0084985

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 SEQ082009 SAF-RC-118

Rad only ☑ Chem only Rad & Chem

☑ Complete Partial

Sampling Location: **STURGEON 14 FILLET/CARCASS**
STURGEON 15 FILLET/CARCASS
STURGEON 16 FILLET/CARCASS

RECEIVED
FEB 04 2010
EDMC

Analytical Chemistry Data Package
Inorganics Analysis

Project: Washington Closures Hanford
As Speciation Analysis of Tissue

SDG 080609
SDG 081409
SDG 082009

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

INORGANIC CHEMISTRY ANALYSIS DATA PACKAGE CONTENTS

As Speciation Analysis in Tissue

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Sample Custody Information

Laboratory Sample Log-In and Chain of Custody Forms for:
SDG080609 10
SDG081409 22
SDG082009 40

BATTELLE MARINE SCIENCES LABORATORY
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Washington Closure Hanford
Arsenic Speciation Study
SDG 080609, SDG081409, and SDG082009

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Percent Dry Wt	AsB µg/g dry wt.	DMA µg/g dry wt.	MMA µg/g dry wt.	As[3,5] µg/g dry wt.	*Total As* µg/g dry wt.
Method Detection Limit (MDL)								*0.002* [1]	*0.005*	*0.007*	*0.01*	*Cal.*
2981-113	J19266	SDG080609	08/06/09	07/28/09	09/17/09	091709-LCDRC	32.7	0.0510	0.005 U	0.007 U	0.01 U	*0.0730*
2981-114	J19265	SDG080609	08/06/09	07/28/09	09/17/09	091709-LCDRC	27.4	0.197	0.005 U	0.007 U	0.01 U	*0.219*
2981-115	J19268	SDG080609	08/06/09	07/29/09	09/17/09	091709-LCDRC	26.3	0.0369	0.00666	0.007 U	0.0101	*0.0606*
2981-116	J19267	SDG080609	08/06/09	07/29/09	09/17/09	091709-LCDRC	23.4	0.110	0.005 U	0.007 U	0.01 U	*0.132*
2981-117 R1	J19292	SDG080609	08/06/09	07/30/09	09/17/09	091709-LCDRC	33.7	0.0727	0.0141	0.007 U	0.01 U	*0.104*
2981-117 R2	J19292	SDG080609	08/06/09	07/30/09	09/17/09	091709-LCDRC	33.7	0.0661	0.0157	0.007 U	0.01 U	*0.0989*
2981-118	J19291	SDG080609	08/06/09	07/30/09	09/17/09	091709-LCDRC	27.6	0.201	0.0101	0.007 U	0.01 U	*0.228*
2981-119	J192B2	SDG080609	08/06/09	08/03/09	09/17/09	091709-LCDRC	25.7	0.134	0.0142	0.007 U	0.01 U	*0.165*
2981-120	J192B1	SDG080609	08/06/09	08/03/09	09/17/09	091709-LCDRC	22.1	0.439	0.005 U	0.007 U	0.01 U	*0.461*
2981-121	J192C2	SDG080609	08/06/09	08/03/09	09/17/09	091709-LCDRC	29.5	0.0526	0.00828	0.007 U	0.01 U	*0.0779*
2981-122	J192C1	SDG080609	08/06/09	08/03/09	09/17/09	091709-LCDRC	25.0	0.146	0.005 U	0.007 U	0.01 U	*0.168*
2981-123	J192F1	SDG081409	08/14/09	08/04/09	09/17/09	091709-LCDRC	22.3	0.402	0.005 U	0.007 U	0.01 U	*0.424*
2981-124	J192F2	SDG081409	08/14/09	08/04/09	09/17/09	091709-LCDRC	25.3	0.153	0.005 U	0.007 U	0.01 U	*0.175*
2981-125	J192H2	SDG081409	08/14/09	08/04/09	09/17/09	091709-LCDRC	27.0	0.0391	0.005 U	0.007 U	0.01 U	*0.0611*
2981-126	J192H3	SDG081409	08/14/09	08/04/09	09/17/09	091709-LCDRC	33.6	0.0172	0.0170	0.007 U	0.01 U	*0.0512*
2981-127	J19304	SDG081409	08/14/09	08/05/09	09/17/09	091709-LCDRC	23.8	0.104	0.005 U	0.007 U	0.01 U	*0.126*
2981-128	J19305	SDG081409	08/14/09	08/05/09	09/17/09	091709-LCDRC	27.3	0.0339	0.005 U	0.007 U	0.01 U	*0.0559*
2981-129 R1	J19314	SDG081409	08/14/09	08/05/09	09/18/09	091809-LCDRC	20.8	0.327	0.005 U	0.007 U	0.01 U	*0.349*
2981-129 R2	J19314	SDG081409	08/14/09	08/05/09	09/18/09	091809-LCDRC	20.8	0.120	0.005 U	0.007 U	0.01 U	*0.142*
2981-130	J19315	SDG081409	08/14/09	08/05/09	09/18/09	091809-LCDRC	26.7	0.0883	0.005 U	0.007 U	0.01 U	*0.110*
2981-131	J19325	SDG081409	08/14/09	08/06/09	09/18/09	091809-LCDRC	24.5	0.0631	0.005 U	0.007 U	0.01 U	*0.0851*
2981-132	J19326	SDG081409	08/14/09	08/06/09	09/18/09	091809-LCDRC	33.2	0.0184	0.00862	0.007 U	0.01 U	*0.0441*
2981-133	J193L2	SDG081409	08/14/09	08/06/09	09/18/09	091809-LCDRC	22.4	0.218	0.005 U	0.007 U	0.01 U	*0.240*
2981-134	J193L3	SDG081409	08/14/09	08/06/09	09/18/09	091809-LCDRC	26.1	0.0840	0.005 U	0.007 U	0.01 U	*0.106*
2981-135	J193M2	SDG081409	08/14/09	08/10/09	09/18/09	091809-LCDRC	28.6	0.0107	0.00942	0.007 U	0.01 U	*0.0371*
2981-136	J193M3	SDG081409	08/14/09	08/10/09	09/18/09	091809-LCDRC	32.0	0.0134	0.00549	0.007 U	0.01 U	*0.0359*
2981-137	J193N4	SDG081409	08/14/09	08/11/09	09/18/09	091809-LCDRC	22.3	0.620	0.005 U	0.007 U	0.01 U	*0.642*
2981-138	J193N5	SDG081409	08/14/09	08/11/09	09/18/09	091809-LCDRC	25.6	0.219	0.0177	0.007 U	0.01 U	*0.254*
2981-139	J19446	SDG082009	08/20/09	08/12/09	09/18/09	091809-LCDRC	39.4	0.0196	0.005 U	0.007 U	0.01 U	*0.0416*
2981-140	J19447	SDG082009	08/20/09	08/17/09	09/18/09	091809-LCDRC	40.9	0.0131	0.005 U	0.007 U	0.0121	*0.0372*
2981-141	J19456	SDG082009	08/20/09	08/17/09	09/18/09	091809-LCDRC	22.9	0.230	0.005 U	0.007 U	0.01 U	*0.252*
2981-142	J19457	SDG082009	08/20/09	08/17/09	09/18/09	091809-LCDRC	26.2	0.0842	0.005 U	0.007 U	0.01 U	*0.106*
2981-143	J19466	SDG082009	08/20/09	08/17/09	09/18/09	091809-LCDRC	24.1	0.133	0.005 U	0.007 U	0.01 U	*0.155*
2981-144	J19467	SDG082009	08/20/09	08/17/09	09/18/09	091809-LCDRC	29.1	0.0341	0.00596	0.007 U	0.01 U	*0.0571*
QUALITY CONTROL SAMPLE RESULTS						*Average*	*27.4*					
Method Blank												
Blank R1					09/17/09	091709-LCDRC		0.002 U	0.005 U	0.007 U	0.01 U	*NA*
Blank R2					09/18/09	091809-LCDRC		0.002 U	0.005 U	0.007 U	0.01 U	*NA*
Standard Reference Material												
DORM-2 r1					09/17/09	091709-LCDRC		14.1	0.312	0.007 U	0.01 U	*14.4*
DORM-2 r2					09/18/09	091809-LCDRC		14.3	0.353	0.007 U	0.01 U	*14.6*
Certified Value								**16.4**	NA	NA	NA	**18.0**
% Recovery								**86%**				**80%**
% Recovery								**87%**				**81%**
Blank Spike Results												
LCS R1					09/17/09	091709-LCDRC		2.00	2.04	2.00	4.04	*10.1*
LCS R2					09/18/09	091809-LCDRC		2.00	1.94	1.86	3.79	*9.59*
Spike								2.00	2.00	2.00	4.00	10.0
% Rec								**100%**	**102%**	**100%**	**101%**	**101%**
% Rec								**100%**	**97%**	**93%**	**95%**	**96%**

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Arsenic Speciation Study
SDG 080609, SDG081409, and SDG082009

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	Percent Dry Wt	AsB µg/g dry wt.	DMA µg/g dry wt.	MMA µg/g dry wt.	As^{3-5} µg/g dry wt.	*Total As* µg/g dry wt.
Method Detection Limit (MDL)								*0.002* [1]	*0.005*	*0.007*	*0.01*	*Cal*
Replicate Analysis Results												
2981-117 R1	J19292	SDG080609	08/06/09	07/30/09	09/17/09	091709-LCDRC	33.7	0.0727	0.0141	0.007 U	0.01 U	*0.104*
2981-117 R2	J19292	SDG080609	08/06/09	07/30/09	09/17/09	091709-LCDRC	33.7	0.0661	0.0157	0.007 U	0.01 U	*0.0989*
	RPD							NA	NA	NA	NA	NA
2981-129 R1	J19314	SDG081409	08/14/09	08/05/09	09/18/09	091809-LCDRC	20.8	0.327	0.005 U	0.007 U	0.01 U	*0.349*
2981-129 R2	J19314	SDG081409	08/14/09	08/05/09	09/18/09	091809-LCDRC	20.8	0.120	0.005 U	0.007 U	0.01 U	*0.142*
	RPD							NA	NA	NA	NA	NA
Matrix Spike Accuracy												
2981-120	J192B1	SDG080609	08/06/09	08/03/09	09/17/09	091709-LCDRC	22.1	0.439	0.005 U	0.007 U	0.01 U	*0.461*
2981- 120MS					09/17/09	091709-LCDRC	22.1	2.37	0.989	1.01	2.99	*7.37*
2981- 120MSD					09/17/09	091709-LCDRC	22.1	2.45	1.14	1.21	2.96	*7.76*
Spike Amount, MS								NA	NA	NA	3.86	NA
Spike Amount, MSD								NA	NA	NA	3.97	NA
% Recovery, MS								NA	NA	NA	**77%**	NA
% Recovery, MSD								NA	NA	NA	**76%**	NA
RPD								NA	NA	NA	**1%**	NA
2981-137	J193N4	SDG081409	08/14/09	08/11/09	09/18/09	091809-LCDRC	22.3	0.620	0.005 U	0.007 U	0.01 U	*0.642*
2981- 137MS					09/18/09	091809-LCDRC	22.3	2.64	1.01	1.07	3.31	*8.03*
2981- 137MSD					09/18/09	091809-LCDRC	22.3	2.72	0.987	1.16	3.33	*8.20*
Spike Amount, MS								NA	NA	NA	3.90	NA
Spike Amount, MSD								NA	NA	NA	3.95	NA
% Recovery, MS								NA	NA	NA	**85%**	NA
% Recovery, MSD								NA	NA	NA	**85%**	NA
RPD								NA	NA	NA	**1%**	NA

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

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

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

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Arsenic Speciation Study
Wet Weight Conversion Table

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	AsB µg/g wet wt.	DMA µg/g wet wt.	MMA µg/g wet wt.	As[1,5] µg/g wet wt.	*Total As* µg/g wet wt.
Method Detection Limit (MDL)							*0.00055* [1]	*0.001*	*0.002*	*0.003*	*Calc.*
2981-113	J19266	SDG080609	08/06/09	07/28/09	09/17/09	091709-LCDRC	0.0167	0.001 U	0.002 U	0.003 U	*0.0227*
2981-114	J19265	SDG080609	08/06/09	07/28/09	09/17/09	091709-LCDRC	0.0541	0.001 U	0.002 U	0.003 U	*0.0601*
2981-115	J19268	SDG080609	08/06/09	07/29/09	09/17/09	091709-LCDRC	0.00970	0.00175	0.002 U	0.003 U	*0.0165*
2981-116	J19267	SDG080609	08/06/09	07/29/09	09/17/09	091709-LCDRC	0.0258	0.001 U	0.002 U	0.003 U	*0.0318*
2981-117 R1	J19292	SDG080609	08/06/09	07/30/09	09/17/09	091709-LCDRC	0.0245	0.00476	0.002 U	0.003 U	*0.0342*
2981-117 R2	J19292	SDG080609	08/06/09	07/30/09	09/17/09	091709-LCDRC	0.0223	0.00529	0.002 U	0.003 U	*0.0326*
2981-118	J19291	SDG080609	08/06/09	07/30/09	09/17/09	091709-LCDRC	0.0556	0.00278	0.002 U	0.003 U	*0.0633*
2981-119	J192B2	SDG080609	08/06/09	08/03/09	09/17/09	091709-LCDRC	0.0343	0.00363	0.002 U	0.003 U	*0.0430*
2981-120	J192B1	SDG080609	08/06/09	08/03/09	09/17/09	091709-LCDRC	0.0972	0.001 U	0.002 U	0.003 U	*0.103*
2981-121	J192C2	SDG080609	08/06/09	08/03/09	09/17/09	091709-LCDRC	0.0155	0.00244	0.002 U	0.003 U	*0.0230*
2981-122	J192C1	SDG080609	08/06/09	08/03/09	09/17/09	091709-LCDRC	0.0363	0.001 U	0.002 U	0.003 U	*0.0423*
2981-123	J192F1	SDG081409	08/14/09	08/04/09	09/17/09	091709-LCDRC	0.0896	0.001 U	0.002 U	0.003 U	*0.0956*
2981-124	J192F2	SDG081409	08/14/09	08/04/09	09/17/09	091709-LCDRC	0.0387	0.001 U	0.002 U	0.003 U	*0.0447*
2981-125	J192H2	SDG081409	08/14/09	08/04/09	09/17/09	091709-LCDRC	0.0106	0.001 U	0.002 U	0.003 U	*0.0166*
2981-126	J192H3	SDG081409	08/14/09	08/04/09	09/17/09	091709-LCDRC	0.00577	0.00570	0.002 U	0.003 U	*0.0165*
2981-127	J19304	SDG081409	08/14/09	08/05/09	09/17/09	091709-LCDRC	0.0247	0.001 U	0.002 U	0.003 U	*0.0307*
2981-128	J19305	SDG081409	08/14/09	08/05/09	09/17/09	091709-LCDRC	0.00924	0.001 U	0.002 U	0.003 U	*0.0152*
2981-129 R1	J19314	SDG081409	08/14/09	08/05/09	09/18/09	091809-LCDRC	0.0681	0.001 U	0.002 U	0.003 U	*0.0741*
2981-129 R2	J19314	SDG081409	08/14/09	08/05/09	09/18/09	091809-LCDRC	0.0251	0.001 U	0.002 U	0.003 U	*0.0311*
2981-130	J19315	SDG081409	08/14/09	08/05/09	09/18/09	091809-LCDRC	0.0236	0.001 U	0.002 U	0.003 U	*0.0296*
2981-131	J19325	SDG081409	08/14/09	08/06/09	09/18/09	091809-LCDRC	0.0155	0.001 U	0.002 U	0.003 U	*0.0215*
2981-132	J19326	SDG081409	08/14/09	08/06/09	09/18/09	091809-LCDRC	0.00612	0.00286	0.002 U	0.003 U	*0.0140*
2981-133	J193L2	SDG081409	08/14/09	08/06/09	09/18/09	091809-LCDRC	0.0489	0.001 U	0.002 U	0.003 U	*0.0549*
2981-134	J193L3	SDG081409	08/14/09	08/06/09	09/18/09	091809-LCDRC	0.0219	0.001 U	0.002 U	0.003 U	*0.0279*
2981-135	J193M2	SDG081409	08/14/09	08/10/09	09/18/09	091809-LCDRC	0.00306	0.00269	0.002 U	0.003 U	*0.0108*
2981-136	J193M3	SDG081409	08/14/09	08/10/09	09/18/09	091809-LCDRC	0.00429	0.00176	0.002 U	0.003 U	*0.0110*
2981-137	J193N4	SDG081409	08/14/09	08/11/09	09/18/09	091809-LCDRC	0.138	0.001 U	0.002 U	0.003 U	*0.144*
2981-138	J193N5	SDG081409	08/14/09	08/11/09	09/18/09	091809-LCDRC	0.0559	0.00453	0.002 U	0.003 U	*0.0655*
2981-139	J19446	SDG082009	08/20/09	08/12/09	09/18/09	091809-LCDRC	0.00774	0.001 U	0.002 U	0.003 U	*0.0137*
2981-140	J19447	SDG082009	08/20/09	08/17/09	09/18/09	091809-LCDRC	0.00538	0.001 U	0.002 U	######	*0.0133*
2981-141	J19456	SDG082009	08/20/09	08/17/09	09/18/09	091809-LCDRC	0.0526	0.001 U	0.002 U	0.003 U	*0.0586*
2981-142	J19457	SDG082009	08/20/09	08/17/09	09/18/09	091809-LCDRC	0.0221	0.001 U	0.002 U	0.003 U	*0.0281*
2981-143	J19466	SDG082009	08/20/09	08/17/09	09/18/09	091809-LCDRC	0.0321	0.001 U	0.002 U	0.003 U	*0.0381*
2981-144	J19467	SDG082009	08/20/09	08/17/09	09/18/09	091809-LCDRC	0.00993	0.00174	0.002 U	0.003 U	*0.0167*
QUALITY CONTROL SAMPLE RESULTS						*Average*					
Method Blank											
Blank R1					09/17/09	091709-LCDRC	0.0006 U	0.0014 U	0.002 U	0.003 U	*NA*
Blank R2					09/18/09	091809-LCDRC	0.0006 U	0.0014 U	0.002 U	0.003 U	*NA*
Standard Reference Material											
DORM-2 r1					09/17/09	091709-LCDRC					
DORM-2 r2					09/18/09	091809-LCDRC					
Certified Value											
% Recovery											
% Recovery											
Blank Spike Results											
LCS R1					09/17/09	091709-LCDRC					
LCS R2					09/18/09	091809-LCDRC					
Spike											
% Rec											
% Rec											

