URS

March 10, 2008

Mike Gross
U.S. Army Corps of Engineers, Portland District
333 SW First Avenue
PO Box 2946
Portland, Oregon 97208-2946

Subject: Pre-Removal Action Sediment and Clam Sample Analysis
Bradford Island Remedial Investigation
Bonneville Dam Forebay, Cascade Locks, Oregon
Contract No W9128F-04-D-0001, Task Order No. DT06

Dear Mr. Gross:

Please find the results of analysis of the sediment and clam (*Corbicula fluminea*) collected by URS from the Columbia River along the north shore of Bradford Island. The samples were analyzed in general accordance with the *Quality Assurance Project Plan, River Operable Unit Remedial Investigation*, prepared by URS, dated September 2007. These samples were collecting in September 2007, just prior to implementation of the sediment dredging project.

This summary report consists of the following:

- Tabulated data for each sample analyzed
- Sample location map showing the general areas where the samples were obtained based (the footprint of the removal action)
- A case narrative discussing the laboratory data quality and usability

This information will be utilized in the remedial investigation and risk assessment as provided in the *RI/FS Management Plan*.

The original laboratory data deliverables both the .pdf and electronic versions are available upon request.

We look forward to working with you on this important project.

Sincerely,
URS CORPORATION

Jeff Wallace, R.G.
Project Manager

Attachments:
Analytical Results Tables 1 through 8
Figure 1: Pre-Removal Action Sediment and Clam Sampling Areas
QA/QC Review of Laboratory Analytical Data – Pre-Removal Action

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Table 1
Clam Tissue PCB Analytical Results and Screening Criteria
Bradford Island - Remedial Investigation
Pre-Removal Action Samples

							Parameter	Polychlorinated Biphenyls (units = µg/kg or ppb)								
							Method	EPA SW-846 8082								
Sample Station	URS ID	Lab ID	Sample Date	Moisture (%)	Total Lipids (%)	Basis	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1268	Total PCBs[5] (as Aroclors)
1	070926A1TC	K0708865-002	9/26/2007	73.6	13.1	D	38 U	76 U	38 U	38 U	38 U	**1,300**	38 U	38 U	**1,300**
1	070926A7TC[1]	K0708865-001[1]	9/26/2007	73.7	12.2	D	39 U	77 U	39 U	39 U	39 U	**1,400**	39 U	39 U	**1,400**
2	070926A2TC	K0708865-003	9/26/2007	74.1	13.9	D	38 U	76 U	38 U	38 U	38 U	**970**	38 U	38 U	**970**
3	070927A3TC	K0708865-004	9/27/2007	74.8	13.2	D	39 U	78 U	39 U	39 U	39 U	**700**	39 U	39 U	**700**
5	070925A5TC	K0708865-005	9/25/2007	73.8	13.5	D	75 U	150 U	75 U	75 U	75 U	**460**	75 U	75 U	**460**
1	070926A1TC	K0708865-002	9/26/2007	73.6	3.4	W	10 U	20 U	10 U	10 U	10 U	**330**	10 U	10 U	**330**
1	070926A7TC[1]	K0708865-001[1]	9/26/2007	73.7	3.2	W	10 U	20 U	10 U	10 U	10 U	**380**	10 U	10 U	**380**
2	070926A2TC	K0708865-003	9/26/2007	74.1	3.6	W	9.9 U	20 U	9.9 U	9.9 U	9.9 U	**250**	9.9 U	9.9 U	**250**
3	070927A3TC	K0708865-004	9/27/2007	74.8	3.3	W	9.8 U	20 U	9.8 U	9.8 U	9.8 U	**180**	9.8 U	9.8 U	**180**
5	070925A5TC	K0708865-005	9/25/2007	73.8	3.5	W	20 U	40 U	20 U	20 U	20 U	**120**	20 U	20 U	**120**
ODEQ ATLs for Fish/Shellfish (2007)[2] (µg/kg wet)					**Birds (Individual)**		NE	NE	NE	NE	NE	NE	NE	NE	35
					Mammals (Indivdual)		NE	NE	NE	NE	NE	NE	NE	NE	880
					Humans[4]		NE	NE	NE	NE	NE	NE	NE	NE	0.57
ODEQ CTLs for Fish/Shellfish (2007)[3] (µg/kg wet)					**Freshwater**		NE	NE	NE	NE	NE	NE	NE	NE	430

Notes:
µg/kg = microgram per kilogram
ATL = Acceptable Tissue Levels
CTL = Critical Tish Level
D = Dry Weight
EPA = U.S. Environmental Projection Agency
J = The reported value is an estimate.
MRL = method reporting limit
NE = Not Established
ODEQ = Oregon Department of Environmental Quality
U = The analyte was not detected above the reported MRL.
UJ = The analyte was not detected. The reported sample quanitification limit is an estimate.
W = Wet Weight
= reported concentration exceeded one or more screening criteria listed.
- Not Analyzed
1 = 070926A7TC is a field duplicate of 070926A1TC
2 = Table A-3a in Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, Oregon Department of Environmental Quality (ODEQ), Final January 31, 2007.
3 = Table A-4 in Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, Oregon Department of Environmental Quality (ODEQ), Final January 31, 2007.
4 = Lowest values of either carcinogen or non-carcinogen criteria.
5 = PCB Aroclors summed using all non-detect values as zero.

Table 2
Clam Tissue Metal Analytical Results and Screening Criteria
Bradford Island - Remedial Investigation
Pre-Removal Action Samples

