EPA 910-R-01-003

United States
Environmental Protection
Agency

Region 10
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Seattle WA 98101

Alaska
Idaho
Oregon
Washington

Office of Environmental Assessment

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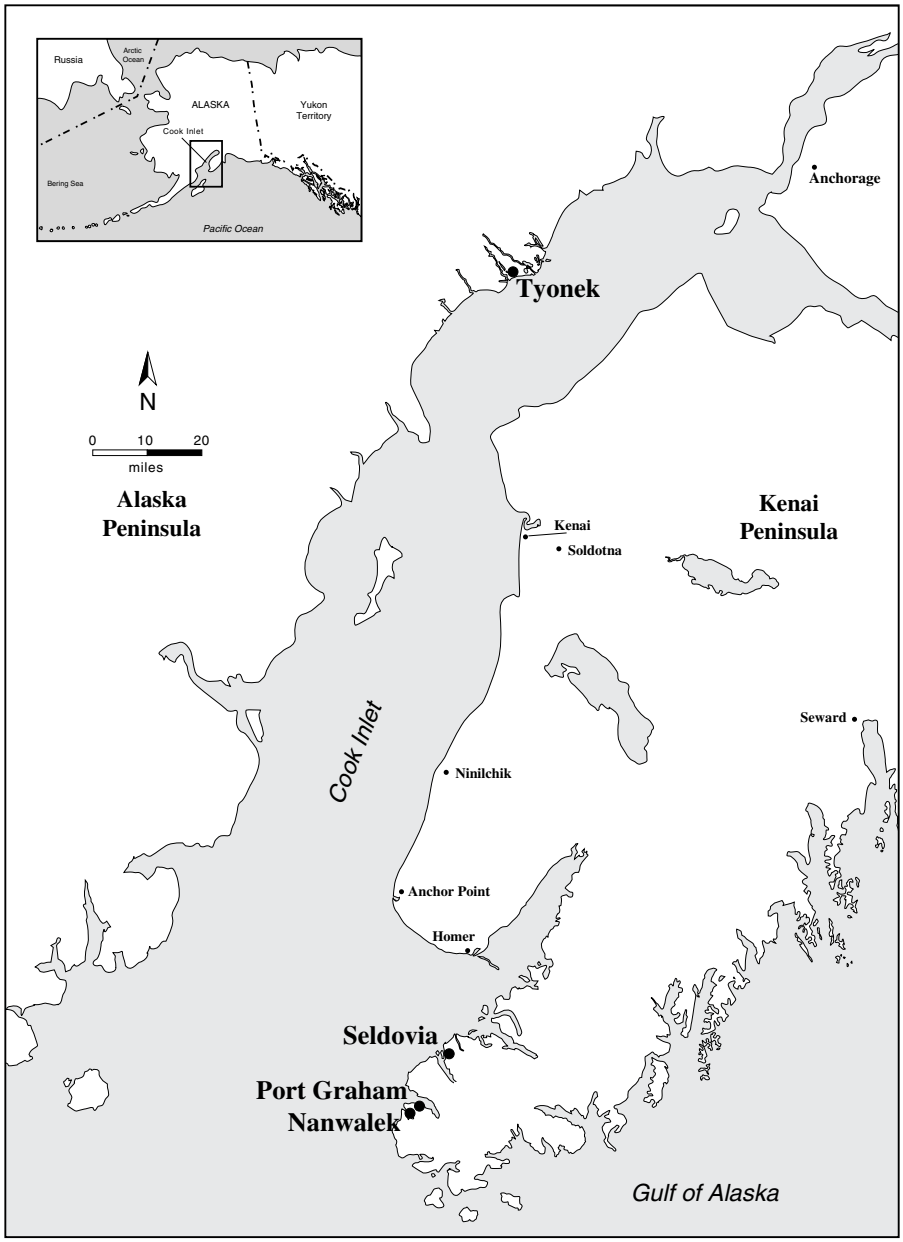
Appendix B

Data Compilation Detected Concentrations

(average, maximum, minimum, n)



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SPECIES	Aroclor 1260 (ng/kg)		PCB Congeners (ng/kg)																			
			77				105				118				123				156			
	avg	n	max	min	avg	n	max	min	avg	n	max	min	avg	n	max	min	avg	n	max	min	avg	n
Chinook	**3200**	1	12.9	6.5	**9.1**	6	220	151	**181**	6	521	372	**443**	6	13	9	**11**	4	38	26	**33**	6
Chum salmon	**4400**	1	3.89	3.59	**3.74**	2					135	120	**128**	2								
Cod											137	101	**119**	2			**106**	1				
Flounder											103	22	**39**	15								
Halibut			3.39	2.01	**2.73**	5	101	102	**102**	2	251	165	**207**	6					20.5	19.7	**20.1**	2
Sea Bass	**6260**	3					344	199	**282**	3	953	63	**593**	4	13	12	**12**	2				
Sockeye			6.71	4.43	**2.73**	9	106	94	**100**	4	265	215	**231**	9					26	21	**23**	5
Blue mussel																						
Butter clam					**9.61**	1																
Large Clam																						
Mussel																						
Steamer clam																						
Goose Tongue																						
Kelp																						
Seaweed											71	25	**45**	6								
Chiton																						
Octopus											25	23	**24**	2								
Snail																						