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Arsenic Speciation Study
Wet Weight Conversion Table

MSL Code	Client ID	SDG	Received Date	Collection Date	Analysis Date	Analytical Batch ID	AsB µg/g wet wt.	DMA µg/g wet wt.	MMA µg/g wet wt.	As^{1-5} µg/g wet wt.	*Total As* µg/g wet wt.
Method Detection Limit (MDL)							*0.00055* [1]	*0.001*	*0.002*	*0.003*	*Cal*
Replicate Analysis Results											
2981-117 R1	J19292	SDG080609	08/06/09	07/30/09	09/17/09	091709-LCDRC	0.0245	0.00476	0.002 U	0.003 U	*0.0342*
2981-117 R2	J19292	SDG080609	08/06/09	07/30/09	09/17/09	091709-LCDRC	0.0223	0.00529	0.002 U	0.003 U	*0.0326*
	RPD						NA	NA	NA	NA	NA
2981-129 R1	J19314	SDG081409	08/14/09	08/05/09	09/18/09	091809-LCDRC	0.0681	0.001 U	0.002 U	0.003 U	*0.0741*
2981-129 R2	J19314	SDG081409	08/14/09	08/05/09	09/18/09	091809-LCDRC	0.0251	0.001 U	0.002 U	0.003 U	*0.0311*
	RPD						NA	NA	NA	NA	NA
Matrix Spike Accuracy											
2981-120	J192B1	SDG080609	08/06/09	08/03/09	09/17/09	091709-LCDRC					
2981-120MS					09/17/09	091709-LCDRC					
2981-120MSD					09/17/09	091709-LCDRC					
Spike Amount, MS											
Spike Amount, MSD											
% Recovery, MS											
% Recovery, MSD											
RPD											
2981-137	J193N4	SDG081409	08/14/09	08/11/09	09/18/09	091809-LCDRC					
2981-137MS					09/18/09	091809-LCDRC					
2981-137MSD					09/18/09	091809-LCDRC					
Spike Amount, MS											
Spike Amount, MSD											
% Recovery, MS											
% Recovery, MSD											
RPD											

NOTES: Arsenobetaine (AsB)
Dimethylarsinic acid (DMA)
Monomethyarsonic acid (MMA)
Arsenate (V or As^{5+})
Arsenite (III or As^{3+})
Total Inorganic Arsenic = As^{1-5}
Total As = Sum of AsB, DMA, MMA, and As^{1-5}
Cal = Calculated Value

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

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

QA/QC NARRATIVE

PROJECT:	Washington Closures Hanford
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:	A total of 32 tissue samples were received at MSL in three shipments: 08/06/09, 08/14/09, and 08/20/09. All samples were received in good condition (i.e., no sample containers were broken or leaking). Samples were assigned a Battelle Central File (CF) identification number (2981) and were entered into the MSL sample tracking and project management system.

SAMPLE PROCESSING INFORMATION:

MSL Code:	**SDG080609: 2981*113-122** **SDG081409: 2981*123-138** **SDG082009: 2981*139-144**
Description:	Freshwater Fish Homogenate
Collection dates	July and August 2009
Laboratory arrival date	08/06/09, 08/14/09, 08/20/09
Cooler temperature on arrival	2.1, 2.5, and 1.2°C, respectively
Extraction Dates:	09/17/09 and 09/18/09
Analyses Dates:	09/17/09 and 09/18/09

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-I-037 ARSENIC SPECIATION USING HIGH-PERFORMANCE LIQUID CHROMATOGRAPHY - INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY (HPLC-ICP-MS) IN AQUEOUS, SEDIMENT, AND TISSUE SAMPLES. This method was developed from guidance in EPA Method 1632 for the speciation of arsenic in waters. This method is applicable to the determination of total inorganic arsenic (As) and arsenic species in drinking, surface, groundwater, seawater, tissue and sediment extracts. The anionic or cationic arsenic species are separated by an anion ion exchange column on high-performance liquid chromatography (HPLC) followed by detection and quantification using inductively coupled plasma – mass spectrometry with a dynamic reaction cell accessory (ICP-DRC-MS). This method quantitatively determines organic species of arsenic including arsenobetaine (AsB), dimethylarsinic acid (DMA), monomethyarsonic acid (MMA), and can be set up to separate the inorganic oxidation states of 3+ and 5+. This allows risk assessment to be conducted on a chemical species of interest rather than just the total arsenic. This is particularly significant for arsenic as the toxicity is highly dependent on the chemical species, with the most toxic being the As3+ oxidation state. The data for the organic arsenic species were included along with the total inorganic arsenic determined as the sum of the inorganic oxidation states of 3+ and 5+. The quality control evaluated was conducted only on the total inorganic arsenic concentration identified in the table as As^{3+5}.

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

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

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 3-10 days after collection and stored at ≤ -18 °C and then lypholized. 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	0.0005 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
As3+5	HPLC/ICP-DRC-MS	85-115%	75-125%	±25%	≤25%	0.01 µg/g	0.003 µg/g

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

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

U Undetected at the MDL, MDL reported.

* Duplicates outside the QC sample criterion.

N Spikes outside the QC sample criterion.

METHOD BLANKS: Method blanks were prepared and analyzed with the samples at a frequency of one each per analytical batch. 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. 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.

REPLICATE PRECISION: Laboratory duplicates were analyzed at a frequency of one each per 20 field samples or analytical batch. The samples did not contain detectable As^{3+5}; therefore, precision was assessed using the matrix spike duplicates.

MATRIX SPIKE ACCURACY: The analytical method calls for matrix spikes at a frequency of one each per 20 samples or analytical batch. A matrix spike duplicate was also added to provide a measure of precision. The matrix spikes were within the QC acceptance criterion of 75-125% for all total inorganic arsenic spikes.

QA/QC NARRATIVE

Analytical precision was assessed using the matrix spike duplicates and were within the QC acceptance criterion of <25% RPD.

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 ±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.

Pacific Northwest NATIONAL LABORATORY | Battelle The Business of Innovation

SAMPLE LOGIN

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

Project Manager: Brandenberger
Date Received: 8/6/2009
Batch: 10
Login Designee: Mcgahan
Project: **Washington Closure Hanford**

Sponsor ID	Site Description	Battelle Code	Matrix	Storage Location	Requested Parameters	Collection Date
J19266	na	2981-113	other solid	Deep Freezer	Total Inorganic Arsenic, Cr	07/28/09
J19265	na	2981-114	other solid	Deep Freezer	Total Inorganic Arsenic, Cr	07/28/09
J19268	na	2981-115	other solid	Deep Freezer	Total Inorganic Arsenic, Cr	07/29/09
J19267	na	2981-116	other solid	Deep Freezer	Total Inorganic Arsenic, Cr	07/29/09
J19292	na	2981-117	other solid	Deep Freezer	Total Inorganic Arsenic, Cr	07/30/09
J19291	na	2981-118	other solid	Deep Freezer	Total Inorganic Arsenic, Cr	07/30/09
J192B2	na	2981-119	other solid	Deep Freezer	Total Inorganic Arsenic, Cr	08/03/09
J192B1	na	2981-120	other solid	Deep Freezer	Total Inorganic Arsenic, Cr	08/03/09
J192C2	na	2981-121	other solid	Deep Freezer	Total Inorganic Arsenic, Cr	08/03/09
J192C1	na	2981-122	other solid	Deep Freezer	Total Inorganic Arsenic, Cr	08/03/09

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-619	Page 1 of 1

Collector Wendy West	**Company Contact** JOAN KESSNER **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 9K N **Data Turnaround** 45 Days
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 1 CARCASS	**SAF No.** RC-118	1/D 72509
Ice Chest No. GLOS-052	**Field Logbook No.** EL-1638 **COA** BESCRC6520	**Method of Shipment** FED EX	
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A	**Bill of Lading/Air Bill No.** FDX # 7978235 11495	

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)			1	0								
Volume			60mL	60mL								
SAMPLE ANALYSIS			Total Inoganic Arsenic	Chromium Hex in Solids - 1636M								
Sample No.	Matrix *	Sample Date	Sample Time									
J19266 2281-113	OTHER SOLID	7/28/09	1100	X	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From Wendy West Wendy West	1100 7/28/09	Received By/Stored In EAS LOCKED STORAGE Wendy West Wendy West	1100 7/28/09
Relinquished By/Removed From EAS LOCKED STORAGE	8/5/09 1130	Received By/Stored In SHANNAN JOHNSON	1130 8/5/09
Relinquished By/Removed From SHANNAN JOHNSON	8/5/09 1130	Received By/Stored In FDX # 7978235 11495	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/5/09

Matrix *

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

LABORATORY SECTION	Received By	Title	Date/Time 08/06/09 1430
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-618	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 1 FILLET		SAF No.: RC-118
Ice Chest No.: GWS-052	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 7978235 114 95

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)			1	0							
Volume			60mL	60mL							
SAMPLE ANALYSIS			Total Inoganic Arsenic	Chromium Hex in Solids - 1636M							
Sample No.	Matrix *	Sample Date	Sample Time								
J19265 2981-114	OTHER SOLID	7/28/09	1100	X	X						

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: Wendy West, Wendy West — Date/Time: 1100, 7/28/09	Received By/Stored In: Wendy West, Wendy West, EAS LOCKED STORAGE — Date/Time: 1100, 7/28/09		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: EAS LOCKED STORAGE — Date/Time: 1130, 8/5/09	Received By/Stored In: SHANNAN JOHNSON — Date/Time: 8/5/09 1130		
Relinquished By/Removed From: SHANNAN JOHNSON — Date/Time: 8/5/09 1130	Received By/Stored In: FDX# 7978235 114 95 — 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:		

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/5/09

LABORATORY SECTION	Received By: [signature]	Title	Date/Time: 8/6/09 1432
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-629	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 2 CARCASS		SAF No.: RC-118
Ice Chest No.: 6105-052	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 797823511495

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)	1	0										
Volume	60mL	60mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic	Chromium Hex in Solids - 1636M										
Sample No.	Matrix *	Sample Date	Sample Time									
J19268 2981.115	OTHER SOLID	7/29/09	1500	X	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Wendy West Wendy West	1550 7/29/09	Received By/Stored In: EAS LOCKED STORAGE Wendy West Wendy West	1600 7/29/09
Relinquished By/Removed From: EAS LOCKED STORAGE	1130 8/5/09	Received By/Stored In: SHANNAN JOHNSON	8/5/09 1130
Relinquished By/Removed From: SHANNAN JOHNSON	8/5/09 1130	Received By/Stored In: FDX# 797823511495	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/5/09

Matrix *

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

LABORATORY SECTION	Received By: [signature]	Title	Date/Time: 8/6/09 1430
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-628	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 2 FILLET	SAF No.: RC-118	72209
Ice Chest No.: GWS-052	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 797823511495	

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)	1	0									
Volume	60mL	60mL									
SAMPLE ANALYSIS	Total Inorganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J19267 2981.116 / OTHER SOLID / 7/29/09 / 1500	X	X									

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 1500	Received By/Stored In	Date/Time 1500
Wendy West	7/29/09	EAS LOCKED STORAGE 2	7/29/09
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
EAS LOCKED STORAGE	8/5/09 1130	SHANNAN JOHNSON	8/5/09 1130
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
SHANNAN JOHNSON	8/5/09 1130	FDX# 797823511495	
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. Custodian removed samples for shipping on 8/5/09

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

LABORATORY SECTION	Received By	Title	Date/Time
	[signature]		05/04/09 1430
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-639	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 3 CARCASS		SAF No.: RC-118
Ice Chest No.: GLOS-052	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX 7978235 11495

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)	10	1										
Volume	15mL	60mL										
SAMPLE ANALYSIS	Total Inorganic Arsenic	Chromium Hex in Solids - 1636M										
Sample No.	Matrix *	Sample Date	Sample Time									
J19292 2981.112	OTHER SOLID	7/30/09	1400	X	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	7/30/09 1400	EAS LOCKED STORAGE Wendy West	7/30/09 1400
Relinquished By/Removed From: EAS LOCKED STORAGE	8/5/09 1130	SHANNAN JOHNSON	8/5/09 1130
Relinquished By/Removed From: SHANNAN JOHNSON	8/5/09 1130	FDX# 7978235 11495	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/5/09