							Parameter	Metals (EPA SW-846) (units = mg/kg or ppm)														
							Method	6010B	6020	6020	6020	6020	6020	6010B	6020	6020	6020	7471A	1630M	6020	6020	6020	6010B
Sample Station	URS ID	Lab ID	Sample Date	Moisture (%)	Total Lipids (%)	Basis		Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury (total, inorganic)	Methyl Mercury	Nickel	Thallium	Vanadium	Zinc
1	070926A1TC	K0708865-002	9/26/2007	73.6	13.1	D		**708**	0.050 U	**10.30**	**10.10**	**20**	**1.79**	**2.30**	**0.560**	**40.6**	**0.491**	**0.040**	**0.027 J**	**0.98**	**0.077**	**1.91**	**109.0**
1	070926A7TC[1]	K0708865-001[1]	9/26/2007	73.7	12.2	D		**778**	0.050 U	**9.12**	**8.95**	**23**	**1.53**	**2.90**	**0.525**	**41.9**	**0.518**	**0.037**	**0.026 J**	**1.33**	**0.070**	**1.83**	**105.0**
2	070926A2TC	K0708865-003	9/26/2007	74.1	13.9	D		**641**	0.050 U	**11.70**	**10.40**	**16 J**	**1.75**	**4.70**	**0.523**	**47.3**	**0.391**	**0.044 J**	**0.021 J**	**1.52**	**0.061**	**1.61**	**91.5**
3	070927A3TC	K0708865-004	9/27/2007	74.8	13.2	D		**730**	0.050 UJ	**12.40**	**8.92**	**22**	**1.69**	**4.70**	**0.683**	**53.7**	**0.732**	**0.053**	**0.023 J**	**1.36**	**0.062**	**2.14**	**99.1**
5	070925A5TC	K0708865-005	9/25/2007	73.8	13.5	D		**575**	0.050 U	**9.78**	**7.89**	**14 J**	**1.30**	**2.40**	**0.462**	**38.7**	**0.395**	**0.043**	**0.019 J**	**1.05**	**0.062**	**1.49**	**96.0**
1	070926A1TC	K0708865-002	9/26/2007	73.6	3.4	W		**187**	0.013 U	**2.72**	**2.67**	**5.3**	**0.47**	**0.60**	**0.148**	**10.7**	**0.130**	**0.011**	**0.0071 J**	**0.26**	**0.020**	**0.50**	**28.7**
1	070926A7TC[1]	K0708865-001[1]	9/26/2007	73.7	3.2	W		**205**	0.013 U	**2.40**	**2.35**	**6.0**	**0.40**	**0.80**	**0.138**	**11.0**	**0.136**	**0.010**	**0.0068 J**	**0.35**	**0.018**	**0.48**	**27.7**
2	070926A2TC	K0708865-003	9/26/2007	74.1	3.6	W		**166**	0.013 UJ	**3.03**	**2.68**	**4.2 J**	**0.45**	**1.20**	**0.135**	**12.3**	**0.101**	**0.011 J**	**0.005 J**	**0.39**	**0.016**	**0.42**	**23.7**
3	070927A3TC	K0708865-004	9/27/2007	74.8	3.3	W		**184**	0.013 U	**3.13**	**2.25**	**5.5**	**0.43**	**1.20**	**0.172**	**13.5**	**0.184**	**0.013**	**0.006 J**	**0.34**	**0.016**	**0.54**	**25.0**
5	070925A5TC	K0708865-005	9/25/2007	73.8	3.5	W		**151**	0.012 U	**2.56**	**2.07**	**3.6 J**	**0.34**	**0.60**	**0.121**	**10.1**	**0.104**	**0.011**	**0.005 J**	**0.28**	**0.016**	**0.39**	**25.1**
ODEQ ATLs for Fish/Shellfish (2007)[2] (mg/kg wet)							**Birds (Individual)**	NE	NE	13.00	NE	NE	8.40	NE	NE	NE	9.3	0.074	0.074	NE	NE	NE	NE
							Mammals (Indivdual)	NE	NE	7.60	NE	NE	5.60	NE	NE	NE	34.0	0.120	0.120	NE	NE	NE	NE
							Humans[4] (subsistence/tribal)	NE	NE	0.00076	NE	NE	0.49	NE	NE	NE	0.5	0.049	0.049	NE	NE	NE	NE
ODEQ CTLs for Fish/Shellfish (2007)[3] (mg/kg wet)							**Freshwater**	NE	NE	6.60	NE	NE	0.15	NE	NE	NE	0.120	0.088 (inorganic)	NE	NE	NE	NE	NE

Notes:
mg/kg = milligram per kilogram
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J = The reported value is an estimate.
MRL = method reporting limit
NE = Not Established
ODEQ = Oregon Department of Environmental Quality
U = The analyte was not detected above the reported MRL.
UJ = The analyte was not detected. The reported sample quanitification limit is an estimate.
W = Wet Weight
= reported concentration exceeded one or more screening criteria listed.
- Not Analyzed
1 = 070926A7TC is a field duplicate of 070926A1TC
2 = Table A-3a in Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, Oregon Department of Environmental Quality (ODEQ), Final January 31, 2007.
3 = Table A-4 in Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, Oregon Department of Environmental Quality (ODEQ), Final January 31, 2007.
4 = Lowest values of either carcinogen or non-carcinogen criteria.

Table 3
Clam Tissue SVOCs Analytical Results and Screening Criteria
Bradford Island - Remedial Investigation
Pre-Removal Action Samples