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SPECIES	PCB Congeners (ng/kg)												Dioxins & Furans		Total PAHs	Pesticides (ng/kg; ppt)				
																DDT compounds				
	167				170				180				OCDD		(ug/kg)	DDT-sum	DDT isomers			
	max	min	avg	n	max	min	avg	n	max	min	avg	n	(ng/kg)	n	avg	avg	max	min	avg	n
Chinook	23	20	**21**	6	48.3	65.1	**53.3**	6	209	169	**185**	6	**13.3**	1	**253**	**5398**	1840	286	**1111**	11
Chum salmon					21.1	19.1	**20.1**	2	64.7	54.1	**54.9**	2			**48**	**2016**	739	363	**575**	2
Cod					30.9	25.1	**28.2**	3	93.6	71.7	**80.5**	3			**1**	**1951**	1050	223	**637**	2
Flounder					56	20	**34**	8	133	21	**63**	15			**60**	**588**	303	280	**288**	3
Halibut					47.8	26.4	**40.6**	6	154	90	**125**	6			**44**	**2902**	1730	467	**863**	6
Sea Bass	42	23	**31**	3	398	210	**305**	3	1440	55	**807**	4			**87**	**5894**	773	526	**679**	4
Sockeye					39	29	**33**	9	121	96	**107**	9			**33**	**3123**	1570	467	**1009**	9
Blue mussel															**14**					
Butter clam															**16**					
Large Clam															**3**					
Mussel																				
Steamer clam															**5**					
Goose Tongue															**133**					
Kelp															**14**					
Seaweed															**5**					
Chiton															**12**					
Octopus									49.6	36.8	**41.9**	3			**5**					
Snail					28.3	20.2	**23.4**	4	81.8	23.7	**57.6**	6			**34**					

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SPECIES	Pesticides (ng/kg; ppt)																			
	DDT compounds (cont'd)								Chlordane Compounds				Dieldrin				Endosulfan			
	DDE isomers				DDD isomers															
	max	min	avg	n	max	min	avg	n	max	min	avg	n	max	min	avg	n	max	min	avg	n
Chinook	6180	457	**3048**	14	2600	340	**1239**	5	2730	220	**1227**	14	1720	480	**769**	5	780	308	**544**	2
Chum salmon	2120	762	**1441**	2					1140	366	**717**	2								
Cod	1470	213	**922**	3	427	357	**392**	2	657	253	**379**	3	242	232	**237**	2				
Flounder	375	216	**300**	3					587	158	**372**	4								
Halibut	4170	430	**1610**	14	687	193	**429**	4					593	218	**419**	5				
Sea Bass	9750	293	**4602**	4			**613**	1	7490	527	**2732**	8			**477**	1				
Sockeye	3870	400	**1634**	19	793	226	**480**	8	2190	137	**777**	19	473	121	**382**	8	1610	252	**664**	4
Blue mussel																				
Butter clam																				
Large Clam																				
Mussel																				
Steamer clam																				
Goose Tongue							**218**	1												
Kelp																				
Seaweed																				
Chiton																				
Octopus																				
Snail																				

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SPECIES	Pesticides (ng/kg; ppt)																			
	Endrin				Heptachlor epoxide				Hexachlorobenzene				Lindane				Mirex			
	max	min	avg	n	max	min	avg	n	max	min	avg	n	max	min	avg	n	max	min	avg	n
Chinook	813	260	**582**	5	276	184	**238**	3	2040	1580	**1787**	6	203	162	**185**	3				
Chum salmon									1040	353	**696**	2								
Cod									242	232	**237**	2								
Flounder									286	281	**283**	3								
Halibut			**407**	1					1590	1040	**1280**	6								
Sea Bass							**310**	1	913	743	**798**	3					417	340	**379**	2
Sockeye	947	177	**483**	6	251	133	**174**	3	1450	803	**1124**	9	793	128	**275**	5				
Blue mussel																				
Butter clam																				
Large Clam																				
Mussel											**301**	1								
Steamer clam																				
Goose Tongue																				
Kelp																				
Seaweed																				
Chiton	309	218	**266**	5			**207**	1							**175**	1				
Octopus																				
Snail									747	500	**624**	2			**155**	1				

