

Table 1. Occurrence Summary, COPC selection and UCL95s for Sediment Samples, LCP Chemicals Site, Brunswick, GA

	Frequency		Range of SQLs		Range of Detects			Avg BG ⁽¹⁾	Residential Soil RSL ⁽²⁾	Percent Detect	COPC?	UCL	Method
	Det	Tot	Min	Max	Min	Max	Mean						
Semi-VOCs													
1-Methylnaphthalene	7	180	0.0067	0.17	0.004	0.43	0.0808		22	4%	no		
2-Methylnaphthalene	44	222	0.00014	1.3	0.00046	0.34	0.103		31	20%	no		
3/4-Methylphenol	1	10	0.43000	1.2	0.20000	0.2	0.717		NA	10%	no		
Acenaphthene	76	268	0.0001	0.2	0.00035	1.2	0.0585		340	28%	no		
Acenaphthylene	86	268	0.0001	0.2	0.00014	0.31	0.0581		170	32%	no		
Anthracene	102	268	0.0001	0.2	0.00019	0.76	0.0655		1,700	38%	no		
Benzo(g,h,i)perylene	102	268	0.0001	0.2	0.00047	9	0.13		170	38%	no		
Butylbenzylphthalate	1	10	0.4300	1.3	0.17000	0.17	0.734		260	10%	no		
Dibenzofuran	27	42	0.0001	1.3	0.00040	0.0026	0.198		7.8	64%	no		
Fluoranthene	121	268	0.0002	0.2	0.00077	4.9	0.118		230	45%	no		
Fluorene	86	268	0.0001	0.2	0.00011	0.097	0.054		230	32%	no		
Naphthalene	73	268	0.0002	0.2	0.00034	0.63	0.0587		3.6	27%	no		
Phenanthrene	95	268	0.0001	0.2	0.00052	0.25	0.0577		170	35%	no		
Phthalate, bis(2-ethylhexyl)	8	10	0.9200	0.97	0.07000	0.32	0.334		35	80%	no		
Pyrene	123	268	0.0002	0.25	0.0014	21	0.212		170	46%	no		
Carcinogenic PAHs													
B(a)P toxic equivalents ⁽³⁾	NA	NA	NA	NA	0.0014*	16.69*	NA		0.015	NA	YES	0.603*	95% Chebyshev
Benzo(a)pyrene	116	268	1.10E-04	0.2	3.10E-04	10	0.144		0.015	43%	NA		
Benzo(a)anthracene	113	268	2.10E-04	0.2	4.00E-04	12	0.149		0.15	42%	NA		
Benzo(b)fluoranthene	107	268	1.30E-04	0.2	3.50E-04	6.3	0.136		0.15	40%	NA		
Benzo(k)fluoranthene	106	268	1.20E-04	0.2	2.10E-04	2.5	0.0844		1.5	40%	NA		
Chrysene	112	268	1.70E-05	0.2	5.20E-04	17	0.204		15	42%	NA		
Dibenzo(a,h)anthracene	90	268	1.20E-04	0.2	0.0016	4.4	0.0892		0.015	34%	NA		
Indeno(1,2,3-cd)pyrene	98	268	1.10E-04	0.2	2.80E-04	4.2	0.094		0.15	37%	NA		
Pesticides													
4,4'-DDT	1	11	0.0043	0.013	0.0078	0.0078	0.00759		1.7	9%	no		
Endrin Aldehyde	1	11	0.0043	0.024	0.0023	0.0023	0.00836		1.8	9%	no		
PCBs													
Aroclor 1268	269	296	0.0022	5.699	0.043	300	3.408		0.22	91%	YES	2.571	95% H
Metals/Inorganics													
Aluminum	19	19	5.9	24	310	49100	19624	19,000	7,700	100%	YES	34812	95% Chebyshev
Antimony	4	19	0.0399	7.9	0.0599	0.1099	3.481	0.046	3.1	21%	no		
Arsenic	17	19	0.05	2.569	0.8399	22	10.18	15	0.39	89%	no		
Barium	19	19	0.2	1	3.4	64	27.05	22	1,500	100%	no		
Beryllium	18	19	0.02	0.46999	0.07	2.599	1.329	1.1	16	95%	no		
Cadmium	6	23	0.02	2	0.1299	0.372	0.643	0.13	7	26%	no		

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	Frequency		Range of SQLs		Range of Detects		Mean	Avg BG ⁽¹⁾	Residential Soil RSL ⁽²⁾	Percent Detect	COPC?	UCL	Method
	Det	Tot	Min	Max	Min	Max							
Calcium	19	19	2.2	50	240	9760	3342	4,000	NA	100%	no		
Chromium	19	19	0.03	2.0299	0.62	99	48.46	34	0.29	100%	YES	123.6	99% Chebyshev
Cobalt	18	19	0.004	1.2	0.24	10	5.508	5.2	2.3	95%	no		
Copper	21	23	0.02	2.5	0.4699	17.79	9.02	7.9	310	91%	no		
Iron	19	19	0.699	14	230	37000	18591	23,000	5,500	100%	no		
Lead	273	274	0.02	6.199	2.099	765	28.42	17	40	100%	YES	43.67	95% Chebyshev
Magnesium	19	19	0.8	50	390	9210	5856	6,100	NA	100%	no		
Manganese	19	19	0.0799	1	5.09	1000	306.7	230	180	100%	YES	510	95% Approximate
Mercury	307	311	1.90E-04	0.41	0.02899	62.9	2.167	0.097	0.56	99%	YES	3.615	95% Chebyshev
Methylmercury	56	56	8.40E-06	4.00E-04	1.07E-04	0.0437	0.00834	NA	0.78	100%	YES	0.0105	95% Approximate
Nickel	21	23	0.0299	4.699	0.589	21.1	9.038	8.7	150	91%	no		
Potassium	19	19	8.2799	237	120	5000	3117	3,100	NA	100%	no		
Selenium	3	19	0.27	4	0.699	1.5	2.049	1.9	39	16%	no		
Silver	3	23	0.007	4	0.119	0.131	1.421	0.059	39	13%	no		
Sodium	19	19	5.9	250	2600	33000	16520	21,000	NA	100%	no		
Sulfide	27	30	0.4	96	2.8	1300	164.1	89	NA	90%	no		
Thallium	4	19	0.02	4	0.2	5.82	2.181	0.19	NA	21%	YES	2.167	97.5% Chebyshev
Vanadium	19	19	0.02	2.4	0.98	100	54.87	51	39	100%	no		
Zinc	23	23	0.2	2	1.799	93	49.77	39	2,300	100%	no		

Notes:

All units are in mg/kg dry weight

NA = Not Applicable

SQL = Sample Quantitation Limit

(1) Average background concentrations for sediment taken from the Human Health Baseline Risk Assessment for Marsh Sediment and Upland Soil, LCP Chemicals Site (Geraghty & Miller, 1999). These data represent the average concentration from a total of 38 background surface sediment samples collected in Jointer Creek (22 samples) and Clubbs Creek (16 samples), although not all analytes were included in all samples. Two-times the average background value was compared with the maximum detected concentration of inorganic constituents from site samples.

(2) Values are the November 2010 Regional Screening Levels for residential soil. RSL values for non-carcinogens were adjusted to a HQ of 0.1.

(3) As an interim procedure, until more definitive Agency guidance is established, Region 4 has adopted a TEF methodology for carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) on the Target Compound List.

These TEFs are based on the relative potency of each compound relative to that of benzo(a)pyrene (BaP). The following TEFs were used to convert each cPAH concentration to an equivalent concentration of BaP:

Benzo(a)pyrene: 1.0, Benzo(a)anthracene: 0.1, Benzo(b)fluoranthene: 0.1, Benzo(k)fluoranthene: 0.01, Chrysene: 0.001, Dibenzo(a,h)anthracene: 1.0 and Ideno(1,2,3-cd)pyrene: 0.1.

Table 2. Derivation of Benzo(a)Pyrene Toxic Equivalents Value

CPAH	TEF	Max	Equivalents	95%UCL	Max w/TEF	95%UCL w/TEF
Benzo(a)pyrene	1	10	10	0.344	10	0.344
Benzo(a)anthracene	0.1	12	1.2	0.387	1.2	0.0387
Benzo(b)fluoranthene	0.1	6.3	0.63	0.272	0.63	0.0272
Benzo(k)fluoranthene	0.01	2.5	0.025	0.130	0.025	0.0013
Chrysene	0.001	17	0.017	0.593	0.017	0.000593
Dibenzo(a,h)anthracene	1	4.4	4.4	0.174	4.4	0.174
Indeno(1,2,3-cd)pyrene	0.1	4.2	0.42	0.177	0.42	0.0177

B(a)P toxic equivalents*

Max	16.69
95%UCL	0.603
Method	95% Chebyshev

*As an interim procedure, until more definitive Agency guidance is established, Region 4 has adopted a TEF methodology for carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs) on the Target Compound List.

Table 3. Occurrence Summary, COPC Selection and UCL95s, for Finfish, Shellfish and Clapper Rail Samples

	Frequency		Percent	Range of SQLs		Range of Detects			RBC	Percent	COPC?	UCL	EPC	Method
	Det	Tot	Detect	Min	Max	Min	Max	Mean	(HQ=0.1)	Detect				
Fin Fish														
Atlantic Croaker														
Aroclor 1268	11	11	100%	0.0006	0.1	0.36	2.244	0.998	0.0016	100%	YES	1.427	1.427	95% Approximate Gamma
Copper	7	7	100%	3	3	2.76	4.42	3.983	5.4	100%	NO			
Mercury	11	11	100%	0.00004	0.02	0.139	0.522	0.236	0.014	100%	YES	0.302	0.302	95% Approximate Gamma UCL
Zinc	7	7	100%	3	3	4.35	7.13	4.947	41	100%	NO			
Black Drum														
Aroclor 1268	22	28	79%	0.0023	0.25	0.052	0.83	0.267	0.0016	79%	YES	0.343	0.343	95% Approximate Gamma UCL
Copper	9	9	100%	3	3	2.3	3.91	3.344	5.4	100%	NO			
Mercury	28	28	100%	0.0004	0.02	0.0858	0.288	0.162	0.014	100%	YES	0.177	0.177	95% Student's-t
Zinc	9	9	100%	3	3	7.28	11.04	9.172	41	100%	NO			
Red Drum														
Aroclor 1268	4	12	33%	0.0042	0.18	0.097	0.1936	0.129	0.0016	33%	YES	0.148	0.148	95% Student's-t
Methoxychlor	1	3	33%	0.05	0.05	0.44	0.44	0.44	0.68	33%	NO			
Copper	3	3	100%	3	3	1.65	3.52		5.4	100%	NO			
Mercury	12	12	100%	0.0004	0.02	0.05	0.44	0.292	0.014	100%	YES	0.348	0.348	95% Student's-t
Zinc	3	3	100%	3	3	4.5	6.6	41	41	100%	NO			
Sheepshead														
Aroclor 1268	8	8	100%	0.0077	0.1	0.16	0.858	0.432	0.0016	100%	YES	0.724	0.724	95% Approximate Gamma UCL
Copper	7	7	100%	3	3	3.12	4.84	3.927	5.4	100%	NO			
Mercury	8	8	100%	0.0004	0.02	0.263	0.448	0.334	0.014	100%	YES	0.372	0.372	95% Student's-t
Zinc	7	7	100%	3	3	5	9.24	6.871	41	100%	NO			
Southern Flounder (and Flounder)														
Aroclor 1268	5	11	45%	0.04	0.1	0.026	0.408	0.143	0.0016	45%	YES	0.249	0.249	95% H
Copper	9	9	100%	0.1	0.1	2.52	3.45	2.911	5.4	100%	NO			
Mercury	11	11	100%	0.0037	0.02	0.198	0.315	0.238	0.014	100%	YES	0.257	0.257	95% Student's-t
Zinc	9	9	100%	3	3	5.88	8.64	7.198	41	100%	NO			
Southern Kingfish														
Aroclor 1268	11	12	92%	0.0042	0.1	0.1	1.344	0.5060	0.0016	92%	YES	0.716	0.716	95% Student's-t
Copper	8	8	100%	3	3	2.125	5.25	3.477	5.4	100%	NO			
Mercury	12	12	100%	0.0004	0.02	0.189	1.13	0.487	0.014	100%	YES	0.663	0.663	95% Approximate Gamma
Zinc	8	8	100%	3	3	5.5	9.89	7.081	41	100%	NO			

Table 3. Occurrence Summary, COPC Selection and UCL95s, for Finfish, Shellfish and Clapper Rail Samples

