	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code 9K	Data Turnaround 45 Days		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 100SA-WALS-FILLET		SAF No. RC-118	N 4/5 51609			
Ice Chest No. AFS-04-041	Field Logbook No. 1633	COA BESCRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading/Bill No. FDX 796986356875					
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation	Cool 4C				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G				
		No. of Container(s)	1				
		Volume	15mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic					
Sample No.	Matrix *	Sample Date	Sample Time				
J18XB0 2991-235	OTHER SOLID	9/24/09	1515	X			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			
Relinquished By/Removed From <i>Wendy West</i>	Date/Time 1515	Received By/Stored In <i>Wendy West</i>	Date/Time 1515	<p>EAS LOCKED STORAGE 2</p> <p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>			
Relinquished By/Removed From EAS LOCKED STORAGE 2	Date/Time 9/24/09	Received By/Stored In SHANNAN JOHNSON	Date/Time 9/24/09				
Relinquished By/Removed From SHANNAN JOHNSON	Date/Time 9/29/09	Received By/Stored In <i>[Signature]</i>	Date/Time 1245				
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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-233	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>915</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 300SA-WAL3, FILLET	SAF No. RC-118	<div style="text-align: right;"><i>6/18 51509</i></div>				
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESCRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading/Air Bill No. <b>FDX# 796986356875</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation	Cool 4C				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G				
		No. of Container(s)	1				
		Volume	15mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic					
Sample No.	Matrix *	Sample Date	Sample Time				
J18XF3 <i>2981-236</i>	OTHER SOLID	<i>9/24/09</i>	<i>1030</i>	<i>X</i>			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1030</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1030</i>	<p><i>at 1030 on 9/24/09</i></p> <p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>			<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Truss</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9/24/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>1045</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>1045</i>	Received By/Stored In <b>FD</b>	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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-232	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 300SA-WAL2, FILLET		SAF No. RC-118		<i>JPS 51609</i>		
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESCRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading # <b>FDX# 796986356875</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS							
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>							
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				
J18XF2 <i>2981-237</i>	OTHER SOLID	<i>9/24/09</i>	<i>0945</i>	<i>X</i>			
CHAIN OF POSSESSION							
Sign/Print Names				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>0945</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>0945</i>	<p><i>EAS LOCKED STORAGE 2</i></p> <p><i>SHANNAN JOHNSON</i></p> <p><i>FDX</i></p> <p><i>09/24/09 1500</i></p> <p><i>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</i></p>			<ul style="list-style-type: none"> <li>S=Soil</li> <li>Ss=Sediment</li> <li>SO=Sludge</li> <li>Sl=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Spills</li> <li>DL=Drum Leaks</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>	Date/Time <i>9/29/09</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>1045</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>9/29/09</i>	Received By/Stored In <i>FDX</i>	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				
LABORATORY SECTION	Received By	Title				Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-231		Page 1 of 1	
Collector <i>Wendy Whit</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>413 5104</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location 300SA-WALI, FILLET		SAF No. RC-118		Data Turnaround <b>45 Days</b>			
Ice Chest No. <i>ARS-04-041</i>		Field Logbook No. 1633		COA BESCR6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/ <i>FDX</i> <b>796986356875</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS					Preservation	Cool 4C			
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"					Type of Container	P/G			
					No. of Container(s)	1			
					Volume	15mL			
SAMPLE ANALYSIS					Total Inorganic Arsenic				
Sample No.	Matrix *	Sample Date	Sample Time						
J18XF1 <i>2981-238</i>	OTHER SOLID	<i>9/24/09</i>	<i>0900</i>	X					
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS				
Relinquished By/Removed From <i>Wendy Whit</i>		Date/Time <i>9/24/09 0900</i>		Received By/Stored In <i>Wendy Whit</i>		Date/Time <i>9/24/09 0900</i>		Matrix *	
Relinquished By/Removed From <i>EAS LOCKED STORAGE 2</i>		Date/Time <i>9/24/09 1045</i>		Received By/Stored In <i>SHANNAN JOHNSON</i>		Date/Time <i>9/24/09 1045</i>		S= Soil Ss= Sediment SO= Solid Sl= Sludge W= Water O= Oil A= Air DS= Drum Solids DL= Drum Liquids T= Tissue Wl= Wipe L= Liquid V= Vegetation X= Other	
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>		Date/Time <i>9/24/09 1245</i>		Received By/Stored In <i>FDX</i>		Date/Time <i>09/30/09 1500</i>		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		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			
LABORATORY SECTION	Received By	Title				Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-216	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 100SA-WALI-CARCASS	SAF No. RC-118	<i>2/18/09</i> 				
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading No. <b>FDX# 796986356875</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS							
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>							
SAMPLE ANALYSIS							
Sample No.	Matrix *	Sample Date	Sample Time				
J18XC6 <i>2981.239</i>	OTHER SOLID	<i>9/24/09</i>	<i>1330</i>	X			
CHAIN OF POSSESSION							
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time	SPECIAL INSTRUCTIONS	
<i>Wendy West</i>		<i>9/24/09</i>	<i>EAS LOCKED STORAGE 2</i>		<i>9/24/09</i>		
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time		
<i>EAS LOCKED STORAGE 2</i>		<i>9/29/09</i>	<i>SHANNAN JOHNSON</i>		<i>9/29/09</i>		
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time		
<i>SHANNAN JOHNSON</i>		<i>9/29/09</i>	<i>FDX</i>				
Relinquished By/Removed From		Date/Time	Received By/Stored In		Date/Time		
<i>Shannon Johnson</i>		<i>9/30/09</i>	<i>1620</i>				
Relinquished By/Removed From		Date/Time	Received By/Stored In		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		