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

LABORATORY SECTION	Received By: [signature]	Title	Date/Time: 8/6/09 1430
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-638	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 3 FILLET	SAF No.: RC-118	
Ice Chest No.: 605-052	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 7978235 11495	

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)	10	1
Volume	15mL	60mL
SAMPLE ANALYSIS	Total Inorganic Arsenic	Chromium Hex in Solids - 1636M

Sample No.	Matrix *	Sample Date	Sample Time	Total Inorganic Arsenic	Chromium Hex in Solids - 1636M
J19291 2981-118	OTHER SOLID	7/30/09	1400	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	7/30/09 1400	Received By/Stored In: EAS LOCKED STORAGE 2	7/30/09 1400
Relinquished By/Removed From: EAS LOCKED STORAGE 2	8/5/09 1130	Received By/Stored In: SHANNAN JOHNSON	8/5/09 1130
Relinquished By/Removed From: SHANNAN JOHNSON	8/5/09 1130	Received By/Stored In: FDX# 7978235 11495	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/5/09

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

LABORATORY SECTION	Received By	Title	Date/Time
	[illegible]		08/06/09 1430
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-649	Page 1 of 1

Collector: Mason F. Fidino	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: STURGEON 4 CARCASS		SAF No.: RC-118
Ice Chest No.: GWS-052	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 7978235 11495

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										
J192B2 2981.119	OTHER SOLID	8/3/09	1100	X	X								

CHAIN OF POSSESSION	Sign/Print Names	
Relinquished By/Removed From: M. Fidino 8-3-09 1100hrs	Received By/Stored In: EAS LOCKED STORAGE	Date/Time: 1100hrs 8-3-09
Relinquished By/Removed From: EAS LOCKED STORAGE	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 8/5/09 1130
Relinquished By/Removed From: SHANNAN JOHNSON	Received By/Stored In: FDX# 7978235 11495	Date/Time: 8/5/09 1130
Relinquished By/Removed From	Received By/Stored In	Date/Time
Relinquished By/Removed From	Received By/Stored In	Date/Time
Relinquished By/Removed From	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/5/09

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

LABORATORY SECTION	Received By	Title	Date/Time: 08/06/09 1430
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-118-648	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N 72709
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 4 FILLET		SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: 6WS-052	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Airbill No.: PDX: 7978235 11495	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS													
Preservation				Cool 4C	Freeze								
Type of Container				P/G	G/P								
No. of Container(s)				0	1								
Volume				15mL	60mL								
				Total Inoganic Arsenic	Chromium Hex in Solids - 1636M								
Sample No.	Matrix *	Sample Date	Sample Time										
J192B1 2981-120	OTHER SOLID	8/3/09	1000	X	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Wendy West	Date/Time: 8/3/09 1000	Received By/Stored In: EAS LOCKED STORAGE	Date/Time: 1000 8/3/09
Relinquished By/Removed From: EAS LOCKED STORAGE	Date/Time: 8/5/09 1130	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 8/5/09 1130
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 8/5/09 1130	Received By/Stored In: PDX: 7978235 11495	Date/Time:
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/5/09

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

LABORATORY SECTION	Received By:	Title	Date/Time: 8/06/09 1430
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-659	Page 1 of 1

Collector: Mason Fidino	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: STURGEON 5 CARCASS		SAF No.: RC-118
Ice Chest No.: 6605-052	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FD 7978235 11495

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

Sample No.	Matrix *	Sample Date	Sample Time	Total Inorganic Arsenic	Chromium Hex in Solids - 1636M
J192C2 2981.121	OTHER SOLID	8-3-09	1500	X	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: M. Fidino	8-3-09 1500	EAS LOCKED STORAGE	8-3-09 1500
Relinquished By/Removed From: EAS LOCKED STORAGE	8/5/09 1130	SHANNAN JOHNSON	8/5/09 1130
Relinquished By/Removed From: SHANNAN JOHNSON	8/5/09 1130	FDX 7978235 11495	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/5/09

Matrix *

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

LABORATORY SECTION	Received By: [signature]	Title	Date/Time: 08/06/09 1430
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-658	Page 1 of 1
Collector: Mason Fidino	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: STURGEON 5 FILLET	SAF No.: RC-118	
Ice Chest No.: GWS-052	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 797823511495	

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J192C1 2981.122 / OTHER SOLID / 8-3-09 / 1400	X	X									

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: M. Fidino; Date/Time: 8-3-09 1400	Received By/Stored In: M. Fidino; EAS LOCKED STORAGE #2; Date/Time: 8-3-09 1400	
Relinquished By/Removed From: EAS LOCKED STORAGE; Date/Time: 8/5/09 1130	Received By/Stored In: SHANNAN JOHNSON; Date/Time: 8/5/09 1130	
Relinquished By/Removed From: SHANNAN JOHNSON; Date/Time: 8/5/09 1130	Received By/Stored In: FDX# 797823511495; 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 relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/5/09
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; T=Tissue; Wl=Wipe; L=Liquid; V=Vegetation; X=Other

LABORATORY SECTION	Received By: [signature]	Title	Date/Time: 08/06/09 1430
FINAL SAMPLE DISPOSITION	Disposal Method	Disposed By	Date/Time

LOG-IN CHECKLIST

Reference SOP# MSL-A-001

Central File #: 2781 Sample No(s): 123-138 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?
✓			Was cooler(s) temperature(s) within acceptable range of 4±2°C or frozen? (if multiple coolers, note temp. of each) 2.5 °C _____ °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

Notes: _____

Completed By: [signature] Date/Time: 08/14/09 1300

SAMPLE PRESERVATION

- [✓] Sample(s) were preserved at MSL
- [ ] 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: Deep freezer C-2
- [ ] Other Notes: _____

Completed By: [signature] Date/Time: 08/14/09 1300

Storage Shelf: Deep freezer C-2

Pacific Northwest NATIONAL LABORATORY

Battelle The Business of Innovation

SAMPLE LOGIN

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

Project Manager: Brandenberger
Date Received: 8/14/2009
Batch: 11
Login Designee: Mcgahan
Project: **Washington Closure Hanford**

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

SOP#: MSL-A-001
As Speciation Data Package for SDGs 080609, 081409, and 082009

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-668

Washington Closure Hanford

Collector Wendy West	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 6 FILLET		**SAF No.** RC-118
Ice Chest No. EAS 08 1 0 6 W S 6 2 8	**Field Logbook No.** EL-1638	**COA** BESCRC6520	**Method of Shipment** FED EX
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** FEDEX 7968507269 69 N/A

Price Code 9K N

Data Turnaround 45 Days

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

Sample No.	Matrix *	Sample Date	Sample Time	Total Inorganic Arsenic	Chromium Hex in Solids - 1636M
J192F1 2281.123	OTHER SOLID	8/4/09	1000	X	X

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1000 8/4/09	EAS LOCK Storage #2 Wendy West	1000 8/4/09
EAS LOCKED STORAGE #2	8/5/09	SHANNAN JOHNSON	8/5/09 1000
SHANNAN JOHNSON	8/5/09 1000	FDX	
			08/24/09 1330

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/5/09

Matrix *

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

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-669

Washington Closure Hanford

Collector Wendy West	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Price Code ~~9K~~ N	**Data Turnaround** 45 Days		
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 6 CARCASS		**SAF No.** RC-118
Ice Chest No. GLOS 028	**Field Logbook No.** EL-1638	**COA** BESCRC6520	**Method of Shipment** FED EX
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** FDX# 796859726969

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J192F2 2981.124 / OTHER SOLID / 8/4/09 / 1145	X	X									

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1145 8/4/09	EAS LOCKED STORAGE 2 Wendy West	1145 8/4/09
EAS LOCKED STORAGE 2	1000 8/13/09	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	FDX	
			08/24/09 1360

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-678	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 7 FILLET	SAF No.: RC-118	8309
Ice Chest No.: EWS 028	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 796859726969	

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 Inoganic 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	
Relinquished By/Removed From: Wendy West; Date/Time 1500 8/4/09	Received By/Stored In: EAS LOCKED STORAGE 2; Date/Time 1500 8/4/09	
Relinquished By/Removed From: EAS LOCKED STORAGE 2; Date/Time 1000 8/13/09	Received By/Stored In: SHANNAN JOHNSON; Date/Time 1000 8/13/09	
Relinquished By/Removed From: SHANNAN JOHNSON; Date/Time 8/13/09 1000	Received By/Stored In: FDX; Date/Time	
Relinquished By/Removed From: ; Date/Time	Received By/Stored In: ; Date/Time 8/14/09 1305	
Relinquished By/Removed From: ; Date/Time	Received By/Stored In: ; Date/Time	
Relinquished By/Removed From: ; Date/Time	Received By/Stored In: ; Date/Time	

SPECIAL INSTRUCTIONS

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

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

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-679

Washington Closure Hanford

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 7 CARCASS		SAF No.: RC-118
Ice Chest No.: GWS 028	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.: PDX 7968597269 69

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M							
Sample No.	Matrix *	Sample Date	Sample Time								
J192H3 2981.126	OTHER SOLID	8/4/09	1510	X	X						

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	8/4/09 1510	EAS LOCKED STORAGE 2 Wendy West	8/4/09 1510
EAS LOCKED STORAGE	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	FDX	
			8/14/09 1300

SPECIAL INSTRUCTIONS

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

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

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-688 | Page 1 of 1

Washington Closure Hanford

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 8 FILLET		SAF No.: RC-118
Ice Chest No.: GW8 028	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 7968597269 69

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS														
Preservation				Cool 4C	Freeze									
Type of Container				P/G	G/P									
No. of Container(s)				0	1									
Volume				15mL	60mL									
				Total Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No.	Matrix *	Sample Date	Sample Time											
J19304 2281.127	OTHER SOLID	8/5/09	0930	X	X									

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	8/5/09 0930	EAS LOCKED STORAGE 2	8/5/09 0930
EAS LOCKED STORAGE 2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	FDX	
		[illegible]	08/14/09 1300

SPECIAL INSTRUCTIONS

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

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

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-689

Washington Closure Hanford

Collector Wendy West	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 8 CARCASS		**SAF No.** RC-118
Ice Chest No. GWS 028	**Field Logbook No.** EL-1638	**COA** BESCRC6520	**Method of Shipment** FED EX
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** FDX 796859726969

Price Code 9K N 8309

Data Turnaround 45 Days

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											
J19305 29.81.128 / OTHER SOLID / 8/5/09 / 1000	X	X									

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1000 8/5/09	EAS LOCKED STORAGE 2 Wendy West	1000 8/5/09
EAS LOCKED STORAGE 2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000		
			08/14/09 1300

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator EAS Custodian removed samples for shipping on 8/15/09

Matrix *

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

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-698

Washington Closure Hanford

Collector Wendy West	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 9 FILLET		**SAF No.** RC-118
Ice Chest No. GVOS 028	**Field Logbook No.** EL-1638	**COA** BESCRC6520	**Method of Shipment** FED EX
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A		**Bill of Lading/Airbill No.** FDX 796859726969

Price Code ~~9K~~ N NN 8309

Data Turnaround 45 Days

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J19314 2281-123 / OTHER SOLID / 8/5/09 / 1300	X	X									

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
wendywest	1300 8/5/09	EAS LOCKED STORAGE 2 wendywest	1300 8/5/09
EAS LOCKED STORAGE 2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	FDX	
		[illegible]	08/14/09 1300

SPECIAL INSTRUCTIONS

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

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-118-699	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K D; SD 8309	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 9 CARCASS		SAF No.: RC-118	
Ice Chest No.: GL25 028	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FD 7968597269 69	

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											
J19315 2281-130 / OTHER SOLID / 8/5/09 / 1400	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1400 8/5/09	EAS LOCKED STORAGE 2 Wendy West	1400 8/5/09
EAS LOCKED STORAGE 2	8/10/09 1000	SHANNAN JOHNSON	8/12/09 1000
SHANNAN JOHNSON	8/12/09 1000	FDX	
		[illegible]	08/14/09 1300

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/15/09

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

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-708

Washington Closure Hanford

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 10 FILLET		SAF No.: RC-118
Ice Chest No.: GLOS 028	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 796859726969

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

SAMPLE ANALYSIS

Preservation	Cool 4C	Freeze								
Type of Container	P/G	G/P								
No. of Container(s)	0	1								
Volume	15mL	60mL								
	Total Inoganic Arsenic	Chromium Hex in Solids - 1636M								

Sample No.	Matrix *	Sample Date	Sample Time										
J19325 2981.131	OTHER SOLID	8/6/09	0900	X	X								

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	0910 8/6/09	EAS LOCKED STORAGE Wendy West	0900 2 8/6/09
EAS LOCKED STORAGE	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	FDX	
		[illegible]	08/14/09 1300

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/18/09

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-709	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; AD 8309	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 10 CARCASS	SAF No.: RC-118	
Ice Chest No.: GLOS 028	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 796859726969	

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								
J19326 2981 · 132	OTHER SOLID	8/6/09	1030	X	X						

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	8/6/09 1030	EAS LOCKED STORAGE 2 Wendy West	8/6/09 1030
Relinquished By/Removed From: EAS LOCKED STORAGE 2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	8/13/09 1000		
Relinquished By/Removed From			8/14/09 1330
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-718

Washington Closure Hanford

Collector Wendy West	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Price Code 9K N 408609	**Data Turnaround** 45 Days		
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 11 FILLET		**SAF No.** RC-118
Ice Chest No. GWS 028	**Field Logbook No.** EL-1638	**COA** BESCRC6520	**Method of Shipment** FED EX
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** FL 7968597269 69

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												
J193L2 2981.133 / OTHER SOLID / 8/6/09 / 1420	X	X										

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Wendy West	8/6/09 1420	Received By/Stored In: EAS LOCKED STORAGE 2 Wendy West	8/6/09 1420
Relinquished By/Removed From: EAS LOCKED STORAGE 2	8/13/09 1000	Received By/Stored In: SHANNAN JOHNSON	8/13/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	8/13/09 1000	Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	8/14/09 1300
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

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

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-719	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 11 CARCASS		SAF No.: RC-118
Ice Chest No.: GWS 028	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Airbill No.: FDX # 796859726969

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No.	Matrix *	Sample Date	Sample Time								
J193L3 2781.134	OTHER SOLID	8/6/09	1430	X	X						

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From	Date/Time 1430 8/6/09	Received By/Stored In EAS LOCKED STORAGE2	Date/Time 1430 8/6/09
Relinquished By/Removed From EAS LOCKED STORAGE2	Date/Time 8/13/09	Received By/Stored In SHANNAN JOHNSON	Date/Time 8/13/09 1000
Relinquished By/Removed From SHANNAN JOHNSON	Date/Time 8/13/09 1000	Received By/Stored In FDX	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time 08/14/09 1300
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

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

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-728	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 12 FILLET	SAF No.: RC-118	
Ice Chest No.: GWS 028	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX 796859726969	

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												
J193M2 2981.135 / OTHER SOLID / 8/10/09 / 1130	X	X										

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	8/10/09 1130	EAS LOCKED STORAGE2 Wendy West	8/10/09 1130
Relinquished By/Removed From: EAS LOCKED STORAGE2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	8/13/09 1000	FDX	
Relinquished By/Removed From:		Received By/Stored In: [signature]	08/14/09 1300
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

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

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-729	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N 408609
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 12 CARCASS	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: GWS 028	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 7968597269 69	

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								
J193M3 8981.136	OTHER SOLID	8/10/09	1200	X	X						