	Frequency		Percent	Range of SQLs		Range of Detects			RBC	Percent	COPC?	UCL	EPC	Method
	Det	Tot	Detect	Min	Max	Min	Max	Mean	(HQ=0.1)	Detect				
Spot														
Aroclor 1268	8	9	89%	0.1	0.1	0.69	3.072	1.2	0.0016	89%	YES	1.785	1.785	95% Student's-t
Copper	9	9	100%	3	3	2.775	5.25	3.839	5.4	100%	NO			
Mercury	9	9	100%	0.02	0.02	0.0495	0.166	0.101	0.014	100%	YES	0.124	0.124	95% Student's-t
Zinc	9	9	100%	3	3	4.8	8.88	6.433	41	100%	NO			
Spotted Seatrout														
Aroclor 1268	31	31	100%	0.0041	0.1	0.089	1.2	0.445	0.0016	100%	YES	0.556	0.556	95% Approximate Gamma
Copper	10	10	100%	3	3	2.2	5.32	3.259	5.4	100%	NO			
Mercury	31	31	100%	0.0004	0.02	0.12	0.941	0.439	0.014	100%	YES	0.495	0.495	95% Student's-t
Zinc	10	10	100%	3	3	4.68	9.5	6.1	41	100%	NO			
Striped Mullet														
Aroclor 1268	26	26	100%	0.0052	0.1	0.027	10.5	1.907	0.0016	100%	YES	2.704	2.704	95% Approximate Gamma
Copper	9	9	100%	3	3	2.34	4.34	3.323	5.4	100%	NO			
Mercury	26	26	100%	0.0004	0.02	0.0111	0.0775	0.0361	0.014	100%	YES	0.042	0.042	95% Student's-t
Zinc	9	9	100%	3	3	8.1	12.16	10.36	41	100%	NO			
SHELLFISH														
Blue Crab														
Aroclor 1268	15	18	83%	0.0035	0.1	0.0073	0.4	0.122	0.0016	83%	YES	0.195	0.195	95% Approximate Gamma UCL
Copper	9	9	100%	3	3	16.2	25.2	19.29	5.4	100%	YES	20.9	20.9	95% Student's-t
Mercury	18	18	100%	0.0004	0.02	0.255	1.12	0.602	0.014	100%	YES	0.708	0.708	95% Student's-t
Zinc	9	9	100%	3	3	30.6	52.8	42.88	41	100%	YES	46.94	46.94	95% Student's-t
White Shrimp														
Aroclor 1268	4	9	44%	0.1	0.1	0.1058	0.682	0.221	0.0016	44%	YES	0.533	0.533	95% Chebyshev
Copper	9	9	100%	3	3	7.48	22	10.53	5.4	100%	YES	13.3	13.3	95% Student's-t
Mercury	9	9	100%	0.02	0.02	0.0374	0.125	0.0903	0.014	100%	YES	0.112	0.112	95% Student's-t
Zinc	9	9	100%	3	3	11.4	12.1	11.81	41	100%	NO			
WILDLIFE														
Clapper Rail														
Aroclor 1268 ⁽¹⁾	14	14	100%	0.296	0.636	0.19	19.42	5.02	0.0016	100%	YES	19.94	19.42	99% Chebyshev
Mercury	14	14	100%	0.917	0.68	0.68	7.3	3.124	0.014	100%	YES	4.671	4.671	95% Approximate Gamma UCL

Notes:

All units are in mg/kg.

(1) The 99% Chebyshev calculated value for the UCL for Aroclor 1268 was 19.94 mg/kg which exceeded the maximum detected value of 19.42 mg/kg. 19.42 mg/kg will be used as the exposure point concentration in the risk calculations.

Table 4. Size Fractions and Total Organic Carbon in Marsh Sediment Samples along with Spearman Rank Correlation Coefficients and Probabilities.

Sample ID	Coarse Sand	Fine Sand	Fines	Gravel	Medium Sand	TOC	Est. TOC in Fines
06291-C-7	2.59%	1.49%	74.68%	20.12%	0.54%	5.75%	7.70%
06291-C-6	6.08%	0.56%	53.54%	33.57%	1.30%	6.56%	12.25%
06291-C-6	2.42%	2.14%	54.22%	40.50%	0.53%	6.56%	12.10%
06291-C-7	2.59%	1.49%	74.68%	20.12%	0.54%	5.75%	7.70%
06291-CR-C	1.04%	76.39%	15.19%	5.63%	1.26%	0.67%	4.41%
06291-D-C	8.23%	5.17%	61.00%	17.10%	2.56%	5.21%	8.54%
06291-MG-H7(M)	1.90%	0.38%	59.76%	36.14%	0.31%	5.81%	9.72%
06291-MG-K7(M)	1.33%	0.59%	57.99%	39.90%	0.17%	4.42%	7.62%
06291-TC-C	6.66%	24.39%	42.40%	24.12%	1.44%	3.00%	7.08%
06290-C-15	3.82%	2.76%	92.08%	0.52%	0.86%	4.22%	4.58%
06290-C-16	1.31%	69.59%	20.67%	0.55%	7.81%	0.96%	4.64%
06290-C-29	2.15%	0.68%	72.41%	25.61%	0.69%	5.23%	7.22%
06290-C-33	3.94%	75.34%	8.77%	0.69%	10.80%	1.63%	18.59%
06290-C-36	4.14%	1.48%	92.94%	1.34%	0.53%	4.66%	5.01%
06290-C-45	3.40%	1.50%	55.11%	39.68%	0.52%	4.92%	8.93%
06290-C-5	9.72%	13.26%	70.84%	7.92%	2.35%	4.72%	6.66%
06290-FS-AREA-2	6.61%	42.28%	38.77%	8.43%	4.29%	7.69%	19.84%
06290-FS-AREA-3	5.10%	8.90%	72.69%	12.13%	1.95%	7.71%	10.61%
06290-M-AB	9.62%	70.50%	7.41%	0.82%	10.99%	0.41%	5.53%
06289-C-103	6.91%	1.98%	73.25%	15.50%	0.14%	5.48%	7.48%
06289-C-104	6.49%	21.16%	48.92%	5.49%	17.57%	3.47%	7.09%
06289-C-105	15.41%	10.05%	49.09%	8.88%	16.22%	2.36%	4.81%
06289-FS-AREA-1	3.98%	42.51%	46.41%	4.24%	2.62%	2.43%	5.24%
06289-FS-AREA-4	8.19%	41.98%	32.61%	11.16%	5.74%	2.53%	7.76%
06289-FS-AREA-5	5.38%	12.46%	72.39%	7.61%	1.59%	4.35%	6.01%
06289-FS-AREA-6	3.42%	0.59%	49.05%	45.75%	0.48%	5.95%	12.13%
Correlations		rho	p-value				
TOC-Coarse Sand		-0.104	0.611		Median Est. TOC in fines		7.55%
TOC-Fine Sand		-0.677	0.0002				
TOC-Fines		0.525	0.007				
TOC-Gravel		0.651	0.0005				
TOC-Medium Sand		-0.524	0.007				

Table 5. Percent Moisture in Marsh Sediment Samples

Sample ID	Percent Moisture
06289-M-108	72.9
06289-FS-AREA-6	68.9
06289-M-106	72
06289-M-107	73.8
06290-M-104	71.2
06290-M-103	77.9
06290-M-100	73
06290-M-204	68.6
06290-M-37	72.4
06290-M-AB	19.3
06290-M-41	71.1
06290-NOAA-9-G	63.5
06291-MG-D9(M)	66
06291-NOAA-5-G	51.1
06291-M-25	65
06291-MG-K7(M)	66.1
06291-NOAA-3-G	78.7
06291-MG-H7(M)	66.2
06291-CR-M	63.7
06291-MG-N2(M)	81.3
06291-MG-B7(M)	71.3
06291-TC-M	61.4
06292-NOAA-8-G	77.4
06292-NOAA-7-G	71.6
06292-NOAA-6-G	69.2
06292-M-28	69.8
Average	67.82

Table 6. Calculation of DA_{event} for COPCs in Marsh Sediment

Chemical	EPC mg/kg	Effective Concentration Fraction percent	Percent Moisture percent	SAF mg/cm ²	ABS Fraction	DA _{event} mg/cm ²
B(a)P toxic equivalents	0.603	7.55%	67.82%	13	0.13	4.6E-08
Aroclor 1268	2.571	7.55%	67.82%	13	0.14	2.1E-07
Aluminum	34812			13	0	0.0E+00
Chromium	123.6			13	0	0.0E+00
Lead	43.67			13	0	0.0E+00
Manganese	510			13	0	0.0E+00
Mercury	3.615			13	0	0.0E+00
Methylmercury	0.0105			13	0	0.0E+00
Thallium	2.167			13	0	0.0E+00

Table 7. Exposure Assumptions for Marsh Trespasser

Receptor	Adolescent		Adult	
	CTE	RME	CTE	RME
SSA (cm ²)	2559	2559	3870	3870
IR sed (mg/day)	50	100	50	100
AT cancer (days)	25550	25550	25550	25550
AT noncancer (days)	730	3650	2190	10950
ED (yr)	2	10	6	30
EF (days/yr)	6	52	6	52
BW (kg)	45	45	70	70

Table 8a. RME Intake Doses and RME Cancer Risk Estimates for the Marsh Trespasser Scenario

Cancer Risk	DA _{event} mg/cm ²	SSA cm ²	EF d/yr	ED yr	IR _{sed} mg/day	BW kg	AT days	DAD mg/kg-day	Oral Dose mg/kg-day	GI ABS	Oral SF	Dermal Risk	Oral Risk	Total Risk
Adult														
B(a)P toxic equivalents	4.6E-08	3870	52	30	100	70	25550	1.5E-07	5.3E-08	1	7.3E+00	1.1E-06	3.8E-07	1.5E-06
Aroclor 1268	2.1E-07	3870	52	30	100	70	25550	7.1E-07	2.2E-07	1	2.0E+00	1.4E-06	4.5E-07	1.9E-06
Chromium	0.0E+00	3870	52	30	100	70	25550	0.0E+00	1.1E-05	0.025	5.0E-01	0.0E+00	5.4E-06	5.4E-06
												Adult	8.8E-06	
Adolescent														
B(a)P toxic equivalents	4.6E-08	2559	52	10	100	45	25550	5.3E-08	2.7E-08	1	7.3E+00	3.9E-07	2.0E-07	5.9E-07
Aroclor 1268	2.1E-07	2559	52	10	100	45	25550	2.4E-07	1.2E-07	1	2.0E+00	4.9E-07	2.3E-07	7.2E-07
Chromium	0.0E+00	2559	52	10	100	45	25550	0.0E+00	5.6E-06	0.025	5.0E-01	0.0E+00	2.8E-06	2.8E-06
												Adolescent	4.1E-06	
										Lifetime Receptor	2.6E-06	7.4E-06	1.0E-05	

Notes:

GI absorption value was used to convert Oral SF to dermal values.

Lifetime receptor risk was calculated using 0.67 times the adult risk plus the adolescent risk to equal a 30 year exposure period.

Table 8b. CTE Intake Doses and CTE Cancer Risk Estimates for the Marsh Trespasser Scenario

Cancer Risk	DA _{event} mg/cm ²	SSA cm ²	EF d/yr	ED yr	IR _{sed} mg/day	BW kg	AT days	DAD mg/kg-day	Oral mg/kg-day	GI ABS	Oral SF	Dermal Risk	Oral Risk	Total Risk	
Adult															
B(a)P toxic equivalents	4.6E-08	3870	6	6	50	70	25550	3.6E-09	6.1E-10	1	7.3E+00	2.6E-08	4.4E-09	3.1E-08	
Aroclor 1268	2.1E-07	3870	6	6	50	70	25550	1.6E-08	2.6E-09	1	2.0E+00	3.3E-08	5.2E-09	3.8E-08	
Chromium	0.0E+00	3870	6	6	50	70	25550	0.0E+00	1.2E-07	0.025	5.0E-01	0.0E+00	6.2E-08	6.2E-08	
												Adult	1.3E-07		
Adolescent															
B(a)P toxic equivalents	4.6E-08	2559	6	2	50	45	25550	1.2E-09	3.1E-10	1	7.3E+00	8.9E-09	2.3E-09	1.1E-08	
Aroclor 1268	2.1E-07	2559	6	2	50	45	25550	5.6E-09	1.3E-09	1	2.0E+00	1.1E-08	2.7E-09	1.4E-08	
Chromium	0.0E+00	2559	6	2	50	45	25550	0.0E+00	6.5E-08	0.025	5.0E-01	0.0E+00	3.2E-08	3.2E-08	
												Adolescent	5.7E-08		
												Lifetime Receptor	7.9E-08	1.1E-07	1.9E-07

Notes:

GI absorption value was used to convert Oral SF to dermal values.

Table 9a. RME Intake Dose and RME Noncancer Hazard Estimates for the Marsh Trespasser Scenario

Noncancer Hazard	DA _{event} mg/cm ²	SSA cm ²	EF d/yr	ED yr	IR _{sed} mg/day	BW kg	AT days	DAD mg/kg-day	Oral mg/kg-day	GI ABS	Oral RfD	Dermal HQ	Oral HQ	Total HQ
Adult														
Aroclor 1268	2.1E-07	3870	52	30	100	70	10950	1.7E-06	5.2E-07	1	7.0E-05	2.4E-02	7.5E-03	3.1E-02
Aluminum	0.0E+00	3870	52	30	100	70	10950	0.0E+00	7.1E-03	1	1.0E+00	0.0E+00	7.1E-03	7.1E-03
Chromium	0.0E+00	3870	52	30	100	70	10950	0.0E+00	2.5E-05	0.025	3.0E-03	0.0E+00	8.4E-03	8.4E-03
Lead	0.0E+00	3870	52	30	100	70	10950	0.0E+00	8.9E-06	1	NA	NA	NA	NA
Manganese	0.0E+00	3870	52	30	100	70	10950	0.0E+00	1.0E-04	0.04	1.4E-01	0.0E+00	7.4E-04	7.4E-04
Mercury	0.0E+00	3870	52	30	100	70	10950	0.0E+00	7.4E-07	1	1.0E-04	0.0E+00	7.4E-03	7.4E-03
Methylmercury	0.0E+00	3870	52	30	100	70	10950	0.0E+00	2.1E-09	1	1.0E-04	0.0E+00	2.1E-05	2.1E-05
Thallium	0.0E+00	3870	52	30	100	70	10950	0.0E+00	4.4E-07	1	6.5E-05	0.0E+00	6.8E-03	6.8E-03
Adult														0.06
Adolescent														
Aroclor 1268	2.1E-07	2559	52	10	100	45	3650	1.7E-06	8.1E-07	1	7.0E-05	2.4E-02	1.2E-02	3.6E-02
Aluminum	0.0E+00	2559	52	10	100	45	3650	0.0E+00	1.1E-02	1	1.0E+00	0.0E+00	1.1E-02	1.1E-02
Chromium	0.0E+00	2559	52	10	100	45	3650	0.0E+00	3.9E-05	0.025	3.0E-03	0.0E+00	1.3E-02	1.3E-02
Lead	0.0E+00	2559	52	10	100	45	3650	0.0E+00	1.4E-05	1	NA	NA	NA	NA
Manganese	0.0E+00	2559	52	10	100	45	3650	0.0E+00	1.6E-04	0.04	1.4E-01	0.0E+00	1.2E-03	1.2E-03
Mercury	0.0E+00	2559	52	10	100	45	3650	0.0E+00	1.1E-06	1	1.0E-04	0.0E+00	1.1E-02	1.1E-02
Methylmercury	0.0E+00	2559	52	10	100	45	3650	0.0E+00	3.3E-09	1	1.0E-04	0.0E+00	3.3E-05	3.3E-05
Thallium	0.0E+00	2559	52	10	100	45	3650	0.0E+00	6.9E-07	1	6.5E-05	0.0E+00	1.1E-02	1.1E-02
Adolescent														0.08

Notes:

GI absorption value was used to convert Oral RfD to dermal values.
 No HQ was calculated for lead. See text for additional explanation.