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-251	Page 1 of 1																																								
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <b>9K</b>	Data Turnaround <b>45 Days</b>																																									
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 300SA-WALI, CARCASS		SAF No. RC-118		<i>N</i> <i>JAS 5/107</i>																																										
Ice Chest No. <i>APS-04-041</i>	Field Logbook No. EL-1633	COA BESCRC6520	Method of Shipment FED EX																																												
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading No. <b>FDX#-796986356875</b>																																													
POSSIBLE SAMPLE HAZARDS/REMARKS																																															
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>																																															
<table border="1"> <thead> <tr> <th>Preservation</th> <th>Cool 4C</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Type of Container</td> <td>P/G</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>No. of Container(s)</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Volume</td> <td>15mL</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								Preservation	Cool 4C							Type of Container	P/G							No. of Container(s)	1							Volume	15mL														
Preservation	Cool 4C																																														
Type of Container	P/G																																														
No. of Container(s)	1																																														
Volume	15mL																																														
SAMPLE ANALYSIS																																															
<table border="1"> <thead> <tr> <th>Sample No.</th> <th>Matrix *</th> <th>Sample Date</th> <th>Sample Time</th> <th>Total Inorganic Arsenic</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>J18XJ1 <i>2981-240</i></td> <td>OTHER SOLID</td> <td><i>9/24/09</i></td> <td><i>0915</i></td> <td><i>X</i></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>								Sample No.	Matrix *	Sample Date	Sample Time	Total Inorganic Arsenic				J18XJ1 <i>2981-240</i>	OTHER SOLID	<i>9/24/09</i>	<i>0915</i>	<i>X</i>																											
Sample No.	Matrix *	Sample Date	Sample Time	Total Inorganic Arsenic																																											
J18XJ1 <i>2981-240</i>	OTHER SOLID	<i>9/24/09</i>	<i>0915</i>	<i>X</i>																																											
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS																																											
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time																																									
<i>Wendy West</i>		<i>0915</i>		<i>EAS LOCKED STORAGE 2</i>		<i>0915</i>																																									
<i>Wendy West</i>		<i>9/24/09</i>		<i>Wendy West</i>		<i>9/24/09</i>																																									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time																																									
<i>EAS LOCKED STORAGE 2</i>		<i>9/29/09</i>		<i>J</i>		<i>9/29/09</i>																																									
<i>J</i>		<i>10/15</i>		<i>SHANNAN JOHNSON</i>		<i>10/15</i>																																									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time																																									
<i>SHANNAN JOHNSON</i>		<i>9/29/09</i>		<i>FDX</i>		<i>10/15</i>																																									
<i>SHANNAN JOHNSON</i>		<i>10/15</i>		<i>FDX</i>		<i>10/15</i>																																									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time																																									
<i>Shannon Johnson</i>		<i>9/24/09</i>		<i>Shannon Johnson</i>		<i>9/24/09</i>																																									
<i>Shannon Johnson</i>		<i>10/15</i>		<i>Shannon Johnson</i>		<i>10/15</i>																																									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time																																									
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time																																									
LABORATORY SECTION				Received By																																											
FINAL SAMPLE DISPOSITION				Disposal Method																																											
				Disposed By																																											
				Date/Time																																											
				Date/Time																																											