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: Wendy West; Date/Time: 1200 8/10/09	Received By/Stored In: EAS LOCKED STORAGE 2 Wendy West; Date/Time: 1200 8/10/09	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: 1000 8/18/09	Received By/Stored In: SHANNAN JOHNSON; Date/Time: 8/18/09 1000	
Relinquished By/Removed From: SHANNAN JOHNSON; Date/Time: 8/18/09 1000	Received By/Stored In: FDX; Date/Time:	
Relinquished By/Removed From:	Received By/Stored In: [illegible] 08/14/09 1300; Date/Time:	
Relinquished By/Removed From:	Received By/Stored In:	
Relinquished By/Removed From:	Received By/Stored In:	

Matrix *

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

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-738

Washington Closure Hanford

Collector Wendy Wait	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 13 FILLET		**SAF No.** RC-118
Ice Chest No. GWS 028	**Field Logbook No.** EL-1638	**COA** BESCRC6520	**Method of Shipment** FED EX
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A		**Bill of Lading/Airbill No.** FDX: 796859726969

Price Code 9K

Data Turnaround 45 Days

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M										
Sample No. / Matrix * / Sample Date / Sample Time												
J193N4 2981.137 / OTHER SOLID / 8/11/09 / 0900	X	X										

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy Wait	0900 8/11/09	EAS LOCKED STORAGE 2 Wendy Wait	0900 8/11/09
EAS LOCKED STORAGE 2	1000 8/13/09	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	FDX	
			8/14/09 1330

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-739	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 13 CARCASS	SAF No.: RC-118	
Ice Chest No.: GWS D28	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 796859726969	

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											
J193N5 2281.138 / OTHER SOLID / 8/11/09 / 1030	X	X									

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Wendy West	Date/Time: 1030 8/11/09	Received By/Stored In: EAS LOCKED STORAGE2 Wendy West	Date/Time: 1030 8/11/09
Relinquished By/Removed From: EAS LOCKED STORAGE2	Date/Time: 1000 8/13/09	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 8/13/09 1000
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 8/13/09 1000	Received By/Stored In: FDX	Date/Time:
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time

SPECIAL INSTRUCTIONS

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

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

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

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
	X		Was a custody seal present?
		X	Was the custody seal intact? Each sample has a custody seal that was intact. JMK 8/6/09
X			Was cooler(s) temperature(s) within acceptable range of 4±2°C or frozen? 2.1 °C (if multiple coolers, note temp. of each) °C
		X	Was Project Manager notified of any custody/login discrepancies (cooler temp, sponsor codes, etc)? Comment/Remedy:
X			Were all chain of custody forms signed and dated?
	X		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

- [X] Sample(s) were preserved at MSL
- [ ] 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:
- [X] Refrigerate/Freeze Notes:
- [ ] Other Notes:

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

Storage Shelf:

Revised 121608

Pacific Northwest NATIONAL LABORATORY | Battelle The Business of Innovation

SAMPLE LOGIN

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

Project Manager: Brandenberger
Date Received: 8/20/2009
Batch: 12
Login Designee: Csuslick
Project: **Washington Closure Hanford**

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-748

Washington Closure Hanford

Collector Wendy West	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 14 FILLET		**SAF No.** RC-118
Ice Chest No. DCH-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.** FDX# 797863010890

Price Code ~~9K~~ N 81009

Data Turnaround 45 Days

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												
J19446 2981-139 / OTHER SOLID / 8.12.09 / 0930	X	X										

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	0930 8.12.09	EAS LOCKED STORAGE 2 Wendy West	0930 8.12.09
EAS LOCKED STORAGE 2	1245 8/19/09	SHANNAN JOHNSON	1245 8/19/09
SHANNAN JOHNSON	1245 8/19/09	FDX	
		Battelle MSL	8/20/09 1450

SPECIAL INSTRUCTIONS

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

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-118-749	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 14 CARCASS		SAF No.: RC-118	Data Turnaround: 45 Days
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.: FDX 797863010890	

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M

Sample No.	Matrix *	Sample Date	Sample Time	Total Inoganic Arsenic	Chromium Hex in Solids - 1636M
J19447 2981-140	OTHER SOLID	8/17/09	1010	X	X

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1010 8/17/09	EAS LOCKED STORAGE Wendy West	1010 8/17/09
EAS LOCKED STORAGE	1245 8/19/09	SHANNAN JOHNSON	1245 8/19/09
SHANNAN JOHNSON	1245 8/19/09	FDX	
		Anon Battelle MSL	8/20/09 1450

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-118-758	Page 1 of 1
Collector: Mason Fidino	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; 1/1 81009	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 15 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.: FDX 797863010890	

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M								
Sample No.	Matrix *	Sample Date	Sample Time									
J19456 2981-141	OTHER SOLID	8-17-09	1145	X	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Mason Fidino	8-17-09 1145	EAS LOCKED STORAGE 2	8-17-09 1145
Relinquished By/Removed From: EAS LOCKED STORAGE 2	8/19/09 1245	SHANNAN JOHNSON	8/19/09 1245
Relinquished By/Removed From: SHANNAN JOHNSON	8/19/09 1245	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In	8/20/09 1450
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody

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

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

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

Washington Closure Hanford

RC-118-759

Collector Mason Fidino	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Price Code 9~~K~~ N	**Data Turnaround** 45 Days		
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 15 CARCASS		**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.** FDX 797863010890

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											
J19457 2981-142 / OTHER SOLID / 8-17-09 / 1200	X	X									

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Mason Fidino	8-17-09 1200	EAS LOCKED STORAGE 2	8-17-09 1200
EAS LOCKED STORAGE 2	1245 8/19/09	SHANNAN JOHNSON	1245 8/19/09
SHANNAN JOHNSON	1245 8/19/09	FDX	
		Battelle Mar Sci	8/20/09 1450

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-768

Collector M. Fidino	**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 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.** FDX# 797863010090

Price Code ~~9K~~ N MD4009

Data Turnaround 45 Days

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M

Sample No.	Matrix *	Sample Date	Sample Time	Total Inoganic Arsenic	Chromium Hex in Solids - 1636M
J19466 2981-143	OTHER SOLID	8-17-09	1435	X	X

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M. Fidino	8-17-09 1435	EAS LOCKED STORAGE 2	8-17-09 1435
EAS LOCKED STORAGE 2	8/19/09 1245	SHANNAN JOHNSON	8/19/09 1245
SHANNAN JOHNSON	8/19/09 1245	FDX	
		MSL	8/21/09 1450

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-769	Page 1 of 1

Collector: M.F.dino	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: STURGEON 16 CARCASS		SAF No.: RC-118
SAS 81009			
Ice Chest No.: WCH-08-0162	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX # 797863010890

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M								
Sample No.	Matrix *	Sample Date	Sample Time									
J19467 2981-144	OTHER SOLID	8-17-09	1500	X	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: M.F.dino	8-17-09 1500	Received By/Stored In: EAS LOCKED STORAGE	8-17-09 1500
Relinquished By/Removed From: EAS LOCKED STORAGE	8/19/09 1245	Received By/Stored In: SHANNAN JOHNSON	8/19/09 1245
Relinquished By/Removed From: SHANNAN JOHNSON	8/19/09 1245	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In: Battelle MSL	8/20/09 1450
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

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 - ICE intact
		✓	Was the custody seal intact?
✓			Was cooler(s) temperature(s) within acceptable range of 4±2°C or frozen? (if multiple coolers, note temp. of each) 1.2 °C _____ °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:

Notes: temp OK - 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 KYC for splitting; both frozen
- [ ] Other Notes:

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

Storage Shelf: Cleap fzr / Walkin

Analytical Chemistry Data Package
Inorganics Analysis

RECEIVED

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

SEQ082009

INORGANIC CHEMISTRY ANALYSIS DATA PACKAGE CONTENTS

Chromium VI Analysis in Tissue

Summary Table 3
QC Narrative 6

Sample Custody Information

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

SDG081409 9
SDG082009 27
SDG091109 35
SDG091809 55
SDG092309 67
SDG093009 79

BATTELLE MARINE SCIENCES LABORATORY
1529 West Sequim Bay Road
Sequim, Washington 98382
(360) 681-4564

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.[1]
Method Detection Limit (MDL)								*0.471*	*0.127*
2981-133	J193L2	SDG081409	08/14/09	08/06/09	01/25/10	012510-LCDRC	22.4	0.471 U	0.127 U
2981-134	J193L3	SDG081409	08/14/09	08/06/09	01/25/10	012510-LCDRC	26.1	0.471 U	0.127 U
2981-135	J193M2	SDG081409	08/14/09	08/10/09	01/25/10	012510-LCDRC	28.6	0.471 U	0.127 U
2981-136	J193M3	SDG081409	08/14/09	08/10/09	01/25/10	012510-LCDRC	32.0	0.471 U	0.127 U
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
2981-138	J193N5	SDG081409	08/14/09	08/11/09	01/25/10	012510-LCDRC	25.6	0.471 U	0.127 U
2981-139	J19446	SDG082009	08/20/09	08/12/09	01/25/10	012510-LCDRC	39.4	0.471 U	0.127 U
2981-140	J19447	SDG082009	08/20/09	08/17/09	01/25/10	012510-LCDRC	40.9	0.471 U	0.127 U
2981-141	J19456	SDG082009	08/20/09	08/17/09	01/25/10	012510-LCDRC	22.9	1.06	0.241
2981-142	J19457	SDG082009	08/20/09	08/17/09	01/25/10	012510-LCDRC	26.2	0.471 U	0.127 U
2981-143	J19466	SDG082009	08/20/09	08/17/09	01/25/10	012510-LCDRC	24.1	1.20	0.289
2981-144	J19467	SDG082009	08/20/09	08/17/09	01/25/10	012510-LCDRC	29.1	0.471 U	0.127 U
2981-186	J19476	SDG091109	09/11/09	09/03/09	01/25/10	012510-LCDRC	27.6	0.471 U	0.127 U
2981-188	J19477	SDG091109	09/11/09	09/03/09	01/25/10	012510-LCDRC	30.2	0.471 U	0.127 U
2981-189	J19487	SDG091109	09/11/09	09/03/09	01/25/10	012510-LCDRC	43.4	0.471 U	0.127 U
2981-191	J19486	SDG091109	09/11/09	09/03/09	01/25/10	012510-LCDRC	34.0	0.471 U	0.127 U
2981-193	J19497	SDG091109	09/11/09	09/08/09	01/25/10	012510-LCDRC	34.4	0.471 U	0.127 U
2981-196	J19496	SDG091109	09/11/09	09/08/09	01/25/10	012510-LCDRC	26.6	0.654	0.174
2981-198	J194B7	SDG091109	09/11/09	09/08/09	01/25/10	012510-LCDRC	32.6	0.472	0.154
2981-200	J194B8	SDG091109	09/11/09	09/08/09	01/25/10	012510-LCDRC	39.1	0.471 U	0.127 U
2981-201	J194C8	SDG091109	09/11/09	09/09/09	01/22/10	012210-LCDRC	25.6	0.471 U	0.127 U
2981-202	J194C9	SDG091109	09/11/09	09/09/09	01/22/10	012210-LCDRC	32.6	0.471 U	0.127 U
2981-203	J19503	SDG091809	09/18/09	09/10/09	01/22/10	012210-LCDRC	31.1	0.471 U	0.127 U
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
2981-205	J195R1	SDG091809	09/18/09	09/10/09	01/22/10	012210-LCDRC	42.3	0.471 U	0.127 U
2981-206	J195R0	SDG091809	09/18/09	09/10/09	01/22/10	012210-LCDRC	34.5	0.471 U	0.127 U
2981-207	J195T2	SDG091809	09/18/09	09/14/09	01/22/10	012210-LCDRC	36.7	0.471 U	0.127 U
2981-208	J195T3	SDG091809	09/18/09	09/14/09	01/22/10	012210-LCDRC	40.2	0.471 U	0.127 U
2981-209	J195Y0	SDG091809	09/18/09	09/15/09	01/22/10	012210-LCDRC	37.7	0.471 U	0.127 U
2981-210	J195X9	SDG091809	09/18/09	09/15/09	01/22/10	012210-LCDRC	32.2	0.471 U	0.127 U
2981-211	J19609	SDG091809	09/18/09	09/15/09	01/22/10	012210-LCDRC	32.9	0.471 U	0.127 U
2981-212	J19610	SDG091809	09/18/09	09/15/09	01/22/10	012210-LCDRC	38.7	0.471 U	0.127 U
2981-213	J19629	SDG092309	09/23/09	09/16/09	01/22/10	012210-LCDRC	34.7	0.471 U	0.127 U
2981-214	J19628	SDG092309	09/23/09	09/16/09	01/22/10	012210-LCDRC	28.9	0.497	0.143
2981-215	J19639	SDG092309	09/23/09	09/16/09	01/22/10	012210-LCDRC	23.9	0.471 U	0.127 U
2981-218	J19640	SDG092309	09/23/09	09/16/09	01/22/10	012210-LCDRC	29.7	0.471 U	0.127 U
2981-219	J19650	SDG092309	09/23/09	09/17/09	01/22/10	012210-LCDRC	36.0	0.471 U	0.127 U
2981-220	J19649	SDG092309	09/23/09	09/17/09	01/22/10	012210-LCDRC	29.2	0.471 U	0.127 U
2981-221	J19660	SDG092309	09/23/09	09/17/09	01/22/10	012210-LCDRC	32.0	0.471 U	0.127 U
2981-222	J19659	SDG092309	09/23/09	09/17/09	01/22/10	012210-LCDRC	28.7	0.582	0.167
2981-223	J195W5	SDG093009	09/30/09	09/21/09	01/26/10	012610-LCDRC	21.7	0.471 U	0.127 U
2981-224	J195W6	SDG093009	09/30/09	09/21/09	01/26/10	012610-LCDRC	25.7	0.471 U	0.127 U
2981-225	J195W7	SDG093009	09/30/09	09/21/09	01/26/10	012610-LCDRC	19.3	0.902	0.174
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
2981-227	J19666	SDG093009	09/30/09	09/24/09	01/26/10	012610-LCDRC	22.2	0.911	0.202
2981-228	J19665	SDG093009	09/30/09	09/24/09	01/26/10	012610-LCDRC	20.5	1.05	0.215
QUALITY CONTROL SAMPLE RESULTS						*Average*	*30.3*		

BATTELLE MARINE SCIENCES LABORATORY
1529 West Sequim Bay Road
Sequim, Washington 98382
(360) 681-4564

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.[1]
Method Detection Limit (MDL)								*0.471*	*0.127*
Method Blank									
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
Laboratory Control Sample									
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%**	--
Replicate Analysis Results									
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
	RPD							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
	RPD							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
	RPD							NA [2]	NA [2]
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%**
Matrix Spike Accuracy									
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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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.[1]
Method Detection Limit (MDL)								*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%**	--
RPD								**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%**	--
RPD								**10%**	--
Standard Reference Material (Liquid)									
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:

[1] Wet weight detection limit calculated using a percent dry weight of 26.9%.
[2] 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 (≤ 15%) and MS/MSD (≤ 25%) results
* Outside Method DQOs for Duplicates (≤ 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
MSL Sample IDs:	2981*133-138	2981*139-144	2981*185-202 (select)	2981*203-212	2981*213-222	2981*223-228
Collection Date:	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
Description:	Fish Tissue	Fish Tissue	Fish Tissue	Fish Tissue	Fish Tissue	Fish Tissue
Laboratory Arrival Date:	08/14/09	08/20/09	09/11/09	09/18/09	09/23/09	09/30/09
Cooler Temp.	2.5°C	1.2°C	3.7°C	2.7°C	2.0°C	3.2°C
Extraction Date:	01/24/10	01/24/10	01/24/10 01/21/10	01/21/10	01/21/10	01/26/10
Analysis Date:	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 Spectrometery. 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 ^{52}Cr and ^{53}Cr to correct for interferences and potential interconversion between the oxidation states of Cr^{3+} and Cr^{6+}. The tissues were extracted using a Na_2CO_3 and $NaHCO_3$ 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 ≤ -80°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 ≤ -80°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 (µg/g dry wt.)	Achieved MDL (µg/g wet wt.)[1]
CrVI	HPLC/ICP-DRC-MS	85-115%	75-125%	NA	<25%	0.471 µg/g	0.127 µg/g

NA - Tissue standard reference materials certified for CrVI are not presently available.
[1] 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 ^{52}Cr and ^{53}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 ≤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

Pacific Northwest NATIONAL LABORATORY | Battelle The Business of Innovation

Project Manager: Brandenberger
Date Received: 8/14/2009
Batch: 11
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
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

SOP#: MSL-A-001

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-668	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 6 FILLET		SAF No.: RC-118
Ice Chest No.: EAS 08/19 GWS 628	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.: FEDX 79685726969 N/A

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											
J192F1 2281.123 / OTHER SOLID / 8/4/09 / 1000	X	X									

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	8/4/09 1000	EAS LOCK STORAGE #2 Wendy West	8/4/09 1000
EAS LOCKED STORAGE #2	8/5/09	SHANNAN JOHNSON	8/5/09
SHANNAN JOHNSON	8/5/09	FDX	
			08/24/09 1330

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/5/09

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-669	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 6 CARCASS	SAF No.: RC-118	
Ice Chest No.: GLOS 028	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX 7968597269 69	

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J192F2 2581.124 / OTHER SOLID / 8/4/09 / 1145	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1145 8/4/09	EAS LOCKED STORAGE 2 Wendy West	1145 8/4/09
EAS LOCKED STORAGE 2	1000 8/13/09	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	FDX	
		[illegible]	08/24/09 1360

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-678	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 7 FILLET	SAF No.: RC-118	8309
Ice Chest No.: GWS 028	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 796859726969	

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 Inoganic 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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	8/4/09 1500	EAS LOCKED STORAGE 2	8/4/09 1500
EAS LOCKED STORAGE 2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	EOU	
			8/14/09 1305

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-679	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N 8309
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 7 CARCASS	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: G WS 028	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX 796859726969	

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M							
Sample No.	Matrix *	Sample Date	Sample Time								
J192H3 2981.126	OTHER SOLID	8/4/09	1510	X	X						

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	8/4/09 1510	EAS LOCKED STORAGE / Wendy West	8/4/09 1510
EAS LOCKED STORAGE	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000		
			8/14/09 1300

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-688	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 8 FILLET	SAF No.: RC-118	4/18309
Ice Chest No.: GW081028	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 796859726969	

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											
J19304 2581.127 / OTHER SOLID / 8/5/09 / 0930	X	X									

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: Wendy West; Date/Time: 0930 8/5/09	Received By/Stored In: EAS LOCKED STORAGE 2; Date/Time: 0930 8/5/09	
Relinquished By/Removed From: EAS LOCKED STORAGE 2; Date/Time: 1000 8/13/09	Received By/Stored In: SHANNAN JOHNSON; Date/Time: 8/13/09 1000	
Relinquished By/Removed From: SHANNAN JOHNSON; Date/Time: 8/13/09 1000	Received By/Stored In: FDX; Date/Time:	
Relinquished By/Removed From: ; Date/Time:	Received By/Stored In: ; Date/Time: 8/14/09 1360	
Relinquished By/Removed From: ; Date/Time:	Received By/Stored In: ; Date/Time:	Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/13/09
Relinquished By/Removed From: ; Date/Time:	Received By/Stored In: ; Date/Time:	

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-689	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 8 CARCASS		SAF No.: RC-118
Ice Chest No.: GWS 028	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX 796859726969

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											
J19305 2981.128 / OTHER SOLID / 8/5/09 / 1000	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1000 8/5/09	EAS LOCKED STORAGE 2 Wendy West	1000 8/5/09
EAS LOCKED STORAGE 2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	FDX	
		[illegible]	08/14/09 1300

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-698

Collector Wendy West	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 9 FILLET		**SAF No.** RC-118
Ice Chest No. GWS 028	**Field Logbook No.** EL-1638	**COA** BESCRC6520	**Method of Shipment** FED EX
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** FDX# 796859726969

Price Code ~~9K~~ N

Data Turnaround 45 Days

AD 8309

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J19314 2781.129 / OTHER SOLID / 8/5/09 / 1300	X	X									

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
wendy west	1300 8/5/09	EAS LOCKED STORAGE 2 wendy west	1300 8/5/09
EAS LOCKED STORAGE 2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	FDX	
		[illegible]	08/14/09 1300

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-699	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 91 / 0 — Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 9 CARCASS	SAF No.: RC-118	8309
Ice Chest No.: G125 028	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FD 796859726969	

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J19315 2281-130 / OTHER SOLID / 8/5/09 / 1400	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	8/5/09 1400	EAS LOCKED STORAGE 2 Wendy West	8/5/09 1400
EAS LOCKED STORAGE 2	8/8/09 1000	SHANNAN JOHNSON	8/12/09 1000
SHANNAN JOHNSON	8/12/09 1000	FDX	
			8/14/09 1300

SPECIAL INSTRUCTIONS

Sampler unavailable to relinquish samples from EAS Refrigerator. EAS Custodian removed samples for shipping on 8/18/09

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-708	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 10 FILLET		SAF No.: RC-118
Ice Chest No.: GLOS 028	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 796859726969

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M								
Sample No.	Matrix *	Sample Date	Sample Time									
J193252981-131	OTHER SOLID	8/6/09	0900	X	X							

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	8/6/09 0910	EAS LOCKED STORAGE 2 Wendy West	8/6/09 0900
EAS LOCKED STORAGE 2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000		
			8/14/09 1300

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-709	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 10 CARCASS	SAF No.: RC-118	SAD 8309
Ice Chest No.: GLOS 028	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 796859726969	

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								
J19326 2981.132	OTHER SOLID	8/6/09	1030	X	X						

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	8/6/09 1030	EAS LOCKED STORAGE 2 Wendy West	8/6/09 1030
EAS LOCKED STORAGE 2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000		
			8/14/09 1360

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-718	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~91K~~ N 408609; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 11 FILLET	SAF No.: RC-118	
Ice Chest No.: GWS 028	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FD 7968597269 69	

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											
J193L2 2921.133 / OTHER SOLID / 8/6/09 / 1420	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
wendy West	1420 8/6/09	EAS LOCKED STORAGE 2 wendy West	1420 8/6/09
EAS LOCKED STORAGE 2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000		
		CE	8/14/09 1300

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-719	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 11 CARCASS	SAF No.: RC-118	
Ice Chest No.: GWS 028	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.: PDX# 796859726969	

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											
J193L3 2781.134 / OTHER SOLID / 8/6/09 / 1430	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1430 8/6/09	EAS LOCKED STORAGE2 Wendy West	1430 8/6/09
EAS LOCKED STORAGE2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	FDX	
		[illegible]	08/14/09 1300

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-728	Page 1 of 1

Collector: wendy west	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 12 FILLET		SAF No.: RC-118
Ice Chest No.: GWS 028	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX 796859726969

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												
J193M2 2981.135 / OTHER SOLID / 8/10/09 / 1130	X	X										

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
wendy west	1130 8/10/09	EAS LOCKED STORAGE2 wendy west	1130 8/10/09
EAS LOCKED STORAGE2	8/13/09	SHANNAN JOHNSON	8/13/09 0900
SHANNAN JOHNSON	8/13/09 0900	FDX	
			8/14/09 1300

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-729	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N 408609	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 12 CARCASS		SAF No.: RC-118
Ice Chest No.: GLWS 028	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 796859726969

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											
J193M3 2281.136 / OTHER SOLID / 8/10/09 / 1200	X	X									

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1200 8/10/09	EAS LOCKED STORAGE 2	1200 8/10/09
EAS LOCKED STORAGE 2	8/13/09 1000	SHANNAN JOHNSON	8/13/09 1000
SHANNAN JOHNSON	8/13/09 1000	FDX	
		[illegible]	08/14/09 1300

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-738	Page 1 of 1

Collector Wendy Wait	**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 13 FILLET	**SAF No.** RC-118	
Ice Chest No. GWS 028	**Field Logbook No.** EL-1638 **COA** BESCRC6520	**Method of Shipment** FED EX	
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A	**Bill of Lading/Air Bill No.** FDX: 796859726969	

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								
J193N4 298/137	OTHER SOLID	8/11/09	0900	X	X						

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy Wait	8/11/09 0900	EAS LOCKED STORAGE 2 Wendy Wait	8/11/09 0900
EAS LOCKED STORAGE 2	8/12/09 1000	SHANNAN JOHNSON	8/12/09 1000
SHANNAN JOHNSON	8/12/09 1000	FDX	
			08/14/09 1330

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-739	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N MP 8609	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 13 CARCASS		SAF No.: RC-118
Ice Chest No.: GWS 028	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 796859726969

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											
J193N5 2281.138 / OTHER SOLID / 8/11/09 / 1030	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	8/11/09 1030	EAS LOCKED STORAGE 2 (Wendy West)	8/11/09 1030
EAS LOCKED STORAGE 2	8/12/09 1000	SHANNAN JOHNSON	8/12/09 1000
SHANNAN JOHNSON	8/12/09 1000	FDX	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

LOG-IN CHECKLIST

Reference SOP# MSL-A-001

Central File #: 2981 Sample No(s): 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
	X		Was a custody seal present?
		X	Was the custody seal intact? Each sample has a custody seal that was intact. JMK 8/6/09
X			Was cooler(s) temperature(s) within acceptable range of 4±2°C or frozen? (if multiple coolers, note temp. of each) 2.1 °C _____ °C
		X	Was Project Manager notified of any custody/login discrepancies (cooler temp, sponsor codes, etc)? Comment/Remedy: _____
X			Were all chain of custody forms signed and dated?
	X		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

X	Sample(s) were preserved at MSL
	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: _____
	X	Refrigerate/Freeze	Notes: _____
		Other	Notes: _____

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

Storage Shelf: _____

Revsed 121608

SAMPLE LOGIN

Pacific Northwest NATIONAL LABORATORY | Battelle The Business of Innovation

Project Manager: Brandenberger
Date Received: 8/20/2009
Batch: 12
Login Designee: Csuslick

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
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

SOP#: MSL-A-001

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-748	Page 1 of 1

Collector Wendy West	**Company Contact** JOAN KESSNER **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 9K N **Data Turnaround** 45 Days
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 14 FILLET	**SAF No.** RC-118	8/10/09
Ice Chest No. DCH-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.** FDX# 797863010890	

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											
J19446 2981-139 / OTHER SOLID / 8-12-09 / 0930	X	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	0930 8-12-09	Received By/Stored In: Wendy West EAS LOCKED STORAGE 2	0930 8-12-09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	1245 8/19/09	Received By/Stored In: SHANNAN JOHNSON	1245 8/19/09
Relinquished By/Removed From: SHANNAN JOHNSON	1245 8/19/09	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In: Battelle MSL	8/20/09 1450
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-749	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 14 CARCASS		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.: FDX# 797863010890

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J19447 2981-140 / OTHER SOLID / 8/17/09 / 1010	X	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Wendy West	1010 8/17/09	Received By/Stored In: EAS LOCKED STORAGE Wendy West	1010 8/17/09
Relinquished By/Removed From: EAS LOCKED STORAGE	1245 8/19/09	Received By/Stored In: SHANNAN JOHNSON	1245 8/19/09
Relinquished By/Removed From: SHANNAN JOHNSON	1245 8/19/09	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In: Battelle MSL	8/20/09 1450
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-758	Page 1 of 1

Collector: Mason Fidino	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9~~K~~ N 8/18/09	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 15 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.: FDX 797863010890

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											
J19456 2981-141 / OTHER SOLID / 8-17-09 / 1145	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Mason Fidino	8-17-09 1145	EAS LOCKED STORAGE 2	8-17-09 1145
EAS LOCKED STORAGE 2	1245 8/19/09	SHANNAN JOHNSON	1245 8/19/09
SHANNAN JOHNSON	1245 8/19/09	FDX	
			8/20/09 1450

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-759	Page 1 of 1

Collector: Mason Fidino	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9 N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 15 CARCASS		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.: FDX 797863010890

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											
J19457 2981-142 / OTHER SOLID / 8-17-09 / 1200	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Mason Fidino	8-17-09 1200	EAS LOCKED STORAGE 2 8-17-09	8-17-09 1200
EAS LOCKED STORAGE 2	8/19/09 1245	SHANNAN JOHNSON	8/19/09 1245
SHANNAN JOHNSON	8/19/09 1245	FDX	
		Battelle MSL	8/21/09 1450

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-768	Page 1 of 1
Collector: M. Fidino	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: 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.: FDX# 797863010090	

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											
J19466 2981-143 / OTHER SOLID / 8-17-09 / 1435	X	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: M. Fidino	8-17-09 1435	Received By/Stored In: EAS LOCKED STORAGE 2	8-17-09 1435
Relinquished By/Removed From: EAS LOCKED STORAGE 2	8/19/09 1245	Received By/Stored In: SHANNAN JOHNSON	8/19/09 1245
Relinquished By/Removed From: SHANNAN JOHNSON	8/19/09 1245	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In: MSL	8/21/09 1450
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-769	Page 1 of 1

Collector: M. Fidino	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: STURGEON 16 CARCASS		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.: FDX # 797863010890

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J19467 2981-144 / OTHER SOLID / 8-17-09 / 1500	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M. Fidino	8-17-09 1500	EAS LOCKED STORAGE 2	8-17-09 1500
EAS LOCKED STORAGE 2	8/19/09 1245	SHANNAN JOHNSON	8/19/09 1245
SHANNAN JOHNSON	8/19/09 1245	FDX	
		Battelle MSL	8/20/09 1450

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

LOG-IN CHECKLIST

Reference SOP# MSL-A-001

Central File #: 2981 Sample No(s): 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 - ICE intact
		✓	Was the custody seal intact?
✓			Was cooler(s) temperature(s) within acceptable range of 4±2°C or frozen? (if multiple coolers, note temp. of each) 1.2 °C _____ °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:

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 KYC for splitting; bottle frozen
- [ ] Other Notes:

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

Storage Shelf: Cleup fzr / Walkin

SAMPLE LOGIN

Pacific Northwest NATIONAL LABORATORY | Battelle The Business of Innovation

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: M.F. dino	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: STURGEON 17 FILLET		SAF No.: RC-118
Ice Chest No.: WCH-DS-0014	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 7979224885 U4

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 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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M.F. dino	9/3/09 1045	EAS LOCKED STORAGE 2	9/3/09 1045
EAS LOCKED STORAGE 2	9/10/09 1000	SHANNAN JOHNSON	9/10/09 1000
SHANNAN JOHNSON	9/10/09 1000	FDX	
			09/11/09 1450

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-778	Page 1 of 1
Collector: M. Fidino	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: STURGEON 17 FILLET	SAF No.: RC-118	
Ice Chest No.: WCH-08-001-4	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX # 7979224885 04	