Parameter							Semivolatile Organic Compounds (units = µg/kg or ppb)																	
Method							EPA 8270C SIM																	
Sample Station	URS ID	Lab ID	Sample Date	Moisture (%)	Total Lipids (%)	Basis	Acenaphthene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Bis(2-ethylhexyl) phthalate	Butyl benzyl phthalate	Carbazole	Chrysene	Dibenz(a,h)anthracene	Di-n-butyl phthalate	Di-n-octyl phthalate	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	p-Cresol (4-methylphenol)	Phenanthrene	Pyrene
1	070926A1TC	K0708865-002	9/26/2007	73.6	13.1	D	**0.85 J**	**3.5**	**2.8**	1.9 U	1.9 U	1.9 U	1.9 U	710 U	150 U	150 U	**10**	1.9 U	**240 J**	150 U	**50**	**5.0**	1.9 U	150 U	**26**	**11**
1	070926A7TC[1]	K0708865-001[1]	9/26/2007	73.7	12.2	D	**0.87 J**	**3.7**	**5.0**	1.9 U	1.9 U	1.9 U	1.9 U	670 U	140 U	140 U	**9.6**	1.9 U	**300 J**	140 U	**47**	**4.9**	1.9 U	140 U	**24**	1.9 U
2	070926A2TC	K0708865-003	9/26/2007	74.1	13.9	D	**0.94 J**	**4.4 J**	**2.6**	1.9 U	1.9 U	1.9 U	1.9 U	660 U	140 U	140 U	**9.5**	1.9 U	140 UJ	140 U	**48**	**5.1**	1.9 U	140 U	**27**	**11**
3	070927A3TC	K0708865-004	9/27/2007	74.8	13.2	D	**0.99 J**	**4.0**	**2.4**	2.0 U	2.0 U	2.0 U	2.0 U	790 U	160 U	160 U	**8.4**	2.0 U	**230 J**	160 U	**49**	**5.3**	2.0 U	160 U	**27**	**11**
5	070925A5TC	K0708865-005	9/25/2007	73.8	13.5	D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1	070926A1TC	K0708865-002	9/26/2007	73.6	3.4	W	**0.22 J**	**0.92**	**0.75**	0.50 U	0.50 U	0.50 U	0.50 U	190 U	38 U	38 U	**2.6**	0.50 U	**63 J**	38 U	**13**	**1.3**	0.50 U	38 U	**6.8**	**2.8**
1	070926A7TC[1]	K0708865-001[1]	9/26/2007	73.7	3.2	W	**0.23 J**	**0.97**	**1.3**	0.50 U	0.50 U	0.50 U	0.50 U	180 U	35 U	35 U	**2.5**	0.50 U	**79 J**	35 U	**12**	**1.3**	0.50 U	35 U	**6.4**	0.50 U
2	070926A2TC	K0708865-003	9/26/2007	74.1	3.6	W	**0.24 J**	**1.1 J**	**0.67**	0.49 U	0.49 U	0.49 U	0.49 U	170 U	34 U	34 U	**2.5**	0.49 U	34 UJ	34 U	**12**	**1.3**	0.49 U	34 U	**7.0**	**2.8**
3	070927A3TC	K0708865-004	9/27/2007	74.8	3.3	W	**0.25 J**	**1.0**	**0.60**	0.49 U	0.49 U	0.49 U	0.49 U	200 U	40 U	40 U	**2.1**	0.49 U	**59 J**	40 U	**12**	**1.3**	0.49 U	40 U	**6.7**	**2.7**
5	070925A5TC	K0708865-005	9/25/2007	73.8	3.5	W	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ODEQ ATLs for Fish/Shellfish (2007)[2] (µg/kg wet)					**Birds (Individual)**		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
					Mammals (Indivdual)		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	9.5	NE	NE	NE	NE	9.5
					Humans[4] (subsistence/tribal)		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	20,000	NE	NE	NE	NE	15,000
ODEQ CTLs for Fish/Shellfish (2007)[3] (µg/kg wet)					**Freshwater**		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	19,000	NE	NE	NE	NE	1,000

Notes:
µg/kg = microgram per kilogram
ATL = Acceptable Tissue Levels
CTL = Critical Tish Level
D = Dry Weight
EPA = U.S. Environmental Projection Agency
J = The reported value is an estimate.
MRL = method reporting limit
NE = Not Established
ODEQ = Oregon Department of Environmental Quality
SIM = select ion monitoring
U = The analyte was not detected above the reported MRL.
UJ = The analyte was not detected. The reported sample quanitification limit is an estimate.
W = Wet Weight
= reported concentration exceeded one or more screening criteria listed.
- Not Analyzed
1 = 070926A7TC is a field duplicate of 070926A1TC
2 = Table A-3a in Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, Oregon Department of Environmental Quality (ODEQ), Final January 31, 2007.
3 = Table A-4 in Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, Oregon Department of Environmental Quality (ODEQ), Final January 31, 2007.
4 = Lowest values of either carcinogen or non-carcinogen criteria.

Table 4
Sediment PCB Analytical Results and Screening Criteria
Bradford Island - Remedial Investigation
Pre-Removal Action Samples

						Parameter	Polychlorinated Biphenyls (units = µg/kg or ppb)									
						Method	EPA SW-846 8082									
Sample Station	URS ID	Lab ID	Sample Date	Basis	Moisture (%)		Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Total PCBs[3] (as Aroclors)
1	070926A1 SD	K0708772-004	9/26/07	D	34.60		7.6 U	16 U	7.6 U	7.6 U	7.6 U	**130**	7.6 U	7.6 U	7.6 U	**130**
2	070926A2 SD	K0708772-003	9/26/07	D	37.50		8.0 U	16 U	8.0 U	8.0 U	8.0 U	**49**	8.0 U	8.0 U	8.0 U	**49**
2	070926A6 SD[1]	K0708772-005[1]	9/26/07	D	39.10		8.2 U	17 U	8.2 U	8.2 U	8.2 U	**39**	8.2 U	8.2 U	8.2 U	**39**
3	070927A3 SD	K0708772-006	9/27/07	D	70.60		17 U	34 U	17 U	17 U	17 U	17 U	17 U	17 U	17 U	34 U
4	070925A4 SD	K0708772-001	9/25/07	D	41.90		8.5 U	17 U	8.5 U	8.5 U	8.5 U	**100**	8.5 U	8.5 U	8.5 U	**100**
5	070925A5 SD	K0708772-002	9/25/07	D	37.90		8.1 U	17 U	8.1 U	8.1 U	8.1 U	**13**	8.1 U	8.1 U	8.1 U	**13**
ODEQ Sediment Bioaccumulation SLVs (2007)[2] (µg/kg dry)						**Birds (Indivdual)**	NE	NE	NE	NE	NE	NE	NE	NE	NE	**1.8**
						Mammals (Individual)	NE	NE	NE	NE	NE	NE	NE	NE	NE	**44**
						Fish (Freshwater)	NE	NE	NE	NE	NE	NE	NE	NE	NE	**22**
						Humans (Subsistence)	NE	NE	NE	NE	NE	NE	NE	NE	NE	**0.046**

Notes:

µg/kg = microgram per kilogram
D = Dry Weight
EPA = U.S. Environmental Protection Agency
MRL = method reporting limit
NE = Not Established
ODEQ = Oregon Department of Environmental Quality
SLVs = screening level values
J = The reported value is an estimate
U = The analyte was not detected above the reported MRL.
UJ = The analyte was not detected. The reported sample quanitification limit is an estimate
= reported concentration exceeded one or more screening criteria listed.
1 = 070926A6 SD is a field duplicate of 070926A2 SD
2 = Table A-1 in Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, ODEQ, Final January 31, 2007.
3 = PCB Aroclors summed using all non-detect values as zero. If all values were non-detect the highest non-detect value was reported.