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-220	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 100SA-WALS-CARCASS	SAF No. RC-118	N <i>4351609</i>				
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading # <b>FDX# 796986356875</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation	Cool 4C				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G				
		No. of Container(s)	1				
		Volume	15mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic					
Sample No.	Matrix *	Sample Date	Sample Time				
J18XD0 <i>2981-241</i>	OTHER SOLID	<i>9/24/09</i>	<i>1545</i>	<i>X</i>			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1545 9/24/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1545 9/24/09</i>	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=Drain Solids DL=Drain Liquids T=Tar W/Wgr L=Liquid V=Vegetation X=Other
EAS LOCKED STORAGE 2		SHANNAN JOHNSON					
SHANNAN JOHNSON		FDV					
<i>[Signature]</i>		<i>[Signature]</i>					
Date/Time		Date/Time					
Date/Time		Date/Time					
LABORATORY SECTION	Received By	Title			Date/Time		
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By			Date/Time		

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-252	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>415109</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location 300SA-WAL2, CARCASS		SAF No. RC-118			
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. EL-1633	COA BESCR6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading # <b>FDX# 796986356875</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation	Cool 4C				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G				
		No. of Container(s)	1				
		Volume	15mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic					
Sample No.	Matrix *	Sample Date	Sample Time				
J18XJ2 <i>2981-212</i>	OTHER SOLID	<i>9/24/09</i>	<i>1000</i>	<i>X</i>			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1000</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1000</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment in lab</p>			S=Soil
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9/24/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9/24/09</i>				SE=Settlement
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>10/21/09</i>	Received By/Stored In <b>FDX</b>	Date/Time <i>10/21/09</i>				SO=Soil
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				SI=Sludge
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time				W=Water
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	O=Oil	A=Air	DS=Drum Solids	
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	DL=Drum Liquids	T=Tissue	WL=Wipe	
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time	L=Liquid	V=Vegetation	X=Other	
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-197	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>OK</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 100SA-WAL2-FILLET	SAF No. RC-118		<i>N</i>			
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A	Bill of Lading <b>FDX# 796986356875</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS							
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		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				
J18X97 <i>2981-213</i>	OTHER SOLID	<i>9/25/09</i>	<i>1100</i>	<i>X</i>			
CHAIN OF POSSESSION				SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9/25/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9/25/09</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>			<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SH=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Drum Solids</li> <li>DL=Drum Liquids</li> <li>T=Tram</li> <li>W=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
<b>EAS LOCKED STORAGE</b>							
Relinquished By/Removed From <b>EAS LOCKED STORAGE</b>	Date/Time <i>9/29/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9/29/09</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/29/09</i>	Received By/Stored In <b>FOX</b>	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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-217	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>JAS/09</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location 100SA-WAL2-CARCASS		SAF No. RC-118			
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading/ <b>FDX# 796986356875</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation	Cool 4C		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G		
				No. of Container(s)	1		
				Volume	15mL		
SAMPLE ANALYSIS				Total Inorganic Arsenic			
Sample No.	Matrix *	Sample Date	Sample Time				
J18XC7 <i>2981-244</i>	OTHER SOLID	<i>9/25/09</i>	<i>1130</i>	X			
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1130</i> <i>9/25/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1130</i> <i>9/25/09</i>	EAS LOCKED STORAGE		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE</b>	Date/Time <i>9/29/09</i> <i>1015</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9/29/09</i> <i>1015</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/29/09</i> <i>1015</i>	Received By/Stored In <b>FDX</b>	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			Matrix *	
LABORATORY SECTION	Received By	Title				Date/Time	
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By				Date/Time	