Table 9b. CTE Intake Dose and CTE Noncancer Hazard Estimates for the Marsh Trespasser Scenic

Noncancer Hazard	DA _{event} mg/cm ²	SSA cm ²	EF d/yr	ED yr	IR _{sed} mg/day	BW kg	AT days	DAD mg/kg-day	Oral mg/kg-day	GI ABS	Oral RfD	Dermal HQ	Oral HQ	Total HQ
Adult														
Aroclor 1268	2.1E-07	3870	6	6	50	70	2190	1.9E-07	3.0E-08	1	7.0E-05	2.7E-03	4.3E-04	3.2E-03
Aluminum	0.0E+00	3870	6	6	50	70	2190	0.0E+00	4.1E-04	1	1.0E+00	0.0E+00	4.1E-04	4.1E-04
Chromium	0.0E+00	3870	6	6	50	70	2190	0.0E+00	1.5E-06	0.025	3.0E-03	0.0E+00	4.8E-04	4.8E-04
Lead	0.0E+00	3870	6	6	50	70	2190	0.0E+00	5.1E-07	1	NA			
Manganese	0.0E+00	3870	6	6	50	70	2190	0.0E+00	6.0E-06	0.04	1.4E-01	0.0E+00	4.3E-05	4.3E-05
Mercury	0.0E+00	3870	6	6	50	70	2190	0.0E+00	4.2E-08	1	1.6E-04	0.0E+00	2.7E-04	2.7E-04
Methylmercury	0.0E+00	3870	6	6	50	70	2190	0.0E+00	1.2E-10	1	1.0E-04	0.0E+00	1.2E-06	1.2E-06
Thallium	0.0E+00	3870	6	6	50	70	2190	0.0E+00	2.5E-08	1	6.5E-05	0.0E+00	3.9E-04	3.9E-04
													Adult	0.005
Adolescent														
Aroclor 1268	2.1E-07	2559	6	2	50	45	730	2.0E-07	4.7E-08	1	7.0E-05	2.8E-03	6.7E-04	3.5E-03
Aluminum	0.0E+00	2559	6	2	50	45	730	0.0E+00	6.4E-04	1	1.0E+00	0.0E+00	6.4E-04	6.4E-04
Chromium	0.0E+00	2559	6	2	50	45	730	0.0E+00	2.3E-06	0.025	3.0E-03	0.0E+00	7.5E-04	7.5E-04
Lead	0.0E+00	2559	6	2	50	45	730	0.0E+00	8.0E-07	1	NA			
Manganese	0.0E+00	2559	6	2	50	45	730	0.0E+00	9.3E-06	0.04	1.4E-01	0.0E+00	6.7E-05	6.7E-05
Mercury	0.0E+00	2559	6	2	50	45	730	0.0E+00	6.6E-08	1	1.0E-04	0.0E+00	6.6E-04	6.6E-04
Methylmercury	0.0E+00	2559	6	2	50	45	730	0.0E+00	1.9E-10	1	1.0E-04	0.0E+00	1.9E-06	1.9E-06
Thallium	0.0E+00	2559	6	2	50	45	730	0.0E+00	4.0E-08	1	6.5E-05	0.0E+00	6.1E-04	6.1E-04
													Adolescent	0.006

Notes:

GI absorption value was used to convert Oral RfD to dermal values.

No HQ was calculated for lead. See text for additional explanation.

Table 10. Exposure Assumptions for Fish and Wildlife Consumption

	Child		Adolescent		Adult	
	CTE	RME	CTE	RME	CTE	RME
FCR Finfish (g/day)						
Recreational Consumers (EPA, 1997) ⁽¹⁾	1.6	5.3	3.2	10.6	4.7	15.9
High Quantity Consumers (DHHS, 1999) ⁽²⁾	3	10	11	18	13	27
FCR Shellfish (g/day)						
EPA, 1997, Table 10-6	2.3	6	0.8	3.4	3.9	11.8
FCR Clapper Rail (g/day)						
DHHS, 1999	0.02	0.21	0.02	0.17	0.08	0.34
ED (yr)	2	6	3	9	9	30
EF (days/yr)	365	365	365	365	365	365
BW (kg)	15	15	45	45	70	70

Notes:

(1) Table 10-1, South Atlantic.

(2) See Appendix B.

Table 11. Percent of Total Catch for Use as Weighting Factors for the Various Fish Species based on Angling Success

Wave	Sheepshead	Spotted Seatrout	Southern Kingfish	Black Drum	Red Drum	Southern Flounder	Spot	Atlantic Croaker	Striped Mullet
Jan-Feb	9.1%	52.5%	9.4%	0.5%	25.9%	2.6%	0.00%	0.0%	0.0%
Mar-Apr	12.9%	23.9%	40.8%	2.6%	16.4%	2.8%	0.04%	0.6%	0.0%
May-Jun	20.5%	28.9%	27.2%	5.9%	5.4%	5.8%	0.02%	1.8%	4.6%
Jul-Aug	3.3%	38.7%	22.5%	8.7%	12.8%	10.2%	0.07%	3.4%	0.2%
Sep-Oct	5.1%	35.3%	13.9%	4.4%	37.3%	3.5%	0.07%	0.5%	0.0%
Nov-Dec	8.7%	57.2%	4.5%	1.4%	26.2%	1.9%	0.04%	0.1%	0.01%
Yearly	9.9%	39.4%	19.7%	3.9%	20.7%	4.4%	0.04%	1.1%	0.8%

Notes:

Species-specific fish harvest data from 2001-2005 in Georgia were obtained from the Marine Recreational Fisheries Statistics Survey (MRFSS) (NMFSS, 2007).

Table 12a. RME Intake/Risk Calculation for Adult Consumers of Recreationally-caught Finfish

Adult	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Cancer	Noncancer		Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Mercury	Aroclor 1268	
Atlantic Croaker												
Aroclor 1268	1.427	1.1%	15.9	365	30	70	25550		1.5E-06	3.4E-06		
Mercury	0.302	1.1%	15.9	365	30	70					7.2E-07	
Black Drum												
Aroclor 1268	0.343	3.9%	15.9	365	30	70	25550		1.3E-06	3.1E-06		
Mercury	0.177	3.9%	15.9	365	30	70					1.6E-06	
Red Drum												
Aroclor 1268	0.148	20.7%	15.9	365	30	70	25550		3.0E-06	7.0E-06		
Mercury	0.348	20.7%	15.9	365	30	70					1.6E-05	
Sheepshead												
Aroclor 1268	0.724	9.9%	15.9	365	30	70	25550		7.0E-06	1.6E-05		
Mercury	0.372	9.9%	15.9	365	30	70					8.4E-06	
Southern Flounder												
Aroclor 1268	0.249	4.4%	15.9	365	30	70	25550		1.1E-06	2.5E-06		
Mercury	0.257	4.4%	15.9	365	30	70					2.6E-06	
Southern Kingfish												
Aroclor 1268	0.716	19.7%	15.9	365	30	70	25550		1.4E-05	3.2E-05		
Mercury	0.663	19.7%	15.9	365	30	70					3.0E-05	
Spot												
Aroclor 1268	1.785	0.04%	15.9	365	30	70	25550		6.9E-08	1.6E-07		
Mercury	0.124	0.04%	15.9	365	30	70					1.1E-08	
Spotted Seatrout												
Aroclor 1268	0.556	39.4%	15.9	365	30	70	25550		2.1E-05	5.0E-05		
Mercury	0.495	39.4%	15.9	365	30	70					4.4E-05	
Striped Mullet												
Aroclor 1268	2.704	0.8%	15.9	365	30	70	25550		2.1E-06	5.0E-06		
Mercury	0.042	0.8%	15.9	365	30	70					7.7E-08	
Total Intakes									5.1E-05	1.2E-04	1.0E-04	
oral CSF/oral RfD									2	7.E-05	1.E-04	
Risk or HQ									1.0E-04	1.7	1	2.7
Lifetime Cancer Risk									1.1E-04			

Notes:

Lifetime receptor cancer risk was calculated using 0.5 times the adult risk plus the adolescent and child risk to equal a 30 year exposure period.

Table 12b. RME Intake/Risk Calculation for Adolescent Consumers of Recreationally-caught Finfish

Adolescent	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Cancer	Noncancer		Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Mercury	Aroclor 1268	
Atlantic Croaker												
Aroclor 1268	1.427	1.1%	10.6	365	9	45	25550		4.6E-07	3.5E-06		
Mercury	0.302	1.1%	10.6	365	9	45					7.5E-07	
Black Drum												
Aroclor 1268	0.343	3.9%	10.6	365	9	45	25550		4.1E-07	3.2E-06		
Mercury	0.177	3.9%	10.6	365	9	45					1.6E-06	
Red Drum												
Aroclor 1268	0.148	20.7%	10.6	365	9	45	25550		9.3E-07	7.2E-06		
Mercury	0.348	20.7%	10.6	365	9	45					1.7E-05	
Sheepshead												
Aroclor 1268	0.724	9.9%	10.6	365	9	45	25550		2.2E-06	1.7E-05		
Mercury	0.372	9.9%	10.6	365	9	45					8.7E-06	
Southern Flounder												
Aroclor 1268	0.249	4.4%	10.6	365	9	45	25550		3.4E-07	2.6E-06		
Mercury	0.257	4.4%	10.6	365	9	45					2.7E-06	
Southern Kingfish												
Aroclor 1268	0.716	19.7%	10.6	365	9	45	25550		4.3E-06	3.3E-05		
Mercury	0.663	19.7%	10.6	365	9	45					3.1E-05	
Spot												
Aroclor 1268	1.785	0.04%	10.6	365	9	45	25550		2.2E-08	1.7E-07		
Mercury	0.124	0.04%	10.6	365	9	45					1.2E-08	
Spotted Seatrout												
Aroclor 1268	0.556	39.4%	10.6	365	9	45	25550		6.6E-06	5.2E-05		
Mercury	0.495	39.4%	10.6	365	9	45					4.6E-05	
Striped Mullet												
Aroclor 1268	2.704	0.8%	10.6	365	9	45	25550		6.6E-07	5.2E-06		
Mercury	0.042	0.8%	10.6	365	9	45					8.0E-08	
Total Intakes									1.6E-05	1.2E-04	1.1E-04	
oral CSF/oral RfD									2	7.E-05	1.E-04	
Risk or HQ									3.2E-05	1.8	1	2.8

Table 12c. RME Intake/Risk Calculation for Child Consumers of Recreationally-caught Finfish

Child	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Cancer	Noncancer	Cumulative Hazard	
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Mercury		
Atlantic Croaker												
Aroclor 1268	1.427	1.1%	5.3	365	6	15	25550	4.6E-07	5.3E-06			
Mercury	0.302	1.1%	5.3	365	6	15				1.1E-06		
Black Drum												
Aroclor 1268	0.343	3.9%	5.3	365	6	15	25550	4.1E-07	4.8E-06			
Mercury	0.177	3.9%	5.3	365	6	15				2.5E-06		
Red Drum												
Aroclor 1268	0.148	20.7%	5.3	365	6	15	25550	9.3E-07	1.1E-05			
Mercury	0.348	20.7%	5.3	365	6	15				2.5E-05		
Sheepshead												
Aroclor 1268	0.724	9.9%	5.3	365	6	15	25550	2.2E-06	2.5E-05			
Mercury	0.372	9.9%	5.3	365	6	15				1.3E-05		
Southern Flounder												
Aroclor 1268	0.249	4.4%	5.3	365	6	15	25550	3.4E-07	3.9E-06			
Mercury	0.257	4.4%	5.3	365	6	15				4.0E-06		
Southern Kingfish												
Aroclor 1268	0.716	19.7%	5.3	365	6	15	25550	4.3E-06	5.0E-05			
Mercury	0.663	19.7%	5.3	365	6	15				4.6E-05		
Spot												
Aroclor 1268	1.785	0.04%	5.3	365	6	15	25550	2.2E-08	2.5E-07			
Mercury	0.124	0.04%	5.3	365	6	15				1.7E-08		
Spotted Seatrout												
Aroclor 1268	0.556	39.4%	5.3	365	6	15	25550	6.6E-06	7.7E-05			
Mercury	0.495	39.4%	5.3	365	6	15				6.9E-05		
Striped Mullet												
Aroclor 1268	2.704	0.8%	5.3	365	6	15	25550	6.6E-07	7.7E-06			
Mercury	0.042	0.8%	5.3	365	6	15				1.2E-07		
Total Intakes									1.6E-05	1.9E-04	1.6E-04	
oral CSF/oral RfD									2	7.E-05	1.E-04	
Risk or HQ									3.2E-05	2.6	2	4.3