Table 5
Sediment Metal Analytical Results and Screening Criteria
Bradford Island - Remedial Investigation
Pre-Removal Action Samples

					Parameter	Metals (EPA SW-846) (units = mg/kg or ppm)													
					Method	6010B	6020	6020	6010B	6020	6020	6010B	6020	6020	6020	7471A	6020	6020	6010B	6010B
Sample Station	URS ID	Lab ID	Sample Date	Basis	Moisture (%)	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury (total, inorganic)	Nickel	Thallium	Vanadium	Zinc
1	070926A1 SD	K0708772-004	9/26/07	D	34.60	**8,830**	**0.05**	**5.7**	**89.8**	**0.353**	**0.265**	**14.8**	**10.4**	**38.9**	**7.27**	**0.062**	**15.9**	**0.112**	**34.6**	**46.0**
2	070926A2 SD	K0708772-003	9/26/07	D	37.50	**12,000 J**	**0.12**	**4.7**	**108**	**0.384**	**0.365 J**	**20.7**	**11.2**	**32.1 J**	**14.6 J**	**0.118 J**	**17.2**	**0.218 J**	**52.2**	**94.4**
2	070926A6 SD[1]	K0708772-005[1]	9/26/07	D	39.10	**15,900 J**	**0.11**	**3.8**	**124**	**0.331**	**0.851 J**	**23.4**	**8.93**	**24.2 J**	**22.1 J**	**0.065 J**	**14.4**	**0.124 J**	**64.1**	**92.8**
3	070927A3 SD	K0708772-006	9/27/07	D	70.60	**13,400**	**0.13 J**	**2.0**	**93**	**0.314**	**0.498**	**15.2**	**5.87**	**15.3**	**9.39**	**0.224**	**9.9**	**0.132**	**45.9**	**87.4**
4	070925A4 SD	K0708772-001	9/25/07	D	41.90	**13,100**	**0.17**	**2.3**	**108**	**0.331**	**0.540**	**16.3**	**7.48**	**17.8**	**9.78**	**0.269**	**12.5**	**0.165**	**58.6**	**102.0**
5	070925A5 SD	K0708772-002	9/25/07	D	37.90	**11,900**	**0.17**	**2.4**	**149**	**0.280**	**0.490**	**16.1**	**7.03**	**15.9**	**9.11**	**0.366**	**11.4**	**0.139**	**56.8**	**108.0**
ODEQ Sediment Bioaccumulation SLVs (2007)[2] (mg/kg dry)					**Birds (Indivdual)**	NE	NE	7.00	NE	NE	1.00	NE	NE	NE	17	0.070	NE	NE	NE	NE
					Mammals (Individual)	NE	NE	7.00	NE	NE	1.00	NE	NE	NE	17	0.070	NE	NE	NE	NE
					Fish (Freshwater)	NE	NE	7.00	NE	NE	1.00	NE	NE	NE	17	0.070	NE	NE	NE	NE
					Humans (Subsistence)	NE	NE	7.00	NE	NE	1.00	NE	NE	NE	17	0.070	NE	NE	NE	NE

Notes:

µg/kg = microgram per kilogram
D = Dry Weight
EPA = U.S. Environmental Protection Agency
MRL = method reporting limit
NE = Not Established
ODEQ = Oregon Department of Environmental Quality
SLVs = screening level values
J = The reported value is an estimate.
U = The analyte was not detected above the reported MRL.
UJ = The analyte was not detected. The reported sample quanitification limit is an estimate.
= reported concentration exceeded one or more screening criteria listed.
1 = 070926A6 SD is a field duplicate of 070926A2 SD
2 = Table A-1 in Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, ODEQ, Final January 31, 2007.

Table 6
Sediment SVOCs Analytical Results and Screening Criteria
Bradford Island - Remedial Investigation
Pre-Removal Action Samples

Parameter						Semivolatile Organic Compounds (units = ug/kg or ppb)																			
Method						EPA 8270C SIM																			
Sample Station	URS ID	Lab ID	Sample Date	Basis	Moisture (%)	Acenaphthene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Bis(2-ethylhexyl) Phthalate	Butyl Benzyl Phthalate	Carbazole	Chrysene	Dibenz(a,h)anthracene	Di-n-butyl Phthalate	Di-n-octyl Phthalate	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	p-cresol (4-Methylphenol)	Phenanthrene	Pyrene
1	070926A1 SD	K0708772-004	9/26/07	D	34.60	7.7 U	**4.3 J**	**5.7 J**	**32**	**11**	**5.4 J**	**3.2 J**	77 UJ	7.7 U	7.7 U	**7.9**	7.7 U	16 U	7.7 U	**13**	7.7 U	**6.3 J**	8.4 U	**9.1**	**13**
2	070926A2 SD	K0708772-003	9/26/07	D	37.50	7.8 U	84 U	**3.5 J**	84 U	**6.9 J**	**3.5 J**	**3.4 J**	**13 J**	7.8 U	7.8 U	**5.4 J**	**2.5 J**	16 U	7.8 U	**7.6 J**	7.8 U	**4.3 J**	4,600	**3.8 J**	**8.0**
2	070926A6 SD[1]	K0708772-005[1]	9/26/07	D	39.10	8.2 U	78 U	8.2 U	78 U	**7.2 J**	**3.9 J**	8.2 U	**18 J**	8.2 U	8.2 U	**5.3 J**	8.2 U	17 U	8.2 U	**6.6 J**	8.2 U	**4.9 J**	3,600	**2.7 J**	**5.7 J**
3	070927A3 SD	K0708772-006	9/27/07	D	70.60	17 U	17 U	17 U	17 U	**4.2 J**	17 U	17 U	170 UJ	17 U	17 U	17 U	17 U	34 U	85 U	17 U	17 U	**13 J**	17 U	17 U	17 U
4	070925A4 SD	K0708772-001	9/25/07	D	41.90	8.6 U	8.4 U	**3.3 J**	**6.1 J**	**6.4 J**	**4.4 J**	8.6 U	**180 J**	8.6 U	8.6 U	**4.7 J**	8.6 U	**14 J**	8.6 U	**7.1 J**	8.6 U	**4.0 J**	**4.4 J**	**4.5 J**	**6.6 J**
5	070925A5 SD	K0708772-002	9/25/07	D	37.90	8.1 U	10 U	**3.5 J**	**7.4 J**	**7.4 J**	**4.7 J**	**2.5 J**	**51 J**	8.1 U	8.1 U	**5.2 J**	8.1 U	17 U	8.1 U	**8.3**	8.1 U	**3.9 J**	10 U	**5.0 J**	**7.8 J**
ODEQ Sediment Bioaccumulation SLVs (2007)[2] (µg/kg dry)				Birds (Indivdual)		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
				Mammals (Individual)		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	360,000	NE	NE	NE	NE	NE	NE
				Fish (Freshwater)		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	37,000	NE	NE	NE	NE	NE	NE
				Humans (Subsistence)		NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	62,000	NE	NE	NE	NE	NE	NE