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-235	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 300SA-WALS, FILLET	SAF No. RC-118	Bill of Materials # <b>FDX# 796986356875</b>				
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation	Cool 4C				
Special Handling and/or Storage FREEZE "MATRIX COMPOSED OF FISH"		Type of Container	P/G				
		No. of Container(s)	1				
		Volume	15mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic					
Sample No.	Matrix *	Sample Date	Sample Time				
J18XF5 <i>2981.245</i>	OTHER SOLID	<i>9/23/09</i>	<i>11:30</i>	X			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS		Matrix *	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9/23/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9/23/09</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>		<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediment</li> <li>SO=Solid</li> <li>SL=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>DS=Dry Solid</li> <li>DL=Dry Liquid</li> <li>T=Tissue</li> <li>WI=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>	
EAS LOCKED STORAGE 2		SHANNAN JOHNSON					
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>10/4/09</i>	Received By/Stored In <i>FDX</i>	Date/Time <i>10/4/09</i>				
Relinquished By/Removed From <i>[Signature]</i>	Date/Time <i>9/30/09 15:00</i>	Received By/Stored In <i>[Signature]</i>	Date/Time <i>9/30/09 15:00</i>				
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			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-255	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>OK</i> <i>N</i> <i>40 51209</i>	Data Turnaround <b>45 Days</b>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location 300SA-WALS, CARCASS		SAF No. RC-118			
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. EL-1633	COA BESCRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences		Offsite Property No. N/A	Bill of Lading # <b>FDX# 796986356875</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation	Cool 4C		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>				Type of Container	P/G		
				No. of Container(s)	1		
				Volume	15mL		
SAMPLE ANALYSIS				Total Inorganic Arsenic			
Sample No.	Matrix *	Sample Date	Sample Time				
J18XJ5 <i>2981.246</i>	OTHER SOLID	<i>9/25/09</i>	<i>1700</i>	<i>X</i>			
CHAIN OF POSSESSION				Sign/Print Names		SPECIAL INSTRUCTIONS	
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1700</i> <i>9/25/09</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1700</i> <i>9/25/09</i>	EAS LOCKED STORAGE 2		<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>	
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9/25/09</i> <i>1045</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>9/25/09</i> <i>1045</i>				
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/29/09</i> <i>1045</i>	Received By/Stored In <b>FDX</b>	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				
LABORATORY SECTION	Received By	Title		Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-218	Page 1 of 1	
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>4/0 5/18 09</i>	Data Turnaround <b>45 Days</b>		
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location 100SA-WAL3-CARCASS		SAF No. RC-118				
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESCRC6520	Method of Shipment FED EX					
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading/Bill No. <b>796986356875</b>				
POSSIBLE SAMPLE HAZARDS/REMARKS					Preservation	Cool 4C		
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Type of Container	P/G		
					No. of Container(s)	1		
					Volume	15mL		
SAMPLE ANALYSIS					Total Inorganic Arsenic			
Sample No.	Matrix *	Sample Date	Sample Time					
J18XC8 <i>2981-247</i>	OTHER SOLID	<i>9/25/09</i>	<i>1230</i>	X				
CHAIN OF POSSESSION				Sign/Print Names	SPECIAL INSTRUCTIONS			
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>1230</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>1230</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>				Matrix * S=Soil SE=Sediment SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Drum Solids DL=Drum Liquids T=Tissue W=Wipe L=Liquid V=Vegetation X=Other
Relinquished By/Removed From <b>EAS LOCKED STORAGE 2</b>	Date/Time <i>9/25/09</i>	Received By/Stored In <b>SHANNAN JOHNSON</b>	Date/Time <i>1230</i>					
Relinquished By/Removed From <b>SHANNAN JOHNSON</b>	Date/Time <i>9/29/09</i>	Received By/Stored In <b>FDX</b>	Date/Time <i>1045</i>					
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					
LABORATORY SECTION	Received By	Title		Date/Time				
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By		Date/Time				