Table 13a. CTE Risk Calculation for Adult Consumers of Recreationally-caught Finfish

Adult	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Cancer	Noncancer		Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Mercury	mg/kg-day	
Atlantic Croaker												
Aroclor 1268	1.427	1.1%	4.7	365	9	70	25550		1.3E-07	1.0E-06		
Mercury	0.302	1.1%	4.7	365	9	70					2.1E-07	
Black Drum												
Aroclor 1268	0.343	3.9%	4.7	365	9	70	25550		1.2E-07	9.1E-07		
Mercury	0.177	3.9%	4.7	365	9	70					4.7E-07	
Red Drum												
Aroclor 1268	0.148	20.7%	4.7	365	9	70	25550		2.6E-07	2.1E-06		
Mercury	0.348	20.7%	4.7	365	9	70					4.8E-06	
Sheepshead												
Aroclor 1268	0.724	9.9%	4.7	365	9	70	25550		6.2E-07	4.8E-06		
Mercury	0.372	9.9%	4.7	365	9	70					2.5E-06	
Southern Flounder												
Aroclor 1268	0.249	4.4%	4.7	365	9	70	25550		9.6E-08	7.4E-07		
Mercury	0.257	4.4%	4.7	365	9	70					7.7E-07	
Southern Kingfish												
Aroclor 1268	0.716	19.7%	4.7	365	9	70	25550		1.2E-06	9.5E-06		
Mercury	0.663	19.7%	4.7	365	9	70					8.8E-06	
Spot												
Aroclor 1268	1.785	0.04%	4.7	365	9	70	25550		6.1E-09	4.8E-08		
Mercury	0.124	0.04%	4.7	365	9	70					3.3E-09	
Spotted Seatrout												
Aroclor 1268	0.556	39.4%	4.7	365	9	70	25550		1.9E-06	1.5E-05		
Mercury	0.495	39.4%	4.7	365	9	70					1.3E-05	
Striped Mullet												
Aroclor 1268	2.704	0.8%	4.7	365	9	70	25550		1.9E-07	1.5E-06		
Mercury	0.042	0.8%	4.7	365	9	70					2.3E-08	
Total Intakes									4.5E-06	3.5E-05	3.1E-05	
oral CSF/oral RfD									2	7.E-05	1.E-04	
Risk or HQ									9.1E-06	0.5	0	0.8
Lifetime Cancer Risk									1.5E-05			

Table 13b. CTE Risk Calculation for Adolescent Consumers of Recreationally-caught Finfish

Adolescent	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Cancer	Noncancer		Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Mercury	Aroclor 1268	
Atlantic Croaker												
Aroclor 1268	1.427	1.1%	3.2	365	3	45	25550		4.6E-08	1.1E-06		
Mercury	0.302	1.1%	3.2	365	3	45					2.3E-07	
Black Drum												
Aroclor 1268	0.343	3.9%	3.2	365	3	45	25550		4.1E-08	9.6E-07		
Mercury	0.177	3.9%	3.2	365	3	45					5.0E-07	
Red Drum												
Aroclor 1268	0.148	20.7%	3.2	365	3	45	25550		9.3E-08	2.2E-06		
Mercury	0.348	20.7%	3.2	365	3	45					5.1E-06	
Sheepshead				365								
Aroclor 1268	0.724	9.9%	3.2	365	3	45	25550		2.2E-07	5.1E-06		
Mercury	0.372	9.9%	3.2	365	3	45					2.6E-06	
Southern Flounder												
Aroclor 1268	0.249	4.4%	3.2	365	3	45	25550		3.4E-08	7.9E-07		
Mercury	0.257	4.4%	3.2	365	3	45					8.1E-07	
Southern Kingfish												
Aroclor 1268	0.716	19.7%	3.2	365	3	45	25550		4.3E-07	1.0E-05		
Mercury	0.663	19.7%	3.2	365	3	45					9.3E-06	
Spot				365								
Aroclor 1268	1.785	0.04%	3.2	365	3	45	25550		2.2E-09	5.1E-08		
Mercury	0.124	0.04%	3.2	365	3	45					3.5E-09	
Spotted Seatrout												
Aroclor 1268	0.556	39.4%	3.2	365	3	45	25550		6.7E-07	1.6E-05		
Mercury	0.495	39.4%	3.2	365	3	45					1.4E-05	
Striped Mullet												
Aroclor 1268	2.704	0.8%	3.2	365	3	45	25550		6.7E-08	1.6E-06		
Mercury	0.042	0.8%	3.2	365	3	45					2.4E-08	
Total Intakes									1.6E-06	3.7E-05	3.2E-05	
oral CSF/oral RfD									2	7.E-05	1.E-04	
Risk or HQ									3.2E-06	0.5	0	0.9

Table 13c. CTE Risk Calculation for Child Consumers of Recreationally-caught Finfish

Child	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Cancer	Noncancer		Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Mercury	mg/kg-day	
Atlantic Croaker												
Aroclor 1268	1.427	1.1%	1.6	365	2	15	25550	4.6E-08	1.6E-06			
Mercury	0.302	1.1%	1.6	365	2	15				3.4E-07		
Black Drum												
Aroclor 1268	0.343	3.9%	1.6	365	2	15	25550	4.1E-08	1.4E-06			
Mercury	0.177	3.9%	1.6	365	2	15				7.4E-07		
Red Drum												
Aroclor 1268	0.148	20.7%	1.6	365	2	15	25550	9.3E-08	3.3E-06			
Mercury	0.348	20.7%	1.6	365	2	15				7.7E-06		
Sheepshead												
Aroclor 1268	0.724	9.9%	1.6	365	2	15	25550	2.2E-07	7.7E-06			
Mercury	0.372	9.9%	1.6	365	2	15				3.9E-06		
Southern Flounder												
Aroclor 1268	0.249	4.4%	1.6	365	2	15	25550	3.4E-08	1.2E-06			
Mercury	0.257	4.4%	1.6	365	2	15				1.2E-06		
Southern Kingfish												
Aroclor 1268	0.716	19.7%	1.6	365	2	15	25550	4.3E-07	1.5E-05			
Mercury	0.663	19.7%	1.6	365	2	15				1.4E-05		
Spot												
Aroclor 1268	1.785	0.04%	1.6	365	2	15	25550	2.2E-09	7.6E-08			
Mercury	0.124	0.04%	1.6	365	2	15				5.3E-09		
Spotted Seatrout												
Aroclor 1268	0.556	39.4%	1.6	365	2	15	25550	6.7E-07	2.3E-05			
Mercury	0.495	39.4%	1.6	365	2	15				2.1E-05		
Striped Mullet												
Aroclor 1268	2.704	0.8%	1.6	365	2	15	25550	6.7E-08	2.3E-06			
Mercury	0.042	0.8%	1.6	365	2	15				3.6E-08		
Total Intakes									1.6E-06	5.6E-05	4.9E-05	
oral CSF/oral RfD									2	7.E-05	1.E-04	
Risk or HQ									3.2E-06	0.8	0	1.3

Table 14a. RME Risk Calculation for Hypothetical Adult High Quantity Consumers of Finfish

Adult	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Noncancer		Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Mercury	
								mg/kg-day	mg/kg-day	mg/kg-day	
Atlantic Croaker											
Aroclor 1268	1.427	1.1%	27	365	30	70	25550	2.5E-06	5.8E-06		
Mercury	0.302	1.1%	27	365	30	70				1.2E-06	
Black Drum											
Aroclor 1268	0.343	3.9%	27	365	30	70	25550	2.2E-06	5.2E-06		
Mercury	0.177	3.9%	27	365	30	70				2.7E-06	
Red Drum											
Aroclor 1268	0.148	20.7%	27	365	30	70	25550	5.1E-06	1.2E-05		
Mercury	0.348	20.7%	27	365	30	70				2.8E-05	
Sheepshead											
Aroclor 1268	0.724	9.9%	27	365	30	70	25550	1.2E-05	2.8E-05		
Mercury	0.372	9.9%	27	365	30	70				1.4E-05	
Southern Flounder											
Aroclor 1268	0.249	4.4%	27	365	30	70	25550	1.8E-06	4.3E-06		
Mercury	0.257	4.4%	27	365	30	70				4.4E-06	
Southern Kingfish											
Aroclor 1268	0.716	19.7%	27	365	30	70	25550	2.3E-05	5.4E-05		
Mercury	0.663	19.7%	27	365	30	70				5.0E-05	
Spot											
Aroclor 1268	1.785	0.04%	27	365	30	70	25550	1.2E-07	2.7E-07		
Mercury	0.124	0.04%	27	365	30	70				1.9E-08	
Spotted Seatrout											
Aroclor 1268	0.556	39.4%	27	365	30	70	25550	3.6E-05	8.5E-05		
Mercury	0.495	39.4%	27	365	30	70				7.5E-05	
Striped Mullet											
Aroclor 1268	2.704	0.8%	27	365	30	70	25550	3.6E-06	8.5E-06		
Mercury	0.042	0.8%	27	365	30	70				1.3E-07	
Total Intakes								8.7E-05	2.0E-04	1.8E-04	
oral CSF/oral RfD								2	7.E-05	1.E-04	
Risk or HQ								1.7E-04	#NAME?	#NAME?	#NAME?
Lifetime Cancer Risk								2.0E-04			

Notes:

Lifetime receptor cancer risk was calculated using 0.5 times the adult risk plus the adolescent and child risk to equal a 30 year exposure period.

Table 14b. RME Risk Calculation for Hypothetical Adolescent High Quantity Consumers of Finfish

Adolescent	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Cancer	Noncancer		Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Mercury		
								mg/kg-day	mg/kg-day	mg/kg-day		
Atlantic Croaker												
Aroclor 1268	1.427	1.1%	18	365	9	45	25550	7.7E-07	6.0E-06			
Mercury	0.302	1.1%	18	365	9	45				1.3E-06		
Black Drum												
Aroclor 1268	0.343	3.9%	18	365	9	45	25550	6.9E-07	5.4E-06			
Mercury	0.177	3.9%	18	365	9	45				2.8E-06		
Red Drum												
Aroclor 1268	0.148	20.7%	18	365	9	45	25550	1.6E-06	1.2E-05			
Mercury	0.348	20.7%	18	365	9	45				2.9E-05		
Sheepshead												
Aroclor 1268	0.724	9.9%	18	365	9	45	25550	3.7E-06	2.9E-05			
Mercury	0.372	9.9%	18	365	9	45				1.5E-05		
Southern Flounder												
Aroclor 1268	0.249	4.4%	18	365	9	45	25550	5.7E-07	4.4E-06			
Mercury	0.257	4.4%	18	365	9	45				4.6E-06		
Southern Kingfish												
Aroclor 1268	0.716	19.7%	18	365	9	45	25550	7.3E-06	5.6E-05			
Mercury	0.663	19.7%	18	365	9	45				5.2E-05		
Spot												
Aroclor 1268	1.785	0.04%	18	365	9	45	25550	3.7E-08	2.8E-07			
Mercury	0.124	0.04%	18	365	9	45				2.0E-08		
Spotted Seatrout												
Aroclor 1268	0.556	39.4%	18	365	9	45	25550	1.1E-05	8.8E-05			
Mercury	0.495	39.4%	18	365	9	45				7.8E-05		
Striped Mullet												
Aroclor 1268	2.704	0.8%	18	365	9	45	25550	1.1E-06	8.8E-06			
Mercury	0.042	0.8%	18	365	9	45				1.4E-07		
Total Intakes								2.7E-05	2.1E-04	1.8E-04		
oral CSF/oral RfD								2	7.E-05	1.E-04		
Risk or HQ								5.4E-05	#NAME?	#NAME?		#NAME?