Notes:

µg/kg = microgram per kilogram
D = Dry Weight
EPA = U.S. Environmental Protection Agency
MRL = method reporting limit
NE = Not Established
ODEQ = Oregon Department of Environmental Quality
SIM = select ion monitoring
SLVs = screening level values
J = The reported value is an estimate.
U = The analyte was not detected above the reported MRL.
UJ = The analyte was not detected. The reported sample quanitification limit is an estimate.
= reported concentration exceeded one or more screening criteria listed.
1 = 070926A6 SD is a field duplicate of 070926A2 SD
2 = Table A-1 in Guidance for Assessing Bioaccumulative Chemicals of Concern in Sediment, ODEQ, Final January 31, 2007.
Anthracene, benzo(a)pyrene and p-cresol results reported are from the reanalysis performed under CAS work order K0712241 (see QC report for more details)

Table 7
Sediment Grain Size Results
Bradford Island - Remedial Investigation
Pre-Removal Action Samples

Sample Station	URS ID	Lab ID	Sample Date	%Gravel (>2.00 mm)	%Sand, Very Coarse (1.00 - 2.00 mm)	%Sand, Coarse (0.50 - 1.00 mm)	%Sand, Medium (0.25 - 0.50 mm)	%Sand, Fine (0.125 - 0.25 mm)	%Sand, Very Fine (0.0625 - 0.125 mm)	%Silt (0.039 - 0.0625 mm)	%Clay (<0.039 mm)
1	070926A1 SD	K0800426-004	9/27/07	40.0	15.8	13.5	7.59	5.68	4.24	12.0	1.37
2	070926A2 SD	K0800426-003	9/26/07	46.8	12.4	15.3	9.66	6.92	4.13	11.0	2.29
2	070926A6 SD[1]	K0800426-005	9/25/07	52.0	11.4	13.6	9.48	6.74	4.12	9.1	2.48
3	070927A3 SD	K0800426-006	9/25/07	29.3	1.46	1.19	1.26	2.75	6.11	34.2	6.36
4	070925A4 SD	K0800426-001	9/26/07	0.35	0.59	0.94	2.93	19.8	30.6	33.9	6.65
5	070925A5 SD	K0800426-002	9/26/07	0.06	0.61	0.83	2.92	34.1	29.4	26.7	6.76

Notes:

1 = 070926A6 SD is a field duplicate of 070926A2 SD

Table 8
Sediment TOC and TPH-DX Analytical Results
Bradford Island - Remedial Investigation
Pre-Removal Action Samples

				Parameter	TOC	TPH-Dx	
				Method	PSEP (units = %)	NWTPH (units = mg/kg or ppm)	
Sample Station	URS ID	Lab ID	Sample Date	Basis		Diesel Range Organics	Residual Range Organics
1	070926A1 SD	K0800426-004	9/27/07	D	1.02	35 J	77 J
2	070926A2 SD	K0800426-003	9/26/07	D	0.77	15 J	83 J
2	070926A6 SD[1]	K0800426-005	9/25/07	D	0.33	8.4 J	44 J
3	070927A3 SD	K0800426-006	9/25/07	D	1.09	16 J	120 J
4	070925A4 SD	K0800426-001	9/26/07	D	0.92	12 J	98 J
5	070925A5 SD	K0800426-002	9/26/07	D	0.73	8.8 J	70 J

Notes:

µg/kg = microgram per kilogram

1 = 070926A6 SD is a field duplicate of 070926A2 SD

D = Dry Weight

EPA = U.S. Environmental Protection Agency

J = The reported value is an estimate.

MRL = method reporting limit

NE = Not Established

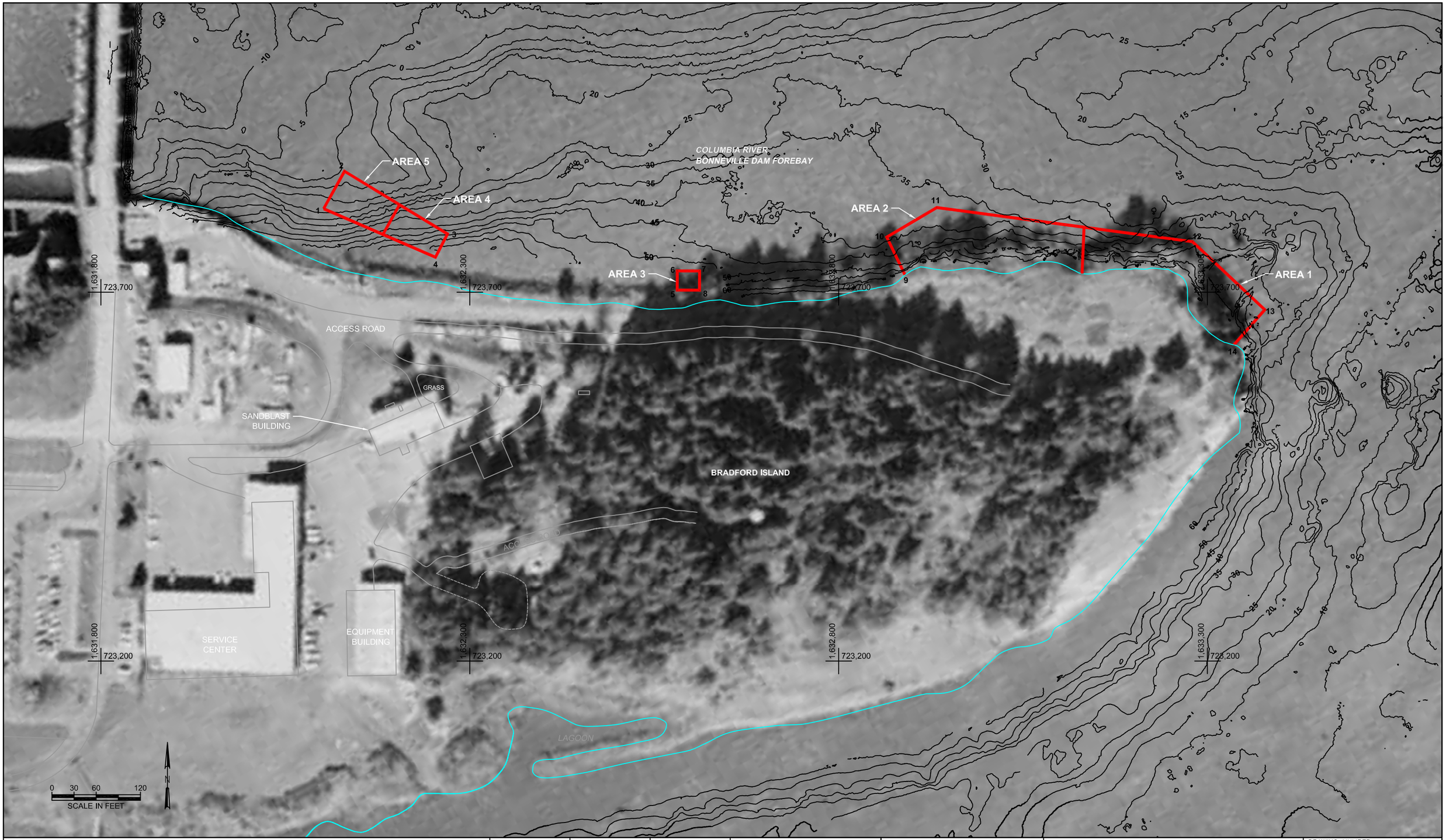
PSEP - Puget Sound Estuary Program Protocol