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								
J19476 2981.186	OTHER SOLID	9/3/09	1045	X	X						

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M. Fidino	9/3/09 1045	EAS LOCKED STORAGE 2	9/3/09 1045
EAS LOCKED STORAGE 2	9/10/09 1100	SHANNAN JOHNSON	9/10/09 1100
SHANNAN JOHNSON	9/10/09 1100		
			9/11/09 1430

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-851	Page 1 of 1
Collector: M. Fidino	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 01 / 4/83/09 — Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 17 CARCASS	SAF No.: RC-118	
Ice Chest No.: WCH - 08 - 001 - 4	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX 7979224885 04	

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 1630M; Mercury - 7473										
Sample No. / Matrix * / Sample Date / Sample Time											
J195V0 2981.187 / OTHER SOLID / 9/3/09 / 1100	X										

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M. Fidino	9/3/09 1100	EAS LOCKED STORAGE	9/3/09 1100
EAS LOCKED STORAGE	9/10/09 1001	SHANNAN JOHNSON	9/10/09 1001
SHANNAN JOHNSON	9/10/09 1001	FDX	
			09/11/09 1458

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-779	Page 1 of 1
Collector: M. Fidino	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: STURGEON 17 CARCASS	SAF No.: RC-118	
Ice Chest No.: WCH-09-001-4	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX 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 Inoganic Arsenic	Chromium Hex in Solids - 1636M							
Sample No.	Matrix *	Sample Date	Sample Time								
J19477 2981.18	OTHER SOLID	9/3/09	1100	X	X						

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M. Fidino	9/3/09 1100	EAS LOCKED STORAGE 2	9/3/09 1100
EAS LOCKED STORAGE 2	9/10/09 1017	SHANNAN JOHNSON	9/10/09 1017
SHANNAN JOHNSON	9/10/09 1017	FDX	
			9/11/09 1452

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-789	Page 1 of 1

Collector: M. Fidino	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: STURGEON 18 CARCASS		SAF No.: RC-118
Ice Chest No.: WCH-08-001-4	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 7979224885 04

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 Inoganic 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		
Relinquished By/Removed From: M. Fidino	Date/Time: 9/3/09 1430	Received By/Stored In: EAS LOCKED STORAGE 2	Date/Time: 9/3/09 1430
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:
Relinquished By/Removed From	Date/Time	Received By/Stored In	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

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-853	Page 1 of 1
Collector: M. Fidino	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N 1/1/83109; 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-08-001-4	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FD. 7979248850 4	

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 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**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M. Fidino	9/3/09 1430	EAS LOCKED STORAGE 2	1430 9/3/09
EAS LOCKED STORAGE 2	9/10/09 1000	SHANNAN JOHNSON	9/10/09 1000
SHANNAN JOHNSON	9/10/09 1000		
		Hale	9/11/09 1430

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-788	Page 1 of 1

Collector: M. Fidino	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 18 FILLET		SAF No.: RC-118
Ice Chest No.: WCH-08-001-4	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX#797922488504

Price Code: ~~9K~~ N

Data Turnaround: 45 Days

NS 81809

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J19486 2981.191 / OTHER SOLID / 9/3/09 / 1415	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M. Fidino	9/3/09 1415	EAS LOCKED STORAGE 2	1415 9/3/09
EAS LOCKED STORAGE 2	9/10/09 1000	SHANNAN JOHNSON	9/10/09 1000
SHANNAN JOHNSON	9/10/09 1000	FDX	
		[illegible]	09/11/09 1450

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-852	Page 1 of 1

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 FILLET		SAF No.: RC-118
Ice Chest No.: WCH-08-001-4	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX 797922488504

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 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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
M. Fidino	9/3/09 1415	EAS LOCKED STORAGE 2	9/3/09 1415
EAS LOCKED STORAGE 2	9/10/09	SHANNAN JOHNSON	9/10/09
SHANNAN JOHNSON	9/10/09	FDX	
			09/11/09 1450

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-799	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 19 CARCASS		SAF No.: RC-118
Ice Chest No.: WCH-08-001-4	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX 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 Inoganic Arsenic	Chromium Hex in Solids - 1636M								
Sample No.	Matrix *	Sample Date	Sample Time									
J19497 2981.193	OTHER SOLID	9.8.09	1340	X	X							

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From: Wendy West	Date/Time: 1340 9.8.09	Received By/Stored In: EAS LOCKED STORAGE 2 Wendy West	Date/Time: 1340 9.8.09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	Date/Time: 9/10/09 100	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 9/10/09 100
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 9/10/09 100	Received By/Stored In: FDX	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In: [illegible]	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:

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-855	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N NC009
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 19 CARCASS	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: WCH1-08-001-4	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX # 797922488504	

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 1630M, Mercury - 7473										
Sample No. / Matrix * / Sample Date / Sample Time											
J195V4 2981.194 / OTHER SOLID / 9.8.09 / 1340	X										

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1340 9.8.09	EAS LOCKED STORAGE 2 Wendy West	1340 9.8.09
EAS LOCKED STORAGE 2	9/10/09 0900	SHANNAN JOHNSON	9/10/09 0900
SHANNAN JOHNSON	9/10/09 0900		
		[illegible]	09/10/09 1432

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-854	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 19 FILLET		SAF No.: RC-118
Ice Chest No.: WCH-DB-001-C	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX 7792248850 4

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 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

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	9.8.09 1230	EAS LOCKED STORAGE 2 Wendy West	9.8.09 1230
EAS LOCKED STORAGE 2	9/10/09 1100	SHANNAN JOHNSON	9/10/09 1100
SHANNAN JOHNSON	9/10/09 1100		
			9/11/09 1450

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-798	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 19 FILLET		SAF No.: RC-118
Ice Chest No.: WCH-08-001-4	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX#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											
J19496 2981.196 / OTHER SOLID / 9.8.09 / 1230	X	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	9.8.09 1230	EAS LOCKED STORAGE 2 Wendy West	9.8.09 1230
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/10/09 1600	SHANNAN JOHNSON	9/10/09 1600
Relinquished By/Removed From: SHANNAN JOHNSON	9/10/09	FDX	
Relinquished By/Removed From		Received By/Stored In: [signature]	09/11/09 1450
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-856	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N 4083109	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 20 FILLET		SAF No.: RC-118
Ice Chest No.: WCH-08-001-4	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX#7979224885 04

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 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**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1545 9-8-09	EAS LOCKED STORAGE 2 Wendy West	1545 9-8-09
EAS LOCKED STORAGE 2	9/10/09	SHANNAN JOHNSON	9/10/09
SHANNAN JOHNSON	9/10/09	[illegible]	
		[illegible]	09/11/09 1450

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-808	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K ~~N~~ MS 81109	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 20 FILLET		SAF No.: RC-118
Ice Chest No.: WCH-08-001-4	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 7979224885 04

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 Inoganic 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**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1545 9.8.09	Wendy West EAS LOCKED STORAGE 2	1545 9.8.09
EAS LOCKED STORAGE 2	9/10/09	SHANNAN JOHNSON	9/10/09 1800
SHANNAN JOHNSON	9/10/09 1800	FDX	
		[illegible]	09/11/09 1450

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-118-857	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N 09/03/09
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 20 CARCASS		SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: WCH-08-001-4	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX 797922488504	

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 1630M; Mercury - 7473											
Sample No. / Matrix * / Sample Date / Sample Time												
J195V6 2981.199 / OTHER SOLID / 9.8.09 / 1600	X											

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1600 9.8.09	EAS lockstorage 2 Wendy West	1600 9.8.09
EAS LOCKSTORAGE 2	9/10/09 1800	SHANNAN JOHNSON	9/10/09 1800
SHANNAN JOHNSON	9/10/09 1800	FDX	
		[illegible]	09/11/09 1450

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-809	Page 1 of 1

Collector Wendy West	**Company Contact** JOAN KESSNER **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 9K N **Data Turnaround** 45 Days
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 20 CARCASS	**SAF No.** RC-118	
Ice Chest No. WCH-08-001-4	**Field Logbook No.** EL-1638 **COA** BESCRC6520	**Method of Shipment** FED EX	
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A	**Bill of Lading/Airbill No.** 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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J194B8 2987.200 / OTHER SOLID / 9.8.09 / 1600	X	X									

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1600 9.8.09	EAS LOCKED STORAGE 2	1600 9.8.09
EAS LOCKED STORAGE 2	9/10/09 1000	SHANNAN JOHNSON	9/10/09 1000
SHANNAN JOHNSON	9/10/09 1000	FDX	
			09/11/09 1450

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-818	Page 1 of 1

Collector Wendy West	**Company Contact** JOAN KESSNER **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** ~~9K~~ N **Data Turnaround** 45 Days
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 21 FILLET	**SAF No.** RC-118	
Ice Chest No. WCH-08-001-4	**Field Logbook No.** EL-1638 / **COA** BESCRC6520	**Method of Shipment** FED EX	
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A	**Bill of Lading/Air Bill No.** FDX# 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												
J194C8 2781-201 / OTHER SOLID / 9.9.09 / 1045	X	X										

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Wendy West	1045 9.9.09	Received By/Stored In: EAS LOCKED STORAGE2	1045 9.9.09
Relinquished By/Removed From: EAS LOCKED STORAGE2	9/10/09 1011	Received By/Stored In: Wendy West / SHANNAN JOHNSON	9/10/09 1011
Relinquished By/Removed From: SHANNAN JOHNSON	9/10/09 1016	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In: [signature]	09/11/09 1450
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-819	Page 1 of 1

Collector Wendy West	**Company Contact** JOAN KESSNER **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** 9K N **Data Turnaround** 45 Days
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 21 CARCASS	**SAF No.** RC-118	
Ice Chest No. WCH-08-001-4	**Field Logbook No.** EL-1638 **COA** BESCRC6520	**Method of Shipment** FED EX	
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A	**Bill of Lading/Airbill No.** FDX# 7979224885 04	

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J194C9 2981.202 / OTHER SOLID / 9.9.09 / 10:55	X	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Wendy West	9.9.09 10:55	Received By/Stored In: EAS LOCKED STORAGE (Wendy West)	9.9.09 1055
Relinquished By/Removed From: EAS LOCKED STORAGE	9/10/09	Received By/Stored In: SHANNAN JOHNSON	9/10/09
Relinquished By/Removed From: SHANNAN JOHNSON	9/10/09	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In: [signature]	09/11/09 1450
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

LOG-IN CHECKLIST

Reference SOP#MSL-A-001

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: Aliquots 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)*	
	MA		Custody seal present	
		MA	Custody seal intact	
MA			Cooler(s) temperature (acceptable ranges = water: 4±2°C / solid: frozen) *(if multiple coolers, note temp. of each)*	3.7 °C _____ °C
		MA	Project Manager notified of any discrepancies or if temperature outside acceptable range? Comments/Remedy: _____	
MA			All chain of custody forms signed and dated?	
	MA		Samples Filtered?	

Sample condition(s): Acceptable Other (explain)

Container type: Tedlar Poly Glass Gas-vial Other plastic jars

Notes: _____

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

SAMPLE PRESERVATION

MA	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:			Notes:
		0.2% HNO3	
		0.5% HCl (Hg samples)	
		Refrigerate	
	MA	Freeze	Outside freezer - to be transfered to pop. vials & put in deep freez
		Other	

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

Pacific Northwest NATIONAL LABORATORY | Battelle The Business of Innovation

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

SOP# MSL-A-001

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-828	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 22 FILLET		SAF No.: RC-118
Ice Chest No.: AFS-04-041	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 7979 4146 3127

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M								
Sample No.	Matrix *	Sample Date	Sample Time									
J19503 2981.203	OTHER SOLID	~~9/10/09~~ 9/10/09	1100	X	X							

CHAIN OF POSSESSION		Sign/Print Names	
Relinquished By/Removed From: Wendy West	Date/Time: 1100 9/10/09	Received By/Stored In: EAS LOCKED STORAGE2 Wendy West	Date/Time: 1100 9/10/09
Relinquished By/Removed From: EAS LOCKED STORAGE2	Date/Time: 9/17/09 950	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 9/17/09 950
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 9/17/09 950	Received By/Stored In: FDX	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In: [illegible]	Date/Time: 09/18/09 1230
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-829	Page 1 of 1

Collector Wendy West	**Company Contact** JOAN KESSNER **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** ~~9K~~ N 8/20/09 **Data Turnaround** 45 Days
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 22 CARCASS	**SAF No.** RC-118	
Ice Chest No. AFS-04-041	**Field Logbook No.** EL-1638 / **COA** BESCRC6520	**Method of Shipment** FED EX	
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A	**Bill of Lading/Air Bill No.** FDX# 7979 4146 3127	

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

Sample No.	Matrix *	Sample Date	Sample Time	Total Inoganic Arsenic	Chromium Hex in Solids - 1636M
J19504 2981.204	OTHER SOLID	9/10/09	1130	X	X

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1130 9/10/09	EAS LOCKED STORAGE2 Wendy West	1130 9/10/09
EAS LOCKED STORAGE2	9/17/09 950	SHANNAN JOHNSON	9/17/09 950
SHANNAN JOHNSON	9/17/09 950	FDX	
			9/18/09 1230

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-839	Page 1 of 1

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 23 CARCASS		SAF No.: RC-118
Ice Chest No.: APS-04-041	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 7979 4146 3127

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											
J195R1 2981.205 / OTHER SOLID / 9/10/09 / 1515	X	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	1515 9/10/09	Received By/Stored In: EAS LOCKED STORAGE 2	1515 9/10/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/17/09 950	Received By/Stored In: SHANNAN JOHNSON	9/17/09 950
Relinquished By/Removed From: SHANNAN JOHNSON	9/17/09 950	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In: Hahn	09/18/09 1230
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-838	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N 1/0 82769 Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 23 FILLET	SAF No.: RC-118	
Ice Chest No.: AFS-04-041	Field Logbook No.: EL-1638 COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 7979 4146 3127	

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											
J195R0 2981.206 / OTHER SOLID / 9/10/09 / 1500	X	X									

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: Wendy West; Date/Time: 9/10/09 1500	Received By/Stored In: EAS LOCKED STORAGE 2; Date/Time: 9/10/09 1500	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: EAS LOCKED STORAGE 2; Date/Time: 9/17/09 950	Received By/Stored In: SHANNAN JOHNSON; Date/Time: 9/17/09 950		
Relinquished By/Removed From: SHANNAN JOHNSON; Date/Time: 9/17/09 950	Received By/Stored In: FDX; Date/Time:		
Relinquished By/Removed From: ; Date/Time:	Received By/Stored In: [illegible] 09/18/09 1230; 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-118-848	Page 1 of 1

Collector Wendy West	**Company Contact** JOAN KESSNER **Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH	**Price Code** ~~9K~~ N 14D 83109 **Data Turnaround** 45 Days
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 24 FILLET	**SAF No.** RC-118	
Ice Chest No. APS-04-041	**Field Logbook No.** EL-1638 / **COA** BESCRC6520	**Method of Shipment** FED EX	
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A	**Bill of Lading/Air Bill No.** FDX# 7979 4146 3127	

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									
J195T2 2981·207	OTHER SOLID	~~9-13-09~~ 9-14-09	1130	X	X							

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	9-14-09 1130	EAS LOCKED STORAGE 2 Wendy West	9-14-09 1130
EAS LOCKED STORAGE 2	9/17/09 950	SHANNAN JOHNSON	9/17/09 950
SHANNAN JOHNSON	9/17/09 950	FDX	
		[illegible]	09/18/09 1230