Table 14c. RME Risk Calculation for Hypothetical Child High Quantity Consumers of Finfish

Child	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Cancer	Noncancer		Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Mercury	Mercury	
Atlantic Croaker												
Aroclor 1268	1.427	1.1%	10	365	6	15	25550	8.6E-07	1.0E-05			
Mercury	0.302	1.1%	10	365	6	15					2.1E-06	
Black Drum												
Aroclor 1268	0.343	3.9%	10	365	6	15	25550	7.7E-07	9.0E-06			
Mercury	0.177	3.9%	10	365	6	15					4.6E-06	
Red Drum												
Aroclor 1268	0.148	20.7%	10	365	6	15	25550	1.7E-06	2.0E-05			
Mercury	0.348	20.7%	10	365	6	15					4.8E-05	
Sheepshead												
Aroclor 1268	0.724	9.9%	10	365	6	15	25550	4.1E-06	4.8E-05			
Mercury	0.372	9.9%	10	365	6	15					2.5E-05	
Southern Flounder												
Aroclor 1268	0.249	4.4%	10	365	6	15	25550	6.3E-07	7.4E-06			
Mercury	0.257	4.4%	10	365	6	15					7.6E-06	
Southern Kingfish												
Aroclor 1268	0.716	19.7%	10	365	6	15	25550	8.1E-06	9.4E-05			
Mercury	0.663	19.7%	10	365	6	15					8.7E-05	
Spot												
Aroclor 1268	1.785	0.04%	10	365	6	15	25550	4.1E-08	4.7E-07			
Mercury	0.124	0.04%	10	365	6	15					3.3E-08	
Spotted Seatrout												
Aroclor 1268	0.556	39.4%	10	365	6	15	25550	1.3E-05	1.5E-04			
Mercury	0.495	39.4%	10	365	6	15					1.3E-04	
Striped Mullet												
Aroclor 1268	2.704	0.8%	10	365	6	15	25550	1.3E-06	1.5E-05			
Mercury	0.042	0.8%	10	365	6	15					2.3E-07	
Total Intakes									3.0E-05	3.5E-04	3.0E-04	
oral CSF/oral RfD									2	7.E-05	1.E-04	
Risk or HQ									6.0E-05	5.0	3	8.0

Table 15a. CTE Risk Calculation for Hypothetical Adult High Quantity Consumers of Finfish

Adult	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Noncancer		Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Mercury	
								mg/kg-day	mg/kg-day	mg/kg-day	
Atlantic Croaker											
Aroclor 1268	1.427	1.1%	13	365	9	70	25550	3.6E-07	2.8E-06		
Mercury	0.302	1.1%	13	365	9	70				5.9E-07	
Black Drum											
Aroclor 1268	0.343	3.9%	13	365	9	70	25550	3.2E-07	2.5E-06		
Mercury	0.177	3.9%	13	365	9	70				1.3E-06	
Red Drum											
Aroclor 1268	0.148	20.7%	13	365	9	70	25550	7.3E-07	5.7E-06		
Mercury	0.348	20.7%	13	365	9	70				1.3E-05	
Sheepshead											
Aroclor 1268	0.724	9.9%	13	365	9	70	25550	1.7E-06	1.3E-05		
Mercury	0.372	9.9%	13	365	9	70				6.9E-06	
Southern Flounder											
Aroclor 1268	0.249	4.4%	13	365	9	70	25550	2.6E-07	2.1E-06		
Mercury	0.257	4.4%	13	365	9	70				2.1E-06	
Southern Kingfish											
Aroclor 1268	0.716	19.7%	13	365	9	70	25550	3.4E-06	2.6E-05		
Mercury	0.663	19.7%	13	365	9	70				2.4E-05	
Spot											
Aroclor 1268	1.785	0.04%	13	365	9	70	25550	1.7E-08	1.3E-07		
Mercury	0.124	0.04%	13	365	9	70				9.2E-09	
Spotted Seatrout											
Aroclor 1268	0.556	39.4%	13	365	9	70	25550	5.2E-06	4.1E-05		
Mercury	0.495	39.4%	13	365	9	70				3.6E-05	
Striped Mullet											
Aroclor 1268	2.704	0.8%	13	365	9	70	25550	5.2E-07	4.1E-06		
Mercury	0.042	0.8%	13	365	9	70				6.3E-08	
Total Intakes								1.3E-05	9.7E-05	8.5E-05	
oral CSF/oral RfD								2	7.E-05	1.E-04	
Risk or HQ								2.5E-05	#NAME?	#NAME?	#NAME?
Lifetime Cancer Risk								4.2E-05			

Table 15b. CTE Risk Calculation for Hypothetical Adolescent High Quantity Consumers of Finfish

Adolescent	EPC mg/kg	FI percent	FCR g/day	EF day/yr	BW kg	AT days	Cance 25550	Cancer	Noncancer		Cumulative Hazard
								Aroclor 1268 mg/kg-day	Aroclor 1268 mg/kg-day	Mercury mg/kg-day	
Atlantic Croaker											
Aroclor 1268	1.427	1.1%	11	365	3	45	25550	1.6E-07	3.7E-06		
Mercury	0.302	1.1%	11	365	3	45				7.8E-07	
Black Drum											
Aroclor 1268	0.343	3.9%	11	365	3	45	25550	1.4E-07	3.3E-06		
Mercury	0.177	3.9%	11	365	3	45				1.7E-06	
Red Drum											
Aroclor 1268	0.148	20.7%	11	365	3	45	25550	3.2E-07	7.5E-06		
Mercury	0.348	20.7%	11	365	3	45				1.8E-05	
Sheepshead											
Aroclor 1268	0.724	9.9%	11	365	3	45	25550	7.5E-07	1.8E-05		
Mercury	0.372	9.9%	11	365	3	45				9.0E-06	
Southern Flounder											
Aroclor 1268	0.249	4.4%	11	365	3	45	25550	1.2E-07	2.7E-06		
Mercury	0.257	4.4%	11	365	3	45				2.8E-06	
Southern Kingfish											
Aroclor 1268	0.716	19.7%	11	365	3	45	25550	1.5E-06	3.4E-05		
Mercury	0.663	19.7%	11	365	3	45				3.2E-05	
Spot											
Aroclor 1268	1.785	0.04%	11	365	3	45	25550	7.4E-09	1.7E-07		
Mercury	0.124	0.04%	11	365	3	45				1.2E-08	
Spotted Seatrout											
Aroclor 1268	0.556	39.4%	11	365	3	45	25550	2.3E-06	5.4E-05		
Mercury	0.495	39.4%	11	365	3	45				4.8E-05	
Striped Mullet											
Aroclor 1268	2.704	0.8%	11	365	3	45	25550	2.3E-07	5.4E-06		
Mercury	0.042	0.8%	11	365	3	45				8.3E-08	
Total Intakes								5.5E-06	1.3E-04	1.1E-04	
oral CSF/oral RfD								2	7.E-05	1.E-04	
Risk or HQ								1.1E-05	#NAME?	#NAME?	#NAME?

Table 15c. CTE Risk Calculation for Hypothetical Child High Quantity Consumers of Finfish

Child	EPC mg/kg	FI percent	FCR g/day	EF day/yr	BW	AT	Cance days	Cancer	Noncancer		Cumulative Hazard
								Aroclor 1268 mg/kg-day	Aroclor 1268 mg/kg-day	Mercury mg/kg-day	
Atlantic Croaker											
Aroclor 1268	1.427	1.1%	3	365	2	15	25550	8.6E-08	3.0E-06		
Mercury	0.302	1.1%	3	365	2	15				6.4E-07	
Black Drum											
Aroclor 1268	0.343	3.9%	3	365	2	15	25550	7.7E-08	2.7E-06		
Mercury	0.177	3.9%	3	365	2	15				1.4E-06	
Red Drum											
Aroclor 1268	0.148	20.7%	3	365	2	15	25550	1.7E-07	6.1E-06		
Mercury	0.348	20.7%	3	365	2	15				1.4E-05	
Sheepshead											
Aroclor 1268	0.724	9.9%	3	365	2	15	25550	4.1E-07	1.4E-05		
Mercury	0.372	9.9%	3	365	2	15				7.4E-06	
Southern Flounder											
Aroclor 1268	0.249	4.4%	3	365	2	15	25550	6.3E-08	2.2E-06		
Mercury	0.257	4.4%	3	365	2	15				2.3E-06	
Southern Kingfish											
Aroclor 1268	0.716	19.7%	3	365	2	15	25550	8.1E-07	2.8E-05		
Mercury	0.663	19.7%	3	365	2	15				2.6E-05	
Spot											
Aroclor 1268	1.785	0.04%	3	365	2	15	25550	4.1E-09	1.4E-07		
Mercury	0.124	0.04%	3	365	2	15				9.9E-09	
Spotted Seatrout											
Aroclor 1268	0.556	39.4%	3	365	2	15	25550	1.3E-06	4.4E-05		
Mercury	0.495	39.4%	3	365	2	15				3.9E-05	
Striped Mullet											
Aroclor 1268	2.704	0.8%	3	365	2	15	25550	1.3E-07	4.4E-06		
Mercury	0.042	0.8%	3	365	2	15				6.8E-08	
Total Intakes								3.0E-06	1.0E-04	9.1E-05	
oral CSF/oral RfD								2	7.E-05	1.E-04	
Risk or HQ								6.0E-06	1.5	1	2.4

Table 16. RME Intake/Risk Calculation for Consumers of Shellfish

Adults	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Cancer	Noncancer			Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Copper	Hg	Zn	
Blue Crab													
Aroclor 1268	0.195	50%	11.8	365	30	70	25550	7.0E-06	1.6E-05				
Copper	20.9	50%	11.8	365	30	70				1.8E-03			
Mercury	0.708	50%	11.8	365	30	70					6.0E-05		
Zinc	46.94	50%	11.8	365	30	70						4.0E-03	
White Shrimp													
Aroclor 1268	0.533	50%	11.8	365	30	70	25550	1.9E-05	4.5E-05				
Copper	13.3	50%	11.8	365	30	70				1.1E-03			
Mercury	0.112	50%	11.8	365	30	70					9.4E-06		
Total Intakes								2.6E-05	6.1E-05	2.9E-03	6.9E-05	4.0E-03	Adult
oral CSF/oral RfD								2.0E+00	7.0E-05	4.0E-02	1.0E-04	3.0E-01	
Risk or HQ								5.3E-05	0.88	0.07	0.7	0.01	
Adolescents													
	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Aroclor 1268	Aroclor 1268	Copper	Hg	Zn
	mg/kg	percent	g/day	day/yr	yr	kg	days		mg/kg-day	mg/kg-day			
Blue Crab													
Aroclor 1268	0.195	50%	3.4	365	9	45	25550	9.5E-07	7.4E-06				
Copper	20.9	50%	3.4	365	9	45				7.9E-04			
Mercury	0.708	50%	3.4	365	9	45					2.7E-05		
Zinc	46.94	50%	3.4	365	9	45						1.8E-03	
White Shrimp													
Aroclor 1268	0.533	50%	3.4	365	9	45	25550	2.6E-06	2.0E-05				
Copper	13.3	50%	3.4	365	9	45				5.0E-04			
Mercury	0.112	50%	3.4	365	9	45					4.2E-06		
Total Intakes								3.5E-06	2.8E-05	1.3E-03	3.1E-05	1.8E-03	Adolescent
oral CSF/oral RfD								2.0E+00	7.0E-05	4.0E-02	1.0E-04	3.0E-01	
Risk or HQ								7.1E-06	0.39	0.03	0.3	0.01	
Child													
	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Aroclor 1268	Aroclor 1268	Copper	Hg	Zn
	mg/kg	percent	g/day	day/yr	yr	kg	days		mg/kg-day	mg/kg-day			
Blue Crab													
Aroclor 1268	0.195	50%	6	365	6	15	25550	3.3E-06	3.9E-05				
Copper	20.9	50%	6	365	6	15				4.2E-03			
Mercury	0.708	50%	6	365	6	15					1.4E-04		
Zinc	46.94	50%	6	365	6	15						9.4E-03	
White Shrimp													
Aroclor 1268	0.533	50%	6	365	6	15	25550	9.1E-06	1.1E-04				
Copper	13.3	50%	6	365	6	15				2.7E-03			
Mercury	0.112	50%	6	365	6	15					2.2E-05		
Total Intakes								1.2E-05	1.5E-04	6.8E-03	1.6E-04	9.4E-03	Child
oral CSF/oral RfD								2.0E+00	7.0E-05	4.0E-02	1.0E-04	3.0E-01	
Risk or HQ								2.5E-05	2.08	0.17	1.6	0.03	
Lifetime Cancer Risk								5.8E-05					

Notes:

Lifetime receptor cancer risk was calculated using 0.5 times the adult risk plus the adolescent and child risk to equal a 30 year exposure period.

Table 17. CTE Intake/Risk Calculation for Consumers of Shellfish

Adults	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Cancer	Noncancer			Cumulative Hazard	
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Copper	Hg	Zn		
Blue Crab														
Aroclor 1268	0.195	50%	3.9	365	9	70	25550	7.0E-07	5.4E-06					
Copper	20.9	50%	3.9	365	9	70				5.8E-04				
Mercury	0.708	50%	3.9	365	9	70					2.0E-05			
Zinc	46.94	50%	3.9	365	9	70						1.3E-03		
White Shrimp														
Aroclor 1268	0.533	50%	3.9	365	9	70	25550	1.9E-06	1.5E-05					
Copper	13.3	50%	3.9	365	9	70				3.7E-04				
Mercury	0.112	50%	3.9	365	9	70					3.1E-06			
Total Intakes								2.6E-06	2.0E-05	9.5E-04	2.3E-05	1.3E-03	Adult	
oral CSF/oral RfD								2.0E+00	7.0E-05	4.0E-02	1.0E-04	3.0E-01		
Risk or HQ								5.2E-06	0.29	0.02	0.2	0.00		0.55
<hr/>														
Adolescents	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Aroclor 1268	Aroclor 1268	Copper	Hg	Zn	Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Copper	Hg	Zn		
Blue Crab														
Aroclor 1268	0.195	50%	0.8	365	3	45	25550	7.4E-08	1.7E-06					
Copper	20.9	50%	0.8	365	3	45				1.9E-04				
Mercury	0.708	50%	0.8	365	3	45					6.3E-06			
Zinc	46.94	50%	0.8	365	3	45						4.2E-04		
White Shrimp														
Aroclor 1268	0.533	50%	0.8	365	3	45	25550	2.0E-07	4.7E-06					
Copper	13.3	50%	0.8	365	3	45				1.2E-04				
Mercury	0.112	50%	0.8	365	3	45					1.0E-06			
Total Intakes								2.8E-07	6.5E-06	3.0E-04	7.3E-06	4.2E-04	Adolescent	
oral CSF/oral RfD								2.0E+00	7.0E-05	4.0E-02	1.0E-04	3.0E-01		
Risk or HQ								5.5E-07	0.09	0.01	0.1	0.00		0.17
<hr/>														
Child	EPC	FI	FCR	EF	ED	BW	AT	Cancer	Aroclor 1268	Aroclor 1268	Copper	Hg	Zn	Cumulative Hazard
	mg/kg	percent	g/day	day/yr	yr	kg	days	Aroclor 1268	Aroclor 1268	Copper	Hg	Zn		
Blue Crab														
Aroclor 1268	0.195	50%	2.3	365	2	15	25550	4.3E-07	1.5E-05					
Copper	20.9	50%	2.3	365	2	15				1.6E-03				
Mercury	0.708	50%	2.3	365	2	15					5.4E-05			
Zinc	46.94	50%	2.3	365	2	15						3.6E-03		
White Shrimp														
Aroclor 1268	0.533	50%	2.3	365	2	15	25550	1.2E-06	4.1E-05					
Copper	13.3	50%	2.3	365	2	15				1.0E-03				
Mercury	0.112	50%	2.3	365	2	15					8.6E-06			
Total Intakes								1.6E-06	5.6E-05	2.6E-03	6.3E-05	3.6E-03	Child	
oral CSF/oral RfD								2.0E+00	7.0E-05	4.0E-02	1.0E-04	3.0E-01		
Risk or HQ								3.2E-06	0.80	0.07	0.6	0.01		1.50
Lifetime Cancer Risk								9.0E-06						