TOC = Total Organic Carbon

TPH-Dx = Total Petroleum Hydrocarbons-Diesel Range

U = The analyte was not detected above the reported MRL.

UJ = The analyte was not detected. The reported sample quantification limit is an estimate



EXPLANATION

- 60 — BATHYMETRIC CONTOURS (FEET MSL)
- REMOVAL AREA BOUNDARY
- BRADFORD ISLAND SHORELINE

JOB No. 25696528	DESIGNED: CW	PROJ. ENGINEER: -	
IMAGERY PROVIDED BY USACE	DRAWN BY: SB	APPROVED BY: JTW	
	CHECKED BY: CW	DATE: MARCH 2008	

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BRADFORD ISLAND

CASCADE LOCKS, OREGON

PRE-REMOVAL ACTION SEDIMENT AND CLAM SAMPLING AREAS

DRAWING NUMBER: FIGURE 1

CAD FILE NUMBER: FIGURE 1

SHEET: | REV.

URS collected five clam (*corbicula fluminea*) samples and six sediment samples, including one field duplicate for each matrix from the Columbia River near Bradford Island on September 25 through 27, 2007. Samples were collected according to the Quality Assurance Project Plan (QAPP) *River Operable Unit Remedial* (URS, 2007). Table 1 summarizes the sample locations, media, and requested analyses. Clams were shucked by URS personnel prior to submittal to the analytical laboratory. Clam tissue and sediment were analyzed by Columbia Analytical Services (CAS), located in Kelso, Washington. Tissue samples were stored frozen upon receipt by CAS and homogenized using a mechanical mixer prior to testing. Sediment samples were stored at 4°C prior to homogenization and analysis. Aliquots of each sample are archived in freezer storage at the CAS Kelso facility for potential future analysis. Analyses were performed in general accordance with the methods listed below. The specific analyses for each media and sample are provided in Table 1.

Method	Analytical Parameter
EPA 8082M	Polychlorinated Biphenyls (PCBs) as Aroclors
EPA 6000/7000 series	Metals
EPA 1630 – Modified	Methyl Mercury (Tissue only)
EPA 8270C-SIM	Semi-Volatile Organic Compounds (SVOCs)
TPH-Dx (Ecology 1997)	Northwest Total Petroleum Hydrocarbons Diesel Fraction (NWTPH-Dx)
Plumb (Plumb 1981)	Total Organic Carbon
Puget Sound Estuary Program (PSEP 1996)	Percent Lipids
Freeze Dry (Tissue) Gravimetric (Sediment)	Percent Solids
PSEP (PSEP 1996)	Grain Size

Analyses were performed in general accordance with the referenced methods. The analytical results for all samples were subjected to a quality assurance/quality control (QA/QC) review. This QA/QC review includes evaluation of representativeness (sample collection/handling), accuracy (spike and/or standard recoveries), analytical precision (duplicate relative percent difference), comparability (use of standard methods) and completeness (percent of usable data). Specifically, the following items were reviewed in each laboratory report submitted: compliance with the QAPP, chain of custody (COC), case narrative, proper sample preservation and handling procedures, holding times, quantitation limits, field/method/trip blank analyses, matrix/matrix spike duplicate recoveries, laboratory duplicate results, field duplicate results, blank spike recoveries (laboratory control samples), data completeness and format, data qualifiers assigned by the laboratory, and analyte identification. The following items were reviewed on 10% of the data: primary and secondary column verification, instrument calibration and a verification of the reported electronic data with the hard copy deliverable. The data were

reviewed in accordance with the criteria contained in the DoD QSM (DoD QSM, January 2006), the above listed methods and the following EPA guidance documents in that order; EPA's *Contract Laboratory Program National Functional Guidelines (EPA NFGs) for Organic Data Review (USEPA, October 1999)*, EPA's *NFGs for Inorganic Data Review (USEPA, October 2004).* A summary of qualifiers assigned to results in this investigation is included in Table 2. For ease of reference, the samples are represented in Table 2 by both the URS sample identification and the laboratory identification. Qualifiers that may be assigned to the results of this investigation include the following:

- U - The analyte was analyzed for but was not detected above the reported sample quantitation limit.
- J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
- UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.
- DNR - Do Not Report

Final sample results and qualifiers are presented in the analytical tables provided in the sampling report.

REPRESENTATIVENESS

Chain-of-Custody and Holding Times

The chain-of-custody (COC) forms indicate that samples were maintained under chain of custody and forms were signed upon release and receipt. All coolers were submitted at temperatures within the EPA-recommended range of 4°C$\pm$ 2°C, with the exception of two coolers, one containing the clam tissue samples recorded at -0.6°C and one containing two sediment samples recorded at -0.8°C. Data were not qualified based on cooler temperatures.