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-849	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N MS8409	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.: AFS-04-04	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX		
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX#797941463127		

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											
J195T3 2981.208 / OTHER SOLID / ~~9-13-09~~ 9-14-09 / 1200	X	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	1200 9-14-09 ~~9-13-09~~	EAS LOCKED STORAGE 2 Wendy West	1200 9-14-09 ~~9-13-09~~
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/17/09 950	SHANNAN JOHNSON	9/17/09 950
Relinquished By/Removed From: SHANNAN JOHNSON	9/17/09 950	FDX	
Relinquished By/Removed From:		Received By/Stored In: [signature]	09/18/09 1230
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-879	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 25 CARCASS		SAF No.: RC-118
Ice Chest No.: APS-04-04	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.: ERO 7979 4 14 63 1 27

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											
J195Y0 2981209 / OTHER SOLID / 9.15.09 / 1130	X	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	1130 9.15.09	EAS LOCKED STORAGE2 Wendy West	1130 9.15.09
Relinquished By/Removed From: EAS LOCKED STORAGE2	9/17/09 950	SHANNAN JOHNSON	9/17/09 950
Relinquished By/Removed From: SHANNAN JOHNSON	9/17/09 950	FDX	
Relinquished By/Removed From		[illegible]	09/18/09 1230
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-878	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N 1/18/09	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 25 FILLET		SAF No.: RC-118
Ice Chest No.: APS-04-041	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 7979 4146 3127

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											
J195X9 2981-210 / OTHER SOLID / 9.15.09 / 1100	X	X									

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	9.15.09 1100	EAS LOCKED STORAGE 2 Wendy West	9.15.09 1100
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/17/09 950	SHANNAN JOHNSON	9/17/09 950
Relinquished By/Removed From: SHANNAN JOHNSON	9/17/09 950	FOY	
Relinquished By/Removed From		Received By/Stored In: [signature]	01/18/09 1230
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-888	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 26 FILLET	SAF No.: RC-118	
Ice Chest No.: AFS-04-041	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Airbill No.: FDX#7794146312 7	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation			Cool 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								
J19609 2981.211	OTHER SOLID	9/15/09	1410	X	X	X					

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1410 9/15/09	EAS LOCKED STORAGE 2 Wendy West	1410 9/15/09
EAS LOCKED STORAGE 2	9/17/09 950	SHANNAN JOHNSON	9/17/09 950
SHANNAN JOHNSON	9/17/09 950	FDX	
		McMahon	09/18/09 1230

SPECIAL INSTRUCTIONS

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.

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

RC-118-889

Collector Wendy West	**Company Contact** JOAN KESSNER	**Telephone No.** 375-4688	**Project Coordinator** KESSNER, JH
Project Designation Columbia River Component of the RCBRA - Tissues	**Sampling Location** STURGEON 26 CARCASS		**SAF No.** RC-118
Ice Chest No. AFS-04-041	**Field Logbook No.** EL-1638	**COA** BESCRC6520	**Method of Shipment** FED EX
Shipped To Battelle Marine Sciences	**Offsite Property No.** N/A		**Bill of Lading/Air Bill No.** FDX# 7979 4 1463127

Price Code 9K N 9/09

Data Turnaround 45 Days

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 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	Method Mercury by EPA 1630M, Mercury - 7473	Chromium Hex in Solids - 1636M								

Sample No.	Matrix *	Sample Date	Sample Time										
J19610 2981.212	OTHER SOLID	9.15.09	1430	X	X	X							

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	9.15.09 1430	Wendy West EAS LOCKED STORAGE2	9.15.09 1430
EAS LOCKED STORAGE 2	9/17/09 950	SHANNAN JOHNSON	9/17/09 950
SHANNAN JOHNSON	9/17/09 950	FDX	
		[illegible]	09/18/09 1230

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

LOG-IN CHECKLIST

Reference SOP#MSL-A-001

Central File #: 2981 Sample No(s): 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)*
	MK		Custody seal present
		MK	Custody seal intact
MK			Cooler(s) temperature (acceptable ranges = water: 4±2°C / solid: frozen) 2.7 °C
			(if multiple coolers, note temp. of each) °C
		MK	Project Manager notified of any discrepancies or if temperature outside acceptable range? Comments/Remedy: _____
MK			All chain of custody forms signed and dated?
	MK		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

- [MK] 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: _____
	MK	Freeze	Notes: Deep freezer D-1
		Other	Notes: _____

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

SAMPLE LOGIN

Pacific Northwest

Battelle

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

SOP#: MSL-A-001

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-899	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 27 CARCASS		SAF No.: RC-118
Ice Chest No.: DCH-08-003-2	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 796967152240

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation				Cool 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									
J19629 2981·213aeh	OTHER SOLID	9/16/09	1115	X	X	X						

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1115 9/16/09	EAS LOCKED STORAGE 2 Wendy West	1115 9/16/09
EAS LOCKED STORAGE 2	9/22/09 100	SHANNAN JOHNSON	9/22/09 100
SHANNAN JOHNSON	9/22/09 100	CFOX	
		[signature]	09/23/09 1250

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-898	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N 11/19/09	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 27 FILLET		SAF No.: RC-118
Ice Chest No.: WCH-08-003-2	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX 796967152240

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 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 2981.214asb / OTHER SOLID / 9/16/09 / 1100	X	X	X								

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1100 9/16/09	EAS LOCKED STORAGE2 Wendy West	1100 9/16/09
EAS LOCKED STORAGE2	9/22/09 100	SHANNAN JOHNSON	9/22/09 100
SHANNAN JOHNSON	9/22/09 1002	FDX	
		[illegible]	09/23/09 1252

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-908	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 28 FILLET	SAF No.: RC-118	
Ice Chest No.: WCH-08-003-2	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Airbill No.: FDX# 796967152240	

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 Inoganic Arsenic	Chromium Hex in Solids - 1636M									
Sample No. / Matrix * / Sample Date / Sample Time											
J19639 2981.215 / OTHER SOLID / 9/16/09 / 1345	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	9/16/09 1345	EAS LOCKED STORAGE 2 (Wendy West)	9/16/09 1345
EAS LOCKED STORAGE 2	9/22/09 100	SHANNAN JOHNSON	9/22/09 100
SHANNAN JOHNSON	9/22/09 100	FDX	
		[illegible]	09/23/09 1250

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-966	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N 9/1/09
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 28 FILLET	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: WCH-08-003-2	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX # 796967152240	

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 1630M; Mercury - 7473										

Sample No.	Matrix *	Sample Date	Sample Time									
J19698 2981-216	OTHER SOLID	9/16/09	1345	X								

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1345 9/16/09	EAS LOCKED STORAGE Wendy West	1345 9/16/09
EAS LOCKED STORAGE	9/22/09 100	SHANNAN JOHNSON	9/22/09 100
SHANNAN JOHNSON	9/22/09 100	FDX	
		[illegible]	09/23/09 1252

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-967	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 28 CARCASS		SAF No.: RC-118
Ice Chest No.: WCH-08-003-2	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX 796967152240

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Freez.											
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									
J19699 2981-217	OTHER SOLID	9/14/09	1400	X								

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1400 9/14/09	EAS LOCKED STORAGE 2 Wendy West	1400 9/14/09
EAS LOCKED STORAGE 2	9/22/09 100	SHANNAN JOHNSON	9/22/09 100
SHANNAN JOHNSON	9/22/09 100	FDX	
		09/23/09	1250

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-909	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 28 CARCASS	SAF No.: RC-118	
Ice Chest No.: WCH-08-003-2	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 796967152240	

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											
J19640 2981 · 218 / OTHER SOLID / 9/16/09 / 1400	X	X									

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: Wendy West; Date/Time: 9/16/09 1400	Received By/Stored In: EAS LOCKED STORAGE 2; Date/Time: 9/16/09 1400		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: EAS LOCKED STORAGE 2; Date/Time: 9/22/09 100	Received By/Stored In: SHANNAN JOHNSON; Date/Time: 9/22/09 100		
Relinquished By/Removed From: SHANNAN JOHNSON; Date/Time: 9/22/09 100	Received By/Stored In: FDX; Date/Time:		
Relinquished By/Removed From:	Received By/Stored In: [illegible] 09/23/09 1250; Date/Time:		
Relinquished By/Removed From:	Received By/Stored In:		
Relinquished By/Removed From:	Received By/Stored In:		

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-919	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 29 CARCASS		SAF No.: RC-118
Ice Chest No: WCH-08-003-2	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 796967152240

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											
J19650 2981-219 / OTHER SOLID / 9/17/09 / 1215	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1215 9/17/09	EAS LOCKED STORAGE 2 Wendy West	1215 9/17/09
EAS LOCKED STORAGE 2	9/22/09 1100	SHANNAN JOHNSON	9/22/09 1100
SHANNAN JOHNSON	9/22/09 1100	FDX	
		[illegible]	09/23/09 1250

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-918	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 29 FILLET		SAF No.: RC-118
Ice Chest No.: WCH-08-003-2	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 796967152240

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											
J19649 2981-220 / OTHER SOLID / 9/17/09 / 1200	X	X									

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	9/17/09 1200	EAS LOCKED STORAGE 2 Wendy West	9/17/09 1200
EAS LOCKED STORAGE 2	9/22/09 100	SHANNAN JOHNSON	9/22/09 100
SHANNAN JOHNSON	9/22/09 100	FDX	
		Stahn	09/23/09 1250

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-929	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N ΔΔ 9909
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 30 CARCASS	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: WCH-08-003-2	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Air Bill No.: FDX# 796967152240	

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								
J19660 2981-221	OTHER SOLID	9/17/09	1500	X	X						

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1500 9/17/09	EAS LOCKED STORAGE 2 Wendy West	1500 9/17/09
EAS LOCKED STORAGE 2	9/22/09 100	SHANNAN JOHNSON	9/22/09 100
SHANNAN JOHNSON	9/22/09 100	FOX	
		John McKahn	09/25/09 1250

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-928	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N 4/19/09	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 30 FILLET		SAF No.: RC-118
Ice Chest No.: WCH-08-003-2	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX # 796967152240

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								
J196592981 222	OTHER SOLID	9/17/09	1445	X	X						

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Wendy West	1445 9/17/09	Received By/Stored In: EAS LOCKED STORAGE 2 Wendy West	1445 9/17/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/22/09 100	Received By/Stored In: SHANNAN JOHNSON	9/22/09 100
Relinquished By/Removed From: SHANNAN JOHNSON	9/22/09 100	Received By/Stored In: FDX	
Relinquished By/Removed From:		Received By/Stored In:	09/23/09 1250
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

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

(Initial appropriate box when completed)

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

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

Container type: Teflon Poly Glass Gap. Vial Other: _____

Notes: _____

Completed By: [signature] Date/Time: 09/23/09 1240

SAMPLE PRESERVATION

- [DM] 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:			Notes:
		0.2% HNO3	
		0.5% HCl (Hg samples)	
		Refrigerate	
	DM	Freeze	Deep freeze C-1
		Other	

Completed By: [signature] Date/Time: 09/23/09 1240

SAMPLE LOGIN

Pacific Northwest NATIONAL LABORATORY | Battelle The Business of Innovation

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	0924/09
J19666	na	2981-227	other solid	Deep Freezer B-1	Total Inorganic Cr Hex in Solids 1636M	0924/09
J19665	na	2981-228	other solid	Deep Freezer B-1	Total Inorganic Cr Hex in Solids 1636M	0924/09
J19752	na	2981-229	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J19751	na	2981-230	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18X99	na	2981-231	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18X96	na	2981-232	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18XJ3	na	2981-233	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18XC9	na	2981-234	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18XB0	na	2981-235	other solid	Deep Freezer B-1	Total Inorganic As	0924/09
J18XF3	na	2981-236	other solid	Deep Freezer B-1	Total Inorganic As	0924/09

10/1/09

SOP#: MSL-A-001

SAMPLE LOGIN

Pacific Northwest NATIONAL LABORATORY | Battelle The Business of Innovation

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-118-866	Page 1 of 1

Collector: Rylie Barron	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: STURGEON 17 VISCERA		SAF No.: RC-118
Ice Chest No.: APS-04-041	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Airbill No.: FDX# 7969863568 75

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Freeze										
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								
J195W5 2981.223	OTHER SOLID	9/21/09	1420	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Rylie Barron RR	9/21/09 1420	Received By/Stored In: LAS LOCKED STORAGE 2 Rylie Barron RR	9/21/09 1420
Relinquished By/Removed From: LAS LOCKED STORAGE 2	9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In	9/30/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-867	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 18 VISCERA		SAF No.: RC-118
Ice Chest No.: AFS-04-041	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX#796986356875

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Freeze										
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								
J195W6 2981.224	OTHER SOLID	9/21/09	1500	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Wendy West	1500 9/21/09	Received By/Stored In: EAS LOCKED STORAGE 2 Wendy West	1500 9/21/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	Received By/Stored In: FDX	
Relinquished By/Removed From:		Received By/Stored In:	9/30/09 1500
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-868	Page 1 of 1

Collector: Rylie Barron	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9L N 1/0 83109	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 19 VISCERA		SAF No.: RC-118
Ice Chest No.: APS-C4-041	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX: 7969863568 75

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Freeze
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 2981-225	OTHER SOLID	9/21/09	1620	X

CHAIN OF POSSESSION — **Sign/Print Names**

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Rylie Barron	9/21/09 1620	EAS LOCKED STORAGE #2 Rylie Barron	9/21/09 1620
EAS LOCKED STORAGE #2	9/21/09 1645	SHANNAN JOHNSON	9/21/09 1645
SHANNAN JOHNSON	9/21/09 1645	FDX	
			09/30/09 1500

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-869	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER — Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N — Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 20 VISCERA	SAF No.: RC-118	
Ice Chest No.: AFS-04-041	Field Logbook No.: EL-1638 — COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Airbill No.: FDX 796986356875	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Freeze										
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 2981-226	OTHER SOLID	9/24/09	1745	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	9/24/09 1745	EAS LOCKED STORAGE2 Wendy West	9/24/09 1745
Relinquished By/Removed From: EAS LOCKED STORAGE2	9/29/09 1045	SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1047	FDX	
Relinquished By/Removed From		Received By/Stored In	09/30/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-935	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: STURGEON 27 VICERA		SAF No.: RC-118
Ice Chest No.: AFS-04-041	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Air Bill No.: FDX# 796986356875

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Freeze											
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 2981-227	OTHER SOLID	9/24/09	1800	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	9/24/09 1800	Received By/Stored In: EAS LOCKED STORAGE 2 Wendy West	9/24/09 1800
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/29/09 1645	Received By/Stored In: SHANNAN JOHNSON	9/29/09 1645
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1645	Received By/Stored In: FDX	
Relinquished By/Removed From:		Received By/Stored In: [signature]	09/30/09 1500
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-934	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 28 ~~AKA 9909~~ STURGEON ~~26~~ VICERA	SAF No.: RC-118	AKA 9909
Ice Chest No.: APS-04-041	Field Logbook No.: EL-1638; COA: BESCRC6520	Method of Shipment: FED EX	
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A	Bill of Lading/Airbill No.: FLY 79698356875	

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Freeze										
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								
J19665 2981.228	OTHER SOLID	9/24/09	1810	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	1810 9/24/09	EAS LOCKED STORAGE2	1810 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE2	9/29/09 1045	SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	FDX	
Relinquished By/Removed From		Received By/Stored In	9/30/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-1079	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N MD 91709	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL 6 CARCASS		SAF No.: RC-118
Ice Chest No.: AFS-D4-041	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Airbill No.: FDX# 796986356875