Table 18. Consumption Rates for Clapper Rail

Age Yr	BW kg	Game Ingestion Rate ⁽¹⁾ g/kg-day		Game Ingestion rate ⁽²⁾ g/day	
		mean	SE	CTE	RME
Child					
<1	9.1	0.014	0.091	0.13	1.78
1-2	12	0.026	0.125	0.31	3.31
3-5	15	0.01	0.04	0.15	1.35
Adolescent					
6-11	30	0.004	0.016	0.12	1.08
12-19	55	0.004	0.019	0.22	2.31
Adult					
20-39	70	0.01	0.021	0.7	3.64
40-69	70	0.012	0.017	0.84	3.22
Clapper rail Ingestion rates used in the risk estimate (g/day) ⁽³⁾				CTE	RME
Children				0.02	0.21
Adolescents				0.02	0.17
Adults				0.08	0.34

Notes:

- (1) Game ingestion rates for different age classes taken from Table 11-6 in USEPA (1997a).
- (2) CTE game ingestion rate (in g/day) calculated by multiplying mean age-specific game ingestion rate times (in g/kg-day) age-specific body weight. RME game ingestion rate (in g/day) calculated by adding 2-times the age-specific standard error (SE) to the mean age-specific game ingestion rate (in g/kg-day) and multiplying that sum by the age-specific body weight.
- (3) CTE and RME clapper rail ingestion rates (in g/day) calculated by multiplying the average CTE and RME game ingestion rates (in g/day) for each receptor grouping (i.e., child, adolescent, adult) by 0.10 (i.e., 10%).

Table 19. RME Risk Calculation for Consumers of Clapper Rail

Adult	EPC	FCR	EF	ED	BW	AT	Cancer	Noncancer		Cumulative Hazard
	mg/kg	g/day	day/yr	yr	kg	days	Aroclor 1268 mg/kg-day	Aroclor 1268 mg/kg-day	Mercury mg/kg-day	
Clapper Rail										
Aroclor 1268	19.42	0.34	365	30	70	25550	4.1E-05	9.5E-05		
Mercury	4.671	0.34	365	30	70				2.3E-05	
Total Intakes							4.1E-05	9.5E-05	2.3E-05	Adult
oral CSF/oral RfD							2	7.E-05	1.E-04	
Risk or HQ							8.2E-05	1.4	0.2	1.6
Adolescent										
Clapper Rail										
Aroclor 1268	19.42	0.17	365	9	45	25550	9.4E-06	7.3E-05		
Mercury	4.671	0.17	365	9	45				1.8E-05	
Total Intakes							9.4E-06	7.3E-05	1.8E-05	Adolescent
oral CSF/oral RfD							2	7.E-05	1.E-04	
Risk or HQ							1.9E-05	1.0	0.2	1.2
Child										
Clapper Rail										
Aroclor 1268	19.42	0.21	365	6	15	25550	2.4E-05	2.8E-04		
Mercury	4.671	0.21	365	6	15				6.7E-05	
Total Intakes							2.4E-05	2.8E-04	6.7E-05	Child
oral CSF/oral RfD							2	7.E-05	1.E-04	
Risk or HQ							4.8E-05	4.0	0.7	4.6
Lifetime Cancer Risk							1.1E-04			

Notes:

Lifetime receptor cancer risk was calculated using 0.5 times the adult risk plus the adolescent and child risk to equal a 30 year exposure period.

Table 20. CTE Risk Calculation for Consumers of Clapper Rail

Adult	EPC	FCR	EF	ED	BW	AT	Cancer	Noncancer		Cumulative Hazard
	mg/kg	g/day	day/yr	yr	kg	days	Aroclor 1268 mg/kg-day	Aroclor 1268 mg/kg-day	Mercury mg/kg-day	
Clapper Rail										
Aroclor 1268	19.42	0.08	365	9	70	25550	2.7E-06	2.1E-05		
Mercury	4.671	0.08	365	9	70				5.1E-06	
Total Intakes							2.7E-06	2.1E-05	5.1E-06	Adult
oral CSF/oral RfD							2	7.E-05	1.E-04	
Risk or HQ							5.5E-06	0.3	0.1	0.4
Adolescent										
Clapper Rail										
Aroclor 1268	19.42	0.02	365	3	45	25550	3.1E-07	7.3E-06		
Mercury	4.671	0.02	365	3	45				1.8E-06	
Total Intakes							3.1E-07	7.3E-06	1.8E-06	Adolescent
oral CSF/oral RfD							2	7.E-05	1.E-04	
Risk or HQ							6.3E-07	0.1	0.0	0.1
Child										
Clapper Rail										
Aroclor 1268	19.42	0.02	365	2	15	25550	7.3E-07	2.5E-05		
Mercury	4.671	0.02	365	2	15				6.1E-06	
Total Intakes							7.3E-07	2.5E-05	6.1E-06	Child
oral CSF/oral RfD							2	7.E-05	1.E-04	
Risk or HQ							1.5E-06	0.4	0.1	0.4
Lifetime Cancer Risk							7.6E-06			

Table 21. Summary of Toxicity Values

Chemical	GI ABS	Oral CSF	Adj. Dermal CSF	Source	Oral RfD	Adj. Dermal RfD	Source
Benzo(a)pyrene toxic equivalents	1	7.3	7.3	IRIS			IRIS (Benzo(a)pyrene)
Aroclor 1268	1	2.0	2.0	IRIS (Aroclor 1254)	7.0E-05	7.0E-05	IRIS (Aroclor 1016)
Aluminum	1				1.0E+00	1.0E+00	PPRTV
Chromium	0.025	0.5	20	New Jersey DEP	3.0E-03	7.5E-05	IRIS (Cr(VI))
Lead	1						
Manganese	0.04				1.4E-01	5.6E-03	IRIS
Mercury	1				1.0E-04	1.0E-04	IRIS (Methylmercury)
Thallium	1				6.5E-05	6.5E-05	IRIS Withdrawn (Soluble Salts)

Notes:

With the exception of thallium, all toxicity values and GI ABS values were obtained from the EPA's December 2010 Regional Screening Level (RSL) Tables (USEPA, 2010b). The Reference Dose a GI ABS values for thallium (Soluble Salts) were obtained from the April 2009 RSL Tables, because the value was withdrawn from EPA's Integrated Risk Information System (IRIS) Database and did not appear on updates of the RSL Tables subsequent to the April 2009 edition.

Risk values were not calculated for lead, see text for details.

Table 22. Summary of Risk Estimates

Exposure Scenario	Receptor	Cancer Risk		Noncancer HI	
		RME	CTE	RME	CTE
Marsh Trespasser	Lifetime	1E-05	2E-07		
	Adult			0.06	0.005
	Adolescent			0.08	0.006
Recreational Finfish Consumer	Lifetime	1E-04	2E-05		
	Adult			3	0.8
	Adolescent			3	0.9
	Child			4	1
High Quantity Finfish Consumer	Lifetime	2E-04	4E-05		
	Adult			5	2
	Adolescent			5	3
	Child			8	2
Shellfish Consumer	Lifetime	6E-05	9E-06		
	Adult			2	0.6
	Adolescent			0.7	0.2
	Child			4	2
Clapper Rail Consumer	Lifetime	1E-04	8E-06		
	Adult			2	0.4
	Adolescent			1	0.1
	Child			1	0.4

Notes:

Risk and hazard estimates were rounded to one significant digit.

Table 23a. Remedial Goal Options for Recreational Fish Consumers

Fish Species	EPCs	Adult Target HI			Adolescent Target HI			Child Target HI			ELCR Target CR		
		0.1	1	3	0.1	1	3	0.1	1	3	1.0E-06	1.0E-05	1.0E-04
Atlantic Croaker													
Aroclor 1268	1.427	0.052	0.52		0.050	0.50		0.033	0.335	1.0	0.012	0.124	1.244
Mercury	0.302	0.011	0.11		0.011	0.11		0.007	0.071	0.21			
Black Drum													
Aroclor 1268	0.343	0.013	0.13		0.012	0.12		0.008	0.080	0.24	0.003	0.030	0.299
Mercury	0.177	0.006	0.065		0.006	0.062		0.004	0.042	0.12			
Red Drum													
Aroclor 1268	0.148	0.005	0.054		0.005	0.052		0.003	0.035	0.10	0.001	0.013	0.129
Mercury	0.348	0.013	0.13		0.012	0.12		0.008	0.082	0.24			
Sheepshead													
Aroclor 1268	0.724	0.026	0.26		0.025	0.25		0.017	0.17	0.51	0.006	0.063	0.631
Mercury	0.372	0.014	0.14		0.013	0.13		0.009	0.087	0.262			
Southern Flounder													
Aroclor 1268	0.249	0.009	0.091		0.009	0.088		0.006	0.058	0.18	0.002	0.022	0.217
Mercury	0.257	0.009	0.094		0.009	0.090		0.006	0.060	0.18			
Southern Kingfish													
Aroclor 1268	0.716	0.026	0.26		0.025	0.25		0.017	0.17	0.50	0.006	0.062	0.624
Mercury	0.663	0.024	0.24		0.023	0.23		0.016	0.16	0.47			
Spot													
Aroclor 1268	1.785	0.065	0.65		0.063	0.63		0.042	0.42	1.3	0.016	0.156	1.557
Mercury	0.124	0.005	0.045		0.004	0.044		0.003	0.029	0.087			
Spotted Seatrout													
Aroclor 1268	0.556	0.020	0.20		0.020	0.20		0.013	0.13	0.39	0.005	0.048	0.485
Mercury	0.495	0.018	0.18		0.017	0.17		0.012	0.12	0.35			
Striped Mullet													
Aroclor 1268	2.704	0.099	0.99		0.095	0.95		0.063	0.63	1.9	0.024	0.236	2.358
Mercury	0.042	0.002	0.015		0.001	0.015		0.001	0.010	0.030			

Calculated Hazard Index (HI)

Excess Lifetime Cancer Risk (ELCR)

Adult

2.7

1.1E-04

Adolescent

2.8

Child

4.3

Note:

RGO values greater than the EPC are not shown.

Table 23b. Remedial Goal Options for Hypothetical High Quantity Fish Consumers

Fish Species	EPCs	Adult Target HI			Adolescent Target HI			Child Target HI			ELCR Target CR		
		0.1	1	3	0.1	1	3	0.1	1	3	1.0E-06	1.0E-05	1.0E-04
Atlantic Croaker													
Aroclor 1268	1.427	0.029	0.285	0.86	0.029	0.285	0.86	0.018	0.18	0.53	0.007	0.071	0.71
Mercury	0.302	0.006	0.060	0.18	0.006	0.060	0.18	0.004	0.038	0.11			
Black Drum													
Aroclor 1268	0.343	0.007	0.069	0.21	0.007	0.069	0.21	0.004	0.043	0.13	0.002	0.017	0.17
Mercury	0.177	0.004	0.035	0.11	0.004	0.035	0.106	0.002	0.022	0.066			
Red Drum													
Aroclor 1268	0.148	0.003	0.030	0.089	0.003	0.030	0.089	0.002	0.018	0.055	0.001	0.007	0.07
Mercury	0.348	0.007	0.070	0.21	0.007	0.070	0.209	0.004	0.043	0.13			
Sheepshead													
Aroclor 1268	0.724	0.014	0.14	0.43	0.014	0.14	0.434	0.009	0.090	0.27	0.004	0.036	0.36
Mercury	0.372	0.007	0.074	0.22	0.007	0.074	0.223	0.005	0.046	0.139			
Southern Flounder													
Aroclor 1268	0.249	0.005	0.050	0.149	0.005	0.050	0.15	0.003	0.031	0.093	0.001	0.012	0.12
Mercury	0.257	0.005	0.051	0.154	0.005	0.051	0.15	0.003	0.032	0.096			
Southern Kingfish													
Aroclor 1268	0.716	0.014	0.143	0.430	0.014	0.14	0.43	0.009	0.089	0.267	0.004	0.036	0.36
Mercury	0.663	0.013	0.133	0.398	0.013	0.13	0.40	0.008	0.082	0.247			
Spot													
Aroclor 1268	1.785	0.036	0.357	1.1	0.036	0.357	1.1	0.022	0.222	0.666	0.009	0.089	0.89
Mercury	0.124	0.002	0.025	0.074	0.002	0.025	0.074	0.002	0.015	0.046			
Spotted Seatrout													
Aroclor 1268	0.556	0.011	0.11	0.33	0.011	0.111	0.334	0.007	0.069	0.21	0.003	0.028	0.28
Mercury	0.495	0.010	0.099	0.297	0.010	0.099	0.297	0.006	0.062	0.185			
Striped Mullet													
Aroclor 1268	2.704	0.054	0.54	1.6	0.054	0.54	1.6	0.034	0.34	1.0	0.013	0.135	1.35
Mercury	0.042	0.001	0.008	0.025	0.001	0.008	0.025	0.001	0.005	0.016			

	<u>Calculated Hazard Index (HI)</u>	<u>Excess Lifetime Cancer Risk (ELCR)</u>
Adult	5.0	2.0E-04
Adolescent	5.0	
Child	8.0	

Note:

RGO values greater than the EPC are not shown.