Sediment samples were stored at 4°C and tissue samples were stored frozen at -20°C prior to homogenization. An aliquot of each sample is archived in freezer storage for potential future analysis. Tissue samples were removed from the freezer, homogenized and returned to the freezer and kept frozen prior to anlayis. Hold times were calculated to account for the fact that the tissue was frozen prior to analysis with the exception that mercury and methyl mercury

holding times were based on a 28 day hold time regardless of freezer storage. All samples were analyzed within the technical and contracted holding time with the following exceptions:

- The hold time was exceeded for the methyl mercury analysis in the tissue samples. Samples were analyzed up to 9 days past the recommended 28 day hold time from sampling to analysis. All methyl mercury results were estimated and flagged 'J' due to analysis outside of hold time.
- The frozen archived (-20°C) sediment samples were analyzed for TPH-Dx, TOC and grain size. Typically samples are not frozen prior to grain size analysis, however the freeze-thaw effects are considered to be minimal and the grain size results are used in a qualitative manor for this investigation. Additionally, the laboratory reextracted and reanalyzed sediment samples for 4-methylphenol, anthracene and benzo(a)pyrene using the frozen sediment previously archived. Sample results from the archived frozen sediment were not qualified based on hold time.

Review of Blanks

Method blanks were used to check for laboratory contamination and instrument bias. The laboratory analyzed at least one method blank for each analysis and for each batch, per DoD QSM requirements. Qualification of samples due to method or field blank contamination followed guidelines set forth in the EPA NFGs.

For organic and inorganic analyses, sample results less than five times (5x) the method blank or field blank concentration and between the method detection limit (MDL) and the method reporting limit (MRL) were flagged as non-detect 'U' at the MRL. When sample results were less than 5x the blank concentration but above the MRL, the reported result was qualified as non-detect 'U'. Target compounds detected in the method or field blanks but reported as not detected in the associated samples were not qualified. Target compounds reported with concentrations greater than 5x the blank concentration were not qualified.

All analytical results were non-detect for method blank analyses or all target compounds reported had concentrations greater than 5x the reported blank concentration; therefore data were not qualified based on method blank results.

ACCURACY

Instrument Calibration

The laboratory performed initial multipoint calibrations for all target and surrogate compounds as required by the analytical methods. Initial calibrations (ICALs) and continuing calibrations (CCALs) were analyzed at the proper frequency and at the appropriate concentrations required by the DoD QSM. Instrument calibrations were acceptable for all analyses performed.

Laboratory Control Samples and Matrix Spike/Matrix Spike Duplicate Review

Laboratory control samples (LCSs) are used to monitor the laboratory's day-to-day performance of routine analytical methods, independent of matrix effects and to assess accuracy for the target compounds. Matrix spike/matrix spike duplicate (MS/MSD) samples are analyzed to assess the ability of the laboratory to recover the target compounds from the sample matrix. At least one LCS and one MS/MSD for each analysis and for each batch was performed per DoD QSM requirements. LCS and MS/MSD recoveries were compared against project-specific control limits outlined in the QAPP and were acceptable for all analytical tests with the following exceptions:

Sediment Samples

- LCS/LCSD recoveries associated with sediment samples K0708772-001 through -006 were outside the project-specific control limits for 4-methylphenol, anthracene and benzo(a)pyrene. After consultation with CAS, it was discovered there was an a problem with an extraction solvent used during the GPC cleanup. A new solvent lot was purchased and additional QC checks were performed by CAS as described in the case narrative attached to data delieverable K0712241. CAS confirmed that no other samples were effected by the solvent. An aliquot of each of the frozen archived sediment samples was reextracted and reanalyzed for the above listed SVOCs under work order number (K0712241). The LCS results for the reanalyzed samples were within the control limits. The initial results were qualified and flagged 'DNR' and the results from the reanalysis were reported.
- MS/MSD recoveries in the QC batch associated with sediment samples K0708772-001 through -006 were outside the project-specific control limits for 4-methylphenol, anthracene and benzo(a)pyrene similar to the associated LCS/LCSD. As detailed above, the samples were reextracted and reanalyzed. The reanalysis results were within the control limits. The original data was flagged 'DNR' and the reanalysis results were reported.
- MS/MSD recoveries for the parent sediment sample (K0708772-001) were below the lower project-specific control limit of 45% for bis(2-ethylhexyl)phthalate with MS and MSD recoveries of 2% and 18%, respectively. The associated LCS/LCSD results were within control limits, indicating the analytical batch was in control. Normally, for low MS/MSD recoveries only the parent sample is qualified, however due to the nature of the recoveries all samples in the matrix were was qualified and flagged 'J/UJ' due to low matrix spike recoveries (shown in Table 2).
- MS/MSD recoveries were below the lower control limit of 80% for antimony in the parent sample K0708772-006 with recoveries of 37% and 33%, respectively. The LCS and post-spike recovery for antimony were in control indicating the analytical batch was in control, therefore a matrix interference may be the cause for low recoveries of

antimony. Antimony results were estimated and flagged 'J' in the parent sample (K0708772-006). Zinc and vanadium had recoveries slightly below the lower control of 80% for either the MS or MSD in the MS/MSD pair; zinc (MS:78%, MSD:80%) and vanadium (MS:81% and MSD:79%). The LCS recoveries for both analytes were in control indicating the analytical batch was in control, neither zinc or vanadium results were estimated based on MS/MSD recoveries.

Tissue Samples

- MS/MSD recoveries were above the control limits for tissue in the parent sample (K0708865-003) for the following Aroclors:

	MS(%)	MSD(%)	Control Limits(%)
Aroclor 1016	171	148	40-140
Aroclor 1260	196	200	60-130

  Recoveries for Aroclors 1016 and 1260 in the sample are likely biased high due to the presence of an elevated concentration of Aroclor 1254. Aroclors 1016 and 1260 were not detected in the associated samples (K0708865-001 through -005), therefore data was not estimated based on MS/MSD recoveries.

- MS/MSD recoveries for anthracene in the parent sample (K0708865-003) were below the lower control limit of 55% for tissue with recoveries of 46% and 45%, respectively. The LCS recovery was in control indicating the analytical batch was in control. Anthracene was estimated and flagged 'UJ' in the parent sample.

- MS/MSD recoveries in the parent sample (K0708865-003) were above the upper control limits for bis(2-ethylhexyl)phthalate, di-n-octyl phthalate and di-n-butyl phthalate. The LCS recoveries were in control indicating the analytical batch was in control. All sample results were non-detect for these three analytes in the parent sample with the exception of di-n-butyl phthalate for samples K0708865-001, -002 and -004. Non-detect sample results were not estimated based on MS/MSD recoveries and samples results reported above the MRL (as listed above) were estimated and flagged 'J' for di-n-butyl phthalate.

- MS recoveries in the parent sample (K0708865-003) associated with samples K0708865-001 through -005 were below the lower control limit of 80% for antimony and mercury with recoveries of 73% and 76%, respectively. Antimony and mercury results were estimated and flagged 'J' in the parent sample.