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-198	Page 1 of 1
Collector <i>Wendy West</i>	Company Contact JOAN KESSNER	Telephone No. 375-4688	Project Coordinator KESSNER, JH	Price Code <i>9K</i>	Data Turnaround <i>45 Days</i>		
Project Designation Columbia River Component of the RCBRA - Tissues	Sampling Location 100SA-WAL3-FILLET	SAF No. RC-118	Bill of Lading # <i>FD 796986356875</i>				
Ice Chest No. <i>AFS-04-041</i>	Field Logbook No. 1633	COA BESCRC6520	Method of Shipment FED EX				
Shipped To Battelle Marine Sciences	Offsite Property No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS		Preservation	Cool 4C				
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>		Type of Container	P/G				
		No. of Container(s)	1				
		Volume	15mL				
SAMPLE ANALYSIS		Total Inorganic Arsenic					
Sample No.	Matrix *	Sample Date	Sample Time				
J18X98 <i>2981-248</i>	OTHER SOLID	<i>9/25/09</i>	<i>1200</i>	X			
CHAIN OF POSSESSION		Sign/Print Names		SPECIAL INSTRUCTIONS			Matrix *
Relinquished By/Removed From <i>Wendy West</i>	Date/Time <i>9/25/09 1200</i>	Received By/Stored In <i>Wendy West</i>	Date/Time <i>9/25/09 1200</i>	<p>Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody of samples for shipment to lab.</p>			<ul style="list-style-type: none"> <li>S=Soil</li> <li>SE=Sediments</li> <li>SO=Sludge</li> <li>SI=Sludge</li> <li>W=Water</li> <li>O=Oil</li> <li>A=Air</li> <li>D6=Dross Sludge</li> <li>DL=Dross Liquids</li> <li>T=Tanner</li> <li>W1=Wipe</li> <li>L=Liquid</li> <li>V=Vegetation</li> <li>X=Other</li> </ul>
<b>EAS LOCKED STORAGE 2</b>		<b>EAS LOCKED STORAGE 2</b>					
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>9/29/09 1045</i>	Received By/Stored In <i>SHANNAN JOHNSON</i>	Date/Time <i>9/29/09 1045</i>				
Relinquished By/Removed From <i>SHANNAN JOHNSON</i>	Date/Time <i>10/21/09 1045</i>	Received By/Stored In <i>EDY</i>	Date/Time <i>10/21/09 1045</i>				
Relinquished By/Removed From <i>EDY</i>	Date/Time <i>09/25/09 1500</i>	Received By/Stored In <i>EDY</i>	Date/Time <i>09/25/09 1500</i>				
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			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-234		Page 1 of 1	
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <i>9K</i> <i>N</i> <i>4851809</i>	
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location 300SA-WAL4, FILLET		SAF No. RC-118		Data Turnaround <b>45 Days</b>			
Ice Chest No. <i>APS-04-041</i>		Field Logbook No. 1633		COA BESCRC6520		Method of Shipment FED EX			
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading # <b>796986356875</b>					
POSSIBLE SAMPLE HAZARDS/REMARKS									
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					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			
J18XF4 <i>2981-249</i>		OTHER SOLID		<i>9/25/09</i>		<i>1400</i>		X	
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS				
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		Matrix *	
<i>Wendy West</i>		<i>9/25/09</i>		<i>Wendy West</i>		<i>9/25/09</i>		S=Soil SL=Seiche SO=Solid SL=Sludge W=Water O=Oil A=Air DS=Dust Solids DL=Dust Liquids T=Tissue W=Wipe L=Liquid V=Vegetation X=Other	
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.	
EAS LOCKED STORAGE 2		<i>9/29/09</i>		SHANNAN JOHNSON		<i>9/29/09</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
SHANNAN JOHNSON		<i>9/29/09</i>		FDX		<i>10/45</i>			
Relinquished By/Removed From		Date/Time		Received By/Stored In		Date/Time			
				<i>Shannan Johnson</i>		<i>9/30/09 1500</i>			
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			