Table 23c. Remedial Goal Options for Shellfish Consumers

Shellfish Species	EPCs	Adult Target HI			Adolescent Target HI			Child Target HI			ELCR Target CR									
		0.1	1	3	0.1	1	3	0.1	1	3	1.0E-06	1.0E-05	1.0E-04							
Blue Crab																				
Aroclor 1268	0.20	0.012	0.12	Receptor HI < 1.0 No RGOs Developed	0.005	0.050	0.15	0.018	0.18	0.54	Receptor ELCR < 1E-4 No RGOs Developed	1.0E-06	1.0E-05	1.0E-04						
Copper	20.9	1.3	12.6												0.018	0.18	0.54			
Mercury	0.71	0.043	0.43															1.2	12.0	35.9
Zinc	46.9	2.8	28.4																	
White Shrimp																				
Aroclor 1268	0.53	0.032	0.32	0.01	0.14	0.41	0.003	0.029	0.086											
Copper	13.3	0.8	8.0																	
Mercury	0.11	0.007	0.07																	

	<u>Calculated Hazard Index (HI)</u>	<u>Excess Lifetime Cancer Risk (ELCR)</u>
Adult	1.7	5.8E-05
Adolescent	0.7	
Child	3.9	

Note:

RGO values greater than the EPC are not shown.

Table 23d. Remedial Goal Options for Clapper Rail Consumers

	EPCs	Adult Target HI			Adolescent Target HI			Child Target HI			ELCR Target CR		
		0.1	1	3	0.1	1	3	0.1	1	3	1.0E-06	1.0E-05	1.0E-04
Clapper Rail													
Aroclor 1268	19.4	1.2	12.2		1.591	15.9		0.4	4.4		1.8E-01	1.8E+00	1.8E+01
Mercury	4.7	0.29	2.9		0.383	3.8		0.11	1.1				

	<u>Calculated Hazard Index (HI)</u>	<u>Excess Lifetime Cancer Risk (ELCR)</u>
Adult	1.6	1.1E-04
Adolescent	1.2	
Child	4.4	

Note:

RGO values greater than the EPC are not shown.

Table 24. Metabolism and Persistence of Various PCB Congeners Based on Park et al. (2007)

IUPAC Name	Structure	Serum Conc. (ng/g lipid)	Distribution	Relative Persistence
11	3,3'-	0.35	0.16%	0.007
15	4,4'-	0.32	0.18%	0.008
16	2,2',3-	0.26	0.14%	0.006
17	2,2',4-	0.2	0.11%	0.005
18	2,2',5-	0.41	0.24%	0.011
22	2,3,4'-	0.23	0.17%	0.008
28	2,4,4'-	1.88	1.01%	0.045
31	2,4',5-	0.61	0.35%	0.015
32	2,4',6-	0.23	0.12%	0.005
33	2',3,4-	0.4	0.27%	0.012
37	3,4,4'-	0.23	0.26%	0.012
41	2,2',3,4-	0.16	0.15%	0.007
43	2,2',3,5-	0.14	0.10%	0.004
44	2,2',3,5'-	0.38	0.33%	0.015
47	2,2',4,4'-	0.3	0.17%	0.008
49	2,2',4,5'-	0.13	0.10%	0.004
52	2,2',5,5'-	0.33	0.22%	0.01
56	2,3,3',4'-	0.1	0.11%	0.005
59	2,3,3',6-	0.16	0.14%	0.006
60	2,3,4,4'-	0.31	0.35%	0.015
61	2,3,4,5-	0.83	0.46%	0.02
64	2,3,4',6-	0.27	0.26%	0.012
66	2,3',4,4'-	0.88	0.68%	0.03
70	2,3',4',5-	0.2	0.31%	0.014
72	2,3',5,5'-	0.33	0.22%	0.01
74	2,4,4',5-	2.73	1.52%	0.067
76	2',3,4,5-	0.08	0.12%	0.005
85	2,2',3,4,4'-	0.17	0.13%	0.006
87	2,2',3,4,5'-	0.32	0.22%	0.01
90	2,2',3,4',5-	0.22	0.16%	0.007
92	2,2',3,5,5'-	0.25	0.16%	0.007
95	2,2',3,5',6-	0.47	0.37%	0.016
99	2,2',4,4',5-	4.78	2.37%	0.105
101	2,2',4,5,5'-	0.87	0.60%	0.027
105	2,3,3',4,4'-	1.65	0.88%	0.039
108	2,3,3',4,5'-	0.32	0.17%	0.008
110	2,3,3',4',6-	0.4	0.41%	0.018
114	2,3,4,4',5-	0.4	0.21%	0.009
115	2,3,4,4',6-	0.21	0.14%	0.006
118	2,3',4,4',5-	7.61	3.94%	0.174
128	2,2',3,3',4,4'-	0.32	0.21%	0.009
130	2,2',3,3',4,5'-	1.79	0.97%	0.043
135	2,2',3,3',5,6'-	0.19	0.12%	0.005
137	2,2',3,4,4',5-	1.32	0.67%	0.03
138	2,2',3,4,4',5'-	13.4	7.00%	0.31
141	2,2',3,4,5,5'-	0.21	0.15%	0.007

Table 24. Metabolism and Persistence of Various PCB Congeners Based on Park et al. (2007)

IUPAC Name	Structure	Serum Conc. (ng/g lipid)	Distribution	Relative Persistence
146	2,2',3,4',5,5'-	5.13	2.85%	0.126
149	2,2',3,4',5',6-	0.56	0.50%	0.022
151	2,2',3,5,5',6-	0.38	0.21%	0.009
153	2,2',4,4',5,5'-	39.21	22.60%	1
156	2,3,3',4,4',5-	2.45	1.33%	0.059
157	2,3,3',4,4',5'-	0.73	0.41%	0.018
158	2,3,3',4,4',6-	0.44	0.23%	0.01
163	2,3,3',4',5,6-	13.33	7.00%	0.31
167	2,3',4,4',5,5'-	1.09	0.57%	0.025
168	2,3',4,4',5',6-	0.21	0.15%	0.007
170	2,2',3,3',4,4',5-	5.07	2.88%	0.127
171	2,2',3,3',4,4',6-	0.71	0.40%	0.018
172	2,2',3,3',4,5,5'-	1.26	0.74%	0.033
174	2,2',3,3',4,5,6'-	0.21	0.14%	0.006
177	2,2',3,3',4',5,6-	1.77	0.98%	0.043
178	2,2',3,3',5,5',6,-	1.63	0.92%	0.041
180	2,2',3,4,4',5,5'-	18.97	11.70%	0.518
183	2,2',3,4,4',5',6-	2.31	1.41%	0.062
187	2,2',3,4',5,5',6-	8.82	5.07%	0.224
189	2,3,3',4,4',5,5'-	0.29	0.16%	0.007
190	2,3,3',4,4',5,6-	1.16	0.66%	0.029
191	2,3,3',4,4',5',6-	0.25	0.15%	0.007
193	2,3,3',4',5,5',6-	1.06	0.64%	0.028
194	2,2',3,3',4,4',5,5'-	3.15	2.14%	0.095
195	2,2',3,3',4,4',5,6-	0.51	0.39%	0.017
196	2,2',3,3',4,4',5,6'-	1.05	0.73%	0.032
200	2,2',3,3',4,5,6,6'-	0.19	0.11%	0.005
201	2,2',3,3',4,5',6,6'-	3.11	2.07%	0.092
202	2,2',3,3',5,5',6,6'-	0.84	0.54%	0.024
203	2,2',3,4,4',5,5',6-	1.59	1.12%	0.05
206	2,2',3,3',4,4',5,5',6-	1.09	0.65%	0.029
207	2,2',3,3',4,4',5,6,6'-	0.19	0.10%	0.004
208	2,2',3,3',4,5,5',6,6'-	0.31	0.18%	0.008
209	2,2',3,3',4,4',5,5',6,6'-	0.84	0.45%	0.02

Note:

Only congeners detected in serum are shown

Table 25. Composition of the three Aroclor Mixtures

IUPAC Name	Structure	Composition		
		Aroclor 1016	Aroclor 1254	Aroclor 1268
1	2-	0.73%	0.00%	0.00%
2	3-	0.01%	0.00%	0.00%
3	4-	0.26%	0.00%	0.00%
4	2,2'-	1.91%	0.03%	0.00%
5	2,3-	3.26%	0.02%	0.00%
6	2,3'-	1.07%	0.01%	0.00%
7	2,4-	1.14%	0.00%	0.00%
8	2,4'-	1.59%	0.14%	0.00%
9	2,5-	4.47%	0.00%	0.00%
10	2,6-	2.09%	0.03%	0.00%
11	3,3'-	0.06%	0.00%	0.00%
12	3,4-	0.16%	0.00%	0.00%
13	3,4'-	0.25%	0.00%	0.00%
14	3,5-	0.00%	0.00%	0.00%
15	4,4'-	2.46%	0.01%	0.00%
16	2,2',3-	1.39%	0.01%	0.00%
17	2,2',4-	5.51%	0.14%	0.00%
18	2,2',5-	3.45%	0.17%	0.00%
19	2,2',6-	0.59%	0.00%	0.00%
20	2,3,3'-	3.48%	0.04%	0.00%
21	2,3,4-	1.99%	0.00%	0.00%
22	2,3,4'-	7.95%	0.02%	0.00%
23	2,3,5-	0.50%	0.00%	0.00%
24	2,3,6-	0.29%	0.00%	0.00%
25	2,3',4-	1.09%	0.00%	0.00%
26	2,3',5-	1.21%	0.01%	0.00%
27	2,3',6-	4.95%	0.00%	0.00%
28	2,4,4'-	5.57%	0.22%	0.00%
29	2,4,5-	0.15%	0.00%	0.00%
30	2,4,6-	1.19%	0.00%	0.00%
31	2,4',5-	2.70%	0.23%	0.00%
32	2,4',6-	4.24%	0.01%	0.00%
33	2',3,4-	1.90%	0.21%	0.00%
34	2',3,5-	0.89%	0.00%	0.00%
35	3,3',4-	0.20%	0.00%	0.00%
36	3,3',5-	0.00%	0.00%	0.00%
37	3,4,4'-	0.51%	0.00%	0.00%
38	3,4,5-	0.00%	0.00%	0.00%
39	3,4',5-	0.00%	0.00%	0.00%
40	2,2',3,3'-	0.57%	0.31%	0.00%
41	2,2',3,4-	1.15%	0.64%	0.00%
42	2,2',3,4'-	1.53%	0.06%	0.00%
43	2,2',3,5-	0.01%	0.00%	0.00%
44	2,2',3,5'-	1.93%	2.08%	0.00%
45	2,2',3,6-	1.20%	0.02%	0.00%
46	2,2',3,6'-	0.00%	0.00%	0.00%
47	2,2',4,4'-	0.81%	0.37%	0.07%
48	2,2',4,5-	0.87%	0.12%	0.00%

Table 25. Composition of the three Aroclor Mixtures

IUPAC Name	Structure	Composition		
		Aroclor 1016	Aroclor 1254	Aroclor 1268
49	2,2',4,5'-	1.49%	1.28%	0.00%
50	2,2',4,6-	0.00%	0.00%	0.06%
51	2,2',4,6'-	0.91%	0.01%	0.00%
52	2,2',5,5'-	2.72%	3.98%	0.00%
53	2,2',5,6'-	1.57%	0.09%	0.00%
54	2,2',6,6'-	0.00%	0.00%	0.00%
55	2,3,3',4-	0.29%	0.00%	0.00%
56	2,3,3',4'-	0.41%	0.00%	0.00%
57	2,3,3',5-	0.79%	0.12%	0.00%
58	2,3,3',5'-	0.14%	0.12%	0.00%
59	2,3,3',6-	0.03%	0.00%	0.00%
60	2,3,4,4'-	2.27%	0.20%	0.00%
61	2,3,4,5-	0.62%	0.00%	0.00%
62	2,3,4,6-	0.94%	0.00%	0.00%
63	2,3,4',5-	0.30%	0.14%	0.00%
64	2,3,4',6-	1.15%	0.39%	0.00%
65	2,3,5,6-	0.20%	0.00%	0.00%
66	2,3',4,4'-	0.92%	5.52%	0.00%
67	2,3',4,5-	0.85%	0.00%	0.00%
68	2,3',4,5'-	1.68%	0.00%	0.00%
69	2,3',4,6-	0.33%	0.01%	0.00%
70	2,3',4',5-	0.44%	3.74%	0.00%
71	2,3',4',6-	0.00%	0.12%	0.00%
72	2,3',5,5'-	0.16%	0.00%	0.00%
73	2,3',5',6-	0.01%	0.00%	0.00%
74	2,4,4',5-	2.65%	1.19%	0.00%
75	2,4,4',6-	0.30%	0.00%	0.00%
76	2',3,4,5-	0.48%	0.00%	0.00%
77	3,3',4,4'-	0.00%	1.79%	0.38%
78	3,3',4,5-	0.00%	0.00%	0.00%
79	3,3',4,5'-	0.00%	0.00%	0.00%
80	3,3',5,5'-	0.00%	0.00%	0.00%
81	3,4,4',5-	0.00%	0.01%	0.00%
82	2,2',3,3',4-	0.00%	1.60%	0.26%
83	2,2',3,3',5-	0.16%	0.55%	0.00%
84	2,2',3,3',6-	0.07%	1.68%	0.04%
85	2,2',3,4,4'-	0.02%	0.88%	0.00%
86	2,2',3,4,5-	0.00%	0.00%	0.00%
87	2,2',3,4,5'-	0.00%	3.15%	0.00%
88	2,2',3,4,6-	0.00%	0.00%	0.81%
89	2,2',3,4,6'-	0.00%	0.12%	0.00%
90	2,2',3,4',5-	0.02%	4.19%	0.00%
91	2,2',3,4',6-	0.08%	1.34%	0.00%
92	2,2',3,5,5'-	0.01%	2.01%	0.05%
93	2,2',3,5,6-	0.00%	0.01%	0.00%
94	2,2',3,5,6'-	0.01%	0.00%	0.07%
95	2,2',3,5',6-	0.29%	1.37%	0.00%
96	2,2',3,6,6'-	0.03%	0.14%	0.08%