Surrogate Recovery Review

Each sample analyzed for organic compounds was spiked with surrogates (system monitoring compounds). Surrogate recoveries are a measure of accuracy for the overall analysis of each individual sample.

Surrogate recoveries were acceptable with the following exceptions:

- The SVOC surrogate phenol-d6 recovery in samples K0708772-001 and -005 was below the lower DoD QSM control limit of 45% with 31% and 35%, respectively. Phenol-d6 is a surrogate for the acid fraction. The only acid fraction target compound, 4-methylphenol, was reported from another analytical batch after reextraction and reanalysis due to a problem that occurred during sample cleanup with the original analytical batch. The surrogate recoveries were acceptable in the reanalysis therefore, further action was not necessary.

PRECISION

Duplicate Review

One field duplicate sample was collected for both sediment and clam matrices to verify acceptable field sampling techniques and the representativeness of the sample aliquots. In addition the laboratory tested precision by analyzing both MSD and LCSD samples. The RPD for field duplicate samples was calculated when both sample results were greater than 5x the reporting limit.

- Laboratory duplicate precision was acceptable for both sediment and clam tissue matrices.
- Field duplicate precision was within the control limits outlined within QAPP with the exception of the following metals within the sediment matrix. The RPD for these metals exceeded the 25% control limit:

	Primary (mg/kg)	Field Duplicate (mg/kg)	RPD
Aluminum	12,000	15,900	28.0
Cadmium	0.365	0.851	79.9
Copper	32.1	24.2	28.1
Lead	14.6	22.1	40.9
Mercury	0.118	0.065	57.9
Thallium	0.218	0.124	55.0

The primary sample (K0708772-003) and the field duplicate (K0708772-005) for sample results listed above were qualified as estimated and flagged 'J'.

COMPARABILITY

Reporting Limits

The laboratory reported sample results between the MRL and MDL. Results reported between the MDL and MRL are reported as estimated and are flagged 'J'.

COMPLETENESS

The laboratory reported all requested analyses and the deliverable data reports were complete. Completeness is defined as the percentage of usable data out of the total amount of data generated. The project completeness goal is 100 percent. Some data were qualified as estimated 'J' or 'UJ'. A summary of qualifiers can be found in Table 2. Completeness for the site investigation was 100%.

REFERENCES

Plumb 1981. *Procedures for Handling and Chemical Analysis of Sediment and Water Samples,* R.H.Plumb, prepared by USEPA and USACE, May, 1981.

PSEP 1996. Puget Sound Estuary Program *Recommended Protocols for Measuring Selected Environmental Variables in Puget Sound*, January 1996 and subsequent chapter revisions.

URS 2007. Quality Assurance Project Plan, River Operable Unit Remedial Investigation, Bradford Island, Bonneville Lock and Dam Project, Cascade Locks, Oregon. September 2007.

USEPA 1999. U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Organic Data Review. October 1999.

EPA 1998. Method 1630: Methyl Mercury in Water by Distillation, Aqueous Ethylation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry. August 1998.

USEPA 2004. U.S. Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. October 2004.

DOD QSM 2006. Department of Defense Environmental Data Quality Workgroup. Department of Defense (DOD) Quality Systems Manual (QSM) for Environmental Laboratories. Final Version 3. January 2006. Retrieved from [http://www.navylabs.navy.mil/Archive/DoDV3.pdf] on 3/3/06

Table 1
Sample Location and Analyses Summary

Pre-Removal Area	URS ID	Lab ID	Collection Date	Method Analyses
Clam Tissue				
1	070926A1TC	K0708865-002	9/26/2007	PCBs (as Aroclors), Metals and SVOCs
1 (duplicate)	070926A7TC	K0708865-001	9/26/2007	
2	070926A2TC	K0708865-003	9/26/2007	
3	070927A3TC	K0708865-004	9/27/2007	
5	070925A5TC	K0708865-005	9/25/2007	PCBs (as Aroclors), Methyl Mercury, Metals and %lipids[1]
Sediment				
1	070926A1SD	K0708772-004 K0712241-004 K0800426-004	9/26/07	PCBs (as Aroclors), Metals, SVOCs, TPH-Dx, TOC, Grain Size
2	070926A2SD	K0708772-003 K0712241-003 K0800426-003	9/26/07	
2 (duplicate)	070926A6 SD	K0708772-005 K0712241-005 K0800426-005	9/26/07	
3	070927A3SD	K0708772-006 K0712241-006 K0800426-006	9/27/07	
4	070925A4SD	K0708772-001 K0712241-001 K0800426-001	9/25/07	
5	070925A5SD	K0708772-002 K0712241-002 K0800426-002	9/25/07	

Notes:
[1]Not enough tissue volume was collected to analyze SVOCs.
Data Package K0708772 = PCB Aroclors, Metals, and SVOCs
Data Package K0712241 = reanalysis of SVOCs
Data Package K0800426 = Grain Size, TOC and TPH-Dx

Table 2
Summary of Qualifications

LAB ID	URS ID	ANALYTE	QUALIFIER	RATIONAL
Clam Tissue				
K0708865-001 K0708865-002 K0708865-003 K0708865-004 K0708865-005	070926A7TC 070926A1TC 070926A2TC 070927A3TC 070925A5TC	methyl mercury	J	hold time exceeded
K0708865-003	070926A2TC	anthracene antimony mercury	J UJ J	MS/MSD recoveries
K0708865-001 K0708865-002 K0708865-004	070926A7TC 070926A1TC 070927A3TC	di-n-butyl phthalate	J	MS/MSD recoveries
Sediment				
K0708772-006	070927A3SD	antimony	J	MS/MSD recoveries
K0708772-001 K0708772-002 K0708772-003 K0708772-004 K0708772-005 K0708772-006	070925A4SD 070925A5SD 070926A2SD 070926A1SD 070926A6SD 070927A3SD	4-methylphenol anthracene benzo(a)pyrene	DNR	LCS recoveries (data reported from reanalysis)
K0708772-001 K0708772-002 K0708772-003 K0708772-004 K0708772-005 K0708772-006	070925A4SD 070925A5SD 070926A2SD 070926A1SD 070926A6SD 070927A3SD	bis(2-ethylhexyl)phthalate	J/UJ	MS/MSD recoveries
K0708772-003 K0708772-005	070926A2SD 070926A6SD	aluminum cadmium copper lead mercury thallium	J	RPD (field duplicate)