Washington Closure Hanford		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST				RC-118-254		Page 1 of 1																																																			
Collector <i>Wendy West</i>		Company Contact JOAN KESSNER		Telephone No. 375-4688		Project Coordinator KESSNER, JH		Price Code <del>9K</del> <i>N</i> <i>DA 5199</i>																																																			
Project Designation Columbia River Component of the RCBRA - Tissues		Sampling Location 300SA-WAL4, CARCASS		SAF No. RC-118		Data Turnaround <b>45 Days</b>																																																					
Ice Chest No. <i>AFS-04-041</i>		Field Logbook No. EL-1633		COA BESRCR6520		Method of Shipment FED EX																																																					
Shipped To Battelle Marine Sciences		Offsite Property No. N/A		Bill of Lading Bill No. <b>FD 796986356875</b>																																																							
POSSIBLE SAMPLE HAZARDS/REMARKS					Preservation																																																						
Special Handling and/or Storage <i>FREEZE "MATRIX COMPOSED OF FISH"</i>					Cool 4C																																																						
					Type of Container																																																						
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Volume					1																																																						
SAMPLE ANALYSIS					15mL																																																						
					Total Inorganic Arsenic																																																						
<table border="1"> <thead> <tr> <th>Sample No.</th> <th>Matrix *</th> <th>Sample Date</th> <th>Sample Time</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>J18XJ4</td> <td><i>2981-250</i></td> <td><i>9/25/09</i></td> <td><i>1415</i></td> <td><i>X</i></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> </tr> <tr> <td></td> </tr> <tr> <td></td> </tr> </tbody> </table>										Sample No.	Matrix *	Sample Date	Sample Time							J18XJ4	<i>2981-250</i>	<i>9/25/09</i>	<i>1415</i>	<i>X</i>																																			
Sample No.	Matrix *	Sample Date	Sample Time																																																								
J18XJ4	<i>2981-250</i>	<i>9/25/09</i>	<i>1415</i>	<i>X</i>																																																							
CHAIN OF POSSESSION					SPECIAL INSTRUCTIONS					Matrix *																																																	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		Received By/Stored In		Date/Time																																																	
<i>Wendy West</i>		<i>9/25/09</i>		<i>Wendy West</i>		<i>9/25/09</i>		EAS LOCKED STORAGE 2		<i>9/25/09</i>																																																	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		Received By/Stored In		Date/Time																																																	
EAS LOCKED STORAGE 2		<i>10/2/09</i>		SHANNAN JOHNSON		<i>10/2/09</i>		SHANNAN JOHNSON		<i>10/2/09</i>																																																	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		Received By/Stored In		Date/Time																																																	
SHANNAN JOHNSON		<i>10/2/09</i>		FOX		<i>10/2/09</i>		FOX		<i>10/2/09</i>																																																	
Relinquished By/Removed From		Date/Time		Sign/Print Names		Date/Time		Received By/Stored In		Date/Time																																																	
				<i>Shannon Johnson</i>		<i>09/29/09 1500</i>																																																					
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LABORATORY SECTION		Received By				Title				Date/Time																																																	
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time																																																	

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

LOG-IN CHECKLIST

Reference SOP# MSL-A-001

Central File #: 2981 Sample No(s): 223-250 Batch: 18  
Project Name: WA Closure Nanford Project Manager: Brundenberger

**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) 3.2 °C  
(if multiple coolers, note temp. of each) \_\_\_\_\_ °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):  Damaged  Other (explain): \_\_\_\_\_

Container type:  Teflon  Poly  Glass  Cap. Vial  Other

Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 09/30/09 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 freeze B-1

Other Notes: \_\_\_\_\_

Completed By: [Signature] Date/Time: 1530 09/30/09

Storage Shelf: B-1