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C										
Type of Container	P/G										
No. of Container(s)	1										
Volume	15mL										
SAMPLE ANALYSIS	Total Inoganic Arsenic										
Sample No.	Matrix *	Sample Date	Sample Time								
J19752 2981-229	OTHER SOLID	9/24/09	1130	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	1130 9/24/09	Received By/Stored In: EAS LOCKED STORAGE 2 Wendy West	1130 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In: [illegible] 9/30/09 1500	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-1078	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL 6 FILLET		SAF No.: RC-118
Ice Chest No.: AFS-04-041	Field Logbook No.: EL-1638	COA: BESCRC6520	Method of Shipment: FED EX
Shipped To: Battelle Marine Sciences	Offsite Property No.: N/A		Bill of Lading/Airbill No.: FDX# 7969863568 79

POSSIBLE SAMPLE HAZARDS/REMARKS

N/A

Special Handling and/or Storage

FREEZE "MATRIX COMPOSED OF FISH"

Preservation	Cool 4C
Type of Container	P/G
No. of Container(s)	1
Volume	15mL

SAMPLE ANALYSIS

Sample No.	Matrix *	Sample Date	Sample Time	Total Inorganic Arsenic
J19751 2981.230	OTHER SOLID	9/24/09	1115	X

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1115 9/24/09	Wendy West EAS LOCKED STORAGE2	1115 9/24/09
EAS LOCKED STORAGE2	9/29/09 1045	SHANNAN JOHNSON	9/29/09 1045
SHANNAN JOHNSON	9/29/09 1045	FDX	
		[illegible]	9/29 1500

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-199	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N JD 51809	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL4-FILLET		SAF No.: RC-118
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/Air Bill No.: FDX#7969 8635 6875

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								
J18X99 2981-231	OTHER SOLID	9/24/09	1400	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	1400 9/24/09	EAS LOCKED STORAGE 2 Wendy West	1400 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/29/09 1045	SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	FED EX	
Relinquished By/Removed From			
Relinquished By/Removed From			
Relinquished By/Removed From			

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-196	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL1-FILLET	SAF No.: RC-118	
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/Airbill No.: FDX#796986356875	

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											
J18X96 2981-232 / OTHER SOLID / 9/24/09 / 1300	X										

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	1300 9/24/09	Received By/Stored In: EAS LOCKED STORAGE 2	1300 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In: [signature]	09/30/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-253	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N 4/05/09	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WAL3, CARCASS		SAF No.: RC-118
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/Airbill No.: FDX# 796986356875

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	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	1045 9/24/09	EAS LOCKED STORAGE 2 Wendy West	1045 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/24/09 1045	Received By/Stored In: SHANNAN JOHNSON	9/24/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/24/09 1045	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In: [signature]	09/30/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-219	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL4-CARCASS		SAF No.: RC-118
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/Air Bill No.: FDX# 7969863568 75

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									
J18XC9 2981-234	OTHER SOLID	9/24/09	1430	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Wendy West	Date/Time: 9/24/09 1930	Received By/Stored In: EAS LOCKED STORAGE 2 Wendy West	Date/Time: 9/24/09 1430
Relinquished By/Removed From: EAS LOCKED STORAGE 2	Date/Time: 9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 9/29/09 1047	Received By/Stored In: FDX	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In: [signature]	Date/Time: 09/30/09 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:

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-200	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N 1A 51809
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL5-FILLET	SAF No.: RC-118	Data Turnaround: 45 Days
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/Air Bill No.: FDX# 796986356875	

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											
J18XB0 2981.235 / OTHER SOLID / 9/24/09 / 1515	X										

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS
Relinquished By/Removed From: Wendy West; Date/Time: 9/24/09 1515	Received By/Stored In: EAS LOCKED STORAGE 2; Date/Time: 9/24/09 1515	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: 9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON; Date/Time: 9/29/09 1045	
Relinquished By/Removed From: SHANNAN JOHNSON; Date/Time: 9/29/09 1045	Received By/Stored In: EDS; Date/Time:	
Relinquished By/Removed From: Date/Time:	Received By/Stored In: [signature]; Date/Time: 09/30/09 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:	

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-233	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WAL3, FILLET		SAF No.: RC-118
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/Air Bill No.: FDX# 796986356875

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									
J18XF3 2981-236	OTHER SOLID	9/24/09	1030	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Wendy West	1030 9/24/09	Received By/Stored In: EAS LOCKED STORAGE 2	1030 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	Received By/Stored In: FDX	
Relinquished By/Removed From:		Received By/Stored In: [signature]	09/30/09 1500
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

Sampler unavailable to remove samples from controlled storage. Shipper removed samples from storage location taking custody

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-232	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N JD 5/18/09	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WAL2, FILLET		SAF No.: RC-118
Ice Chest No.: AF-S-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/Airbill No.: FDX# 796986356875

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									
J18XF2 2981.237	OTHER SOLID	9/24/09	0945	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Wendy West	0945 9/24/09	Received By/Stored In: EAS LOCKED STORAGE 2	0945 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	Received By/Stored In: FDX	
Relinquished By/Removed From:		Received By/Stored In: [illegible]	09/30/09 1500
Relinquished By/Removed From:		Received By/Stored In:	
Relinquished By/Removed From:		Received By/Stored In:	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-231	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WAL1, FILLET		SAF No.: RC-118
Ice Chest No.: APS-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/Airbill No.: FDX# 7969863568 75

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 Inoganic Arsenic											
Sample No.	Matrix *	Sample Date	Sample Time									
J18XF1 2981-238	OTHER SOLID	9/24/09	0900	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	0900 9/24/09	EAS LOCKED STORAGE Wendy West	0900 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE	9/29/09 1045	SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	FDX	
Relinquished By/Removed From		[illegible]	09/30/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-216	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL1-CARCASS		SAF No.: RC-118
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/AIR Bill No.: FDX# 7969863568 75

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 Inoganic Arsenic											
Sample No.	Matrix *	Sample Date	Sample Time									
J18XC6 2981.239	OTHER SOLID	9/24/09	1330	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Wendy West	Date/Time: 1330 9/24/09	Received By/Stored In: EAS LOCKED STORAGE2	Date/Time: 1330 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE2	Date/Time: 9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 9/29/09 1045	Received By/Stored In: FDX	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time: 09/30/09 1600
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:
Relinquished By/Removed From:	Date/Time:	Received By/Stored In:	Date/Time:

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-251	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WAL1, CARCASS		SAF No.: RC-118
Ice Chest No.: APS-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/Air Bill No.: FDX#7969863568 75

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	
J18XJ1 2981.240	OTHER SOLID	9/24/09	0915	X

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	09/15 9/24/09	EAS LOCKED STORAGE 2 Wendy West	09/15 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In: [illegible]	09/30/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-220	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N 4/5 51809	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL5-CARCASS		SAF No.: RC-118
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/Airbill No.: FDX# 7969863568 75

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									
J18XD0 2981-241	OTHER SOLID	9/24/09	1545	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	1545 9/24/09	EAS LOCKED STORAGE Wendy West	1545 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE	9/29/09 1645	SHANNAN JOHNSON	9/29/09 1645
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1645	FDX	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-252	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N 4/15/09; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WAL2, CARCASS	SAF No.: RC-118	
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/Airbill No.: FDX# 796986356875	

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									
J18XJ2 2981.242	OTHER SOLID	9/24/09	1000	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	1000 9/24/09	EAS LOCKED STORAGE2 Wendy West	1000 9/24/09
Relinquished By/Removed From: EAS LOCKED STORAGE2	9/29/09 1045	SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	FOX	
Relinquished By/Removed From		[illegible]	09/30/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-197	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N; Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL2-FILLET	SAF No.: RC-118	
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/Airbill No.: FDX# 796986356875	

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								
J18X97 2981.243	OTHER SOLID	9/25/09	1100	X							

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	9/25/09 1400	Received By/Stored In: EAS LOCKED STORAGE	9/25/09 1400
Relinquished By/Removed From: EAS LOCKED STORAGE	9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	Received By/Stored In: FDX	
Relinquished By/Removed From		Received By/Stored In	9/30/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-217	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL2-CARCASS		SAF No.: RC-118
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/Airbill No.: FDX# 796986356875

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 Inoganic Arsenic											
Sample No.	Matrix *	Sample Date	Sample Time									
J18XC7 2981-249	OTHER SOLID	9/25/09	1130	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	1130 9/25/09	EAS LOCKED STORAGE Wendy West	1130 9/25/09
Relinquished By/Removed From: EAS LOCKED STORAGE	9/29/09 1045	SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	FDX	
Relinquished By/Removed From		[illegible]	9/30/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-235	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WAL5, FILLET		SAF No.: RC-118
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/Air Bill No.: FDX# 796986356875

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 Inoganic Arsenic											
Sample No.	Matrix *	Sample Date	Sample Time									
J18XF5 2981.245	OTHER SOLID	9/25/09	1630	X								

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: Wendy West, Date/Time 1630 9/25/09	Received By/Stored In: EAS LOCKED STORAGE2, Date/Time 1630 9/25/09		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: EAS LOCKED STORAGE2, Date/Time 9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON, Date/Time 9/29/09 1045		
Relinquished By/Removed From: SHANNAN JOHNSON, Date/Time 9/29/09 1045	Received By/Stored In: FOX, Date/Time		
Relinquished By/Removed From, Date/Time	Received By/Stored In: [illegible] 09/30/09 1520, Date/Time	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		

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-118-255	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WAL5, CARCASS		SAF No.: RC-118
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/Air Bill No.: FDX# 7969863568 75

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									
J18XJ5 2981.246	OTHER SOLID	9/25/09	1700	X								

CHAIN OF POSSESSION	Sign/Print Names	SPECIAL INSTRUCTIONS	Matrix *
Relinquished By/Removed From: Wendy West; Date/Time: 1700 9/25/09	Received By/Stored In: EAS LOCKED STORAGE 2; Date/Time: 1700 9/25/09		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: EAS LOCKED STORAGE 2; Date/Time: 9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON; Date/Time: 9/29/09 1045		
Relinquished By/Removed From: SHANNAN JOHNSON; Date/Time: 9/29/09 1045	Received By/Stored In: FDX		
Relinquished By/Removed From: Date/Time	Received By/Stored In: [illegible] 09/30/09 1500	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		

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-118-218	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: 9K N	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL3-CARCASS		SAF No.: RC-118
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/Air Bill No.: 796986356875

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											
J18XC8 2981.247 / OTHER SOLID / 9/25/09 / 1230	X										

CHAIN OF POSSESSION	Date/Time	Sign/Print Names: Received By/Stored In	Date/Time
Relinquished By/Removed From: Wendy West	9/25/09 1230	Received By/Stored In: EAS LOCKED STORAGE 2	9/25/09 1230
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	Received By/Stored In: FOX	
Relinquished By/Removed From		Received By/Stored In: [illegible]	09/30/09 1520
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST	RC-118-198	Page 1 of 1

Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH
Price Code: ~~9K~~ N 149 57809	Data Turnaround: 45 Days		
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 100SA-WAL3-FILLET		SAF No.: RC-118
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/Air Bill No.: FDX 7969863568 75

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									
J18X98 2981.248	OTHER SOLID	9/25/09	1200	X								

CHAIN OF POSSESSION	Sign/Print Names		
Relinquished By/Removed From: Wendy West	Date/Time: 1200 9/25/09	Received By/Stored In: EAS LOCKED STORAGE 2	Date/Time: 1200 9/25/09
Relinquished By/Removed From: EAS LOCKED STORAGE 2	Date/Time: 9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	Date/Time: 9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	Date/Time: 9/29/09 1045	Received By/Stored In:	Date/Time:
Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time: 09/30/09 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

SPECIAL INSTRUCTIONS

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

Matrix *

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

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

WCH-EE-011

Washington Closure Hanford	CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST		RC-118-234	Page 1 of 1
Collector: Wendy West	Company Contact: JOAN KESSNER	Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: 9K N JJS 51809	Data Turnaround: 45 Days
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WAL4, FILLET		SAF No.: RC-118	
Ice Chest No.: APS-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/Air Bill No.: 7969863568 75	

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									
J18XF4 2981.249	OTHER SOLID	9/25/09	1400	X								

CHAIN OF POSSESSION	Date/Time	Sign/Print Names	Date/Time
Relinquished By/Removed From: Wendy West	9/25/09 1400	Received By/Stored In: EAS LOCKED STORAGE 2	9/25/09 1400
Relinquished By/Removed From: EAS LOCKED STORAGE 2	9/29/09 1045	Received By/Stored In: SHANNAN JOHNSON	9/29/09 1045
Relinquished By/Removed From: SHANNAN JOHNSON	9/29/09 1045	Received By/Stored In: DX	
Relinquished By/Removed From		Received By/Stored In: [signature]	09/30/09 1500
Relinquished By/Removed From		Received By/Stored In	
Relinquished By/Removed From		Received By/Stored In	

SPECIAL INSTRUCTIONS

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

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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: Wendy West	Company Contact: JOAN KESSNER; Telephone No.: 375-4688	Project Coordinator: KESSNER, JH	Price Code: ~~9K~~ N DAD 5199
Project Designation: Columbia River Component of the RCBRA - Tissues	Sampling Location: 300SA-WAL4, CARCASS	SAF No.: RC-118	Data Turnaround: 45 Days
Ice Chest No.: AFS-041-041	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/Air Bill No.: FDX 7969 8635 6875	

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 Inoganic Arsenic										
Sample No. / Matrix * / Sample Date / Sample Time											
J18XJ4 2981.250 / OTHER SOLID / 9/25/09 / 1415	X										

CHAIN OF POSSESSION — Sign/Print Names

Relinquished By/Removed From	Date/Time	Received By/Stored In	Date/Time
Wendy West	1415 9/25/09	EAS LOCKED STORAGE 2 Wendy West	1415 9/25/09
EAS LOCKED STORAGE 2	9/29/09 1045	SHANNAN JOHNSON	9/29/09 1045
SHANNAN JOHNSON	9/29/09 1045	FDX	
		[illegible]	09/30/09 1500

SPECIAL INSTRUCTIONS

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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L=Liquid
V=Vegetation
X=Other

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

WCH-EE-011

LOG-IN CHECKLIST

Reference SOP# MSL-A-001

Central File #: 2981 Sample No(s): 223-250 Batch: 18

Project Name: WA Closure Hanford 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)
		USDA Samples (see Compliance Agreement Checklist)
		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:

PM Verification:

Sample Preservation Instructions:

See LIMS for archive/disposal information

TO BE COMPLETED UPON SAMPLE ARRIVAL/LOG-IN

Yes	No	N/A	Indicate in Appropriate Box
	✓		Custody seal present — Seal intact? YES NO
✓			Cooler temperature (acceptable range: 4±2°C or solids:frozen) (if multiple coolers, note temp. of each) — 3.2 °C ___ °C
		✓	Project Manager notified of any custody/login discrepancies (cooler temp, sponsor codes, etc) Comment/Remedy:
✓			Were all chain of custody forms signed and dated?
	✓		Were samples filtered at MSL?

Sample condition(s): [illegible] Other (Explain):

Container type: [illegible] Poly. [illegible] 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

Battelle Marine Sciences Labs, 1529 West Sequim Bay Rd, Sequim, Washington 98382 PH: (360) 681-4565