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SPECIES	Pesticides (ng/kg; ppt)				METALS (ug/kg; ppb)															
					Arsenic Compounds															
	Pentachloroanisole				Total Arsenic				Inorganic As3+				DMA				MMA			
	max	min	avg	n	max	min	avg	n	max	min	avg	n	max	min	avg	n	max	min	avg	n
Chinook	1180	214	**594**	3	709	383	**541**	6												
Chum salmon					252	230	**241**	2												
Cod					5190	3410	**4207**	3					26	22	**24**	2				
Flounder					6300	1610	**2917**	15	16	10	**12**	3					24.1	5.1	**12.9**	15
Halibut	309	143	**226**	2	1500	1180	**1297**	6					72	32	**51**	6				
Sea Bass			**500**	1	1060	673	**792**	4					72	43	**55**	4				
Sockeye	8930	440	**1919**	6	399	268	**345**	9												
Blue mussel					1330	1080	**1203**	3			**5**	1	54	39	**46**	3				
Butter clam					5030	2960	**3963**	3			**11**	1	328	146	**208**	3				
Large Clam					3340	3100	**3180**	3			**14**	1	140	126	**134**	3				
Mussel					1080	883	**967**	3					75	61	**67**	3				
Steamer clam					2950	1580	**2390**	3	28	15	**20**	3	148	61	**106**	3				
Goose Tongue					15	12	**13**	3												
Kelp					2720	2240	**2557**	3					130	113	**121**	3				
Seaweed					4250	2100	**2873**	3					131	77	**104**	2				
Chiton					2050	1420	**1711**	9					105	34	**65**	9				
Octopus					3610	2140	**2958**	3					32	30	**31**	3				
Snail					3700	2390	**2919**	9	95	34	**53**	6	227	56	**113**	9				

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SPECIES	METALS (ug/kg; ppb)											
	Barium				Cadmium				Chromium			
	max	min	avg	n	max	min	avg	n	max	min	avg	n
Chinook			**139**	1	141	73	**109**	6	267	109	**184**	4
Chum salmon	833	772	**803**	2	58	56	**57**	2	573	261	**417**	2
Cod	722	255	**443**	3					689	441	**543**	3
Flounder	948	337	**912**	15	74	21	**48**	13	855	131	**355**	14
Halibut	172	99	**129**	4	57	28	**39**	3	459	166	**353**	3
Sea Bass	864	406	**656**	4	89	43	**62**	3	702	168	**385**	4
Sockeye	289	155	**221**	8	58	22	**37**	6	11700	209	**1954**	6
Blue mussel	462	293	**253**	3	516	429	**465**	3	288	118	**188**	3
Butter clam	1230	958	**1063**	3	107	94	**100**	3	3790	1260	**2000**	3
Large Clam	886	635	**796**	3	95	78	**87**	3	1470	775	**1042**	3
Mussel	170	100	**129**	3	338	243	**302**	3	259	224	**242**	3
Steamer clam	652	542	**585**	3	273	152	**224**	3	364	278	**307**	3
Goose Tongue	167	80	**112**	6					142	113	**128**	6
Kelp	466	224	**363**	3	374	237	**301**	3	504	85	**232**	3
Seaweed					779	412	**510**	3	333	103	**185**	3
Chiton	1610	437	**668**	9	1080	480	**769**	9	1230	403	**612**	9
Octopus	461	95	**308**	3	1560	772	**1123**	3	271	107	**188**	3
Snail	637	87	**301**	9	10100	555	**4493**	9	936	289	**377**	8

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SPECIES	METALS (ug/kg; ppb)															
	Lead				Total-Hg				Methyl-Hg				Selenium			
	max	min	avg	n	max	min	avg	n	max	min	avg	n	max	min	avg	n
Chinook			**42**	1	49.9	30.9	**40.5**	6	49	25	**39**	6	405	318	**371**	6
Chum salmon							**21.9**	1	19.9	19.7	**19.8**	2	599	472	**536**	2
Cod					57.8	34.1	**45.8**	3	45.8	26.8	**38.3**	3	575	563	**568**	3
Flounder	128	21	**42**	14	43	21	**30**	11	47	8	**22**	15	1580	314	**524**	15
Halibut									47	24	**33**	6	505	453	**481**	6
Sea Bass									122	69	**75**	4	633	526	**590**	4
Sockeye									19.8	10.6	**15.0**	9	691	515	**621**	9
Blue mussel	47	41	**43**	3	12.2	10.4	**11.3**	2	4.01	2.51	**3.06**	3	337	267	**304**	3
Butter clam	80	48	**59**	3	16.9	14.4	**15.6**	2	6	4	**5**	3	415	277	**321**	3
Large Clam	41	40	**41**	3					6	5	**6**	3	394	274	**354**	3
Mussel	32	30	**31**	3					2.03	1.63	**1.84**	3	341	309	**323**	3
Steamer clam									5.42	2.95	**3.80**	3	375	333	**354**	3
Goose Tongue	30	7	**26**	4												
Kelp			**25**	1									172	134	**135**	2
Seaweed																
Chiton	461	140	**255**	9							**2.16**	1	238	203	**229**	4
Octopus	25	11	**19**	3					9.59	7.24	**7.90**	3	432	355	**379**	3
Snail	46	23	**38**	9					8.07	3.22	**5.36**	8	812	297	**559**	9

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