Table 25. Composition of the three Aroclor Mixtures

IUPAC Name	Structure	Composition		
		Aroclor 1016	Aroclor 1254	Aroclor 1268
97	2,2',3',4,5-	0.02%	1.73%	0.00%
98	2,2',3',4,6-	0.00%	0.00%	0.19%
99	2,2',4,4',5-	0.03%	2.97%	0.17%
100	2,2',4,4',6-	0.05%	0.00%	0.04%
101	2,2',4,5,5'-	0.01%	0.79%	0.15%
102	2,2',4,5,6'-	0.00%	0.13%	0.13%
103	2,2',4,5',6-	0.01%	0.14%	0.17%
104	2,2',4,6,6'-	0.00%	0.00%	0.00%
105	2,3,3',4,4'-	0.00%	5.46%	0.38%
106	2,3,3',4,5-	0.00%	0.00%	0.00%
107	2,3,3',4',5-	0.03%	0.14%	0.00%
108	2,3,3',4,5'-	0.00%	0.00%	0.00%
109	2,3,3',4,6-	0.00%	0.21%	0.00%
110	2,3,3',4',6-	0.00%	7.37%	0.00%
111	2,3,3',5,5'-	0.00%	0.00%	0.00%
112	2,3,3',5,6-	0.00%	0.00%	0.00%
113	2,3,3',5',6-	0.00%	0.00%	0.07%
114	2,3,4,4',5-	0.00%	0.02%	0.00%
115	2,3,4,4',6-	0.00%	0.00%	0.00%
116	2,3,4,5,6-	0.00%	0.00%	0.00%
117	2,3,4',5,6-	0.00%	0.00%	0.00%
118	2,3',4,4',5-	0.00%	10.60%	0.00%
119	2,3',4,4',6-	0.00%	0.16%	0.07%
120	2,3',4,5,5'-	0.00%	0.00%	0.00%
121	2,3',4,5',6-	0.00%	0.00%	0.00%
122	2',3,3',4,5-	0.00%	0.30%	0.00%
123	2',3,4,4',5-	0.03%	0.07%	0.00%
124	2',3,4,5,5'-	0.00%	0.12%	0.00%
125	2',3,4,5,6'-	0.00%	0.00%	0.00%
126	3,3',4,4',5-	0.00%	0.11%	0.07%
127	3,3',4,5,5'-	0.00%	0.34%	0.00%
128	2,2',3,3',4,4'-	0.00%	1.00%	0.00%
129	2,2',3,3',4,5-	0.00%	0.65%	0.00%
130	2,2',3,3',4,5'-	0.00%	0.18%	0.00%
131	2,2',3,3',4,6-	0.00%	0.18%	0.00%
132	2,2',3,3',4,6'-	0.00%	3.14%	0.07%
133	2,2',3,3',5,5'-	0.00%	0.12%	0.32%
134	2,2',3,3',5,6-	0.00%	0.34%	0.07%
135	2,2',3,3',5,6'-	0.00%	1.14%	0.00%
136	2,2',3,3',6,6'-	0.00%	0.29%	0.00%
137	2,2',3,4,4',5-	0.00%	0.43%	0.05%
138	2,2',3,4,4',5'-	0.00%	3.61%	0.10%
139	2,2',3,4,4',6-	0.00%	0.00%	0.00%
140	2,2',3,4,4',6'-	0.00%	0.00%	0.07%
141	2,2',3,4,5,5'-	0.00%	1.04%	0.39%
142	2,2',3,4,5,6-	0.00%	0.00%	0.05%
143	2,2',3,4,5,6'-	0.00%	0.00%	0.00%
144	2,2',3,4,5',6-	0.00%	0.03%	0.00%

Table 25. Composition of the three Aroclor Mixtures

IUPAC Name	Structure	Composition		
		Aroclor 1016	Aroclor 1254	Aroclor 1268
145	2,2',3,4',6,6'-	0.00%	0.00%	0.00%
146	2,2',3,4',5,5'-	0.00%	0.86%	0.00%
147	2,2',3,4',5,6-	0.00%	0.05%	0.00%
148	2,2',3,4',5,6'-	0.00%	0.00%	0.00%
149	2,2',3,4',5',6-	0.00%	2.95%	0.00%
150	2,2',3,4',6,6'-	0.00%	0.00%	0.00%
151	2,2',3,5,5',6-	0.00%	0.54%	0.39%
152	2,2',3,5,6,6'-	0.00%	0.00%	0.00%
153	2,2',4,4',5,5'-	0.00%	3.72%	0.08%
154	2,2',4,4',5,6'-	0.00%	0.00%	0.00%
155	2,2',4,4',6,6'-	0.00%	0.00%	0.00%
156	2,3,3',4,4',5-	0.00%	1.85%	0.00%
157	2,3,3',4,4',5'-	0.00%	0.65%	0.00%
158	2,3,3',4,4',6-	0.00%	0.40%	0.00%
159	2,3,3',4,5,5'-	0.00%	0.00%	0.01%
160	2,3,3',4,5,6-	0.00%	0.00%	0.00%
161	2,3,3',4,5',6-	0.00%	0.00%	0.32%
162	2,3,3',4',5,5'-	0.00%	0.00%	0.00%
163	2,3,3',4',5,6-	0.00%	0.12%	0.11%
164	2,3,3',4',5',6-	0.00%	0.12%	0.00%
165	2,3,3',5,5',6-	0.00%	0.00%	0.05%
166	2,3,4,4',5,6-	0.00%	0.00%	0.00%
167	2,3',4,4',5,5'-	0.00%	0.27%	0.00%
168	2,3',4,4',5',6-	0.00%	0.00%	0.00%
169	3,3',4,4',5,5'-	0.00%	0.00%	0.00%
170	2,2',3,3',4,4',5-	0.00%	0.45%	0.00%
171	2,2',3,3',4,4',6-	0.00%	0.04%	0.05%
172	2,2',3,3',4,5,5'-	0.00%	0.18%	0.00%
173	2,2',3,3',4,5,6-	0.00%	0.07%	1.14%
174	2,2',3,3',4,5,6'-	0.00%	1.50%	0.05%
175	2,2',3,3',4,5',6-	0.00%	0.01%	0.00%
176	2,2',3,3',4,6,6'-	0.00%	0.12%	0.00%
177	2,2',3,3',4',5,6-	0.00%	0.30%	0.00%
178	2,2',3,3',5,5',6,-	0.00%	0.14%	2.78%
179	2,2',3,3',5,6,6'-	0.00%	0.30%	0.00%
180	2,2',3,4,4',5,5'-	0.00%	0.65%	0.20%
181	2,2',3,4,4',5,6-	0.00%	0.00%	0.00%
182	2,2',3,4,4',5,6'-	0.00%	0.00%	0.06%
183	2,2',3,4,4',5',6-	0.00%	0.29%	0.00%
184	2,2',3,4,4',6,6'-	0.00%	0.00%	0.00%
185	2,2',3,4,5,5',6-	0.00%	0.01%	0.00%
186	2,2',3,4,5,6,6'-	0.00%	0.00%	0.16%
187	2,2',3,4',5,5',6-	0.00%	0.35%	0.09%
188	2,2',3,4',5,6,6'-	0.00%	0.00%	3.79%
189	2,3,3',4,4',5,5'-	0.00%	0.01%	0.00%
190	2,3,3',4,4',5,6-	0.00%	0.23%	0.00%
191	2,3,3',4,4',5',6-	0.00%	0.01%	0.00%
192	2,3,3',4,5,5',6-	0.00%	0.00%	0.00%

Table 25. Composition of the three Aroclor Mixtures

IUPAC Name	Structure	Composition		
		Aroclor 1016	Aroclor 1254	Aroclor 1268
193	2,3,3',4',5,5',6-	0.00%	0.01%	0.00%
194	2,2',3,3',4,4',5,5'-	0.00%	0.01%	3.19%
195	2,2',3,3',4,4',5,6-	0.00%	0.00%	6.12%
196	2,2',3,3',4,4',5,6'-	0.00%	0.01%	5.67%
197	2,2',3,3',4,4',6,6'-	0.00%	0.00%	0.06%
198	2,2',3,3',4,5,5',6-	0.00%	0.00%	0.16%
199	2,2',3,3',4,5,5',6'-	0.00%	0.00%	0.91%
200	2,2',3,3',4,5,6,6'-	0.00%	0.06%	1.46%
201	2,2',3,3',4,5',6,6'-	0.00%	0.01%	14.92%
202	2,2',3,3',5,5',6,6'-	0.00%	0.15%	2.78%
203	2,2',3,4,4',5,5',6-	0.00%	0.01%	5.67%
204	2,2',3,4,4',5,6,6'-	0.00%	0.00%	0.00%
205	2,3,3',4,4',5,5',6-	0.00%	0.00%	0.00%
206	2,2',3,3',4,4',5,5',6-	0.00%	0.00%	28.70%
207	2,2',3,3',4,4',5,6,6'-	0.00%	0.00%	2.47%
208	2,2',3,3',4,5,5',6,6'-	0.00%	0.00%	6.12%
209	2,2',3,3',4,4',5,5',6,6	0.01%	0.00%	8.12%

Table 26. Comparison of MOA-specific Bio-persistent Equivalents in Three Aroclor Mixtures

Mode of Action plus Bioaccumulation	Aroclor 1016	Aroclor 1254	Aroclor 1268
Bioaccumulated Dioxin Toxic Equivalents	0.0E+00	6.60E-07	4.50E-09
Bioaccumulated Neurotoxic Equivalents	2.50E-03	1.40E-02	2.90E-04
Bioaccumulated Thyroid Hormone Equivalents	2.20E-05	2.60E-03	7.30E-07

Table 27. Relative Potency Estimates for the Three Aroclor Mixtures for Three Modes of Action

IUPAC Name	Rel. Persist.	Relative potency estimates			Percent Composition			Relative TEQ Amounts			Relative NEQ Amounts			Relative thyroid-disrupting Amounts		
		Dioxin TEQ	Ca ²⁺ NEQ	Thyroid Relative to PCB127	Aroclor 1016	Aroclor 1254	Aroclor 1268	Aroclor 1016	Aroclor 1254	Aroclor 1268	Aroclor 1016	Aroclor 1254	Aroclor 1268	Aroclor 1016	Aroclor 1254	Aroclor 1268
15	0.008		0	0.001	2.46%						0.0E+00			2.40E-07		
16	0.006		0.50		3.48%						1.1E-04					
17	0.005		0.50		1.99%						4.8E-05					
18	0.011		0.50		7.95%						4.2E-04					
22	0.008		0.42		5.57%						1.7E-04					
28	0.045		0.30	0.006	5.51%						7.3E-04			1.50E-05		
31	0.015		0.20		4.95%						1.5E-04					
32	0.005		0.26		1.19%						1.6E-05					
33	0.012		0.35	0.007	4.24%						1.8E-04			3.70E-06		
37	0.012		0.08	0.001	0.51%						4.9E-06			7.10E-08		
44	0.015		0.79		2.27%						2.6E-04					
47	0.008		0.50	0.006	0.92%	5.52%					3.4E-05	2.1E-04		4.20E-07	2.5E-06	
49	0.004		0.39		1.68%						2.7E-05					
52	0.01		0.70	0.009	2.65%	1.19%					1.8E-04	8.1E-05		2.20E-06	9.8E-07	
56	0.005				1.53%											
59	0.006				0.81%											
60	0.015		0.21		0.87%						2.8E-05					
61	0.02				1.49%	1.28%										
64	0.012		0.38		0.94%						4.1E-05					
74	0.067		0.21		0.91%						1.3E-04					
77	0	0.0001	0.00	0.001	0.00%	1.79%	0.38%									
81	0	0.0003	0.13		0.00%	0.01%	0.00%									
95	0.016		0.99	0.062		0.55%						8.9E-05			5.6E-06	
99	0.105		0.23	0.024		4.19%						9.9E-04			1.1E-04	
101	0.027		0.52	0.024		1.73%						2.4E-04			1.1E-05	
105	0.039	0.00003	0.49	0.005		7.37%			8.6E-08			1.4E-03			1.4E-05	
114	0.009	0.00003			0.00%	0.02%	0.00%	0	5.7E-11	0						
118	0.174	0.00003	0.29		0.00%	10.60%	0.00%	0	5.5E-07	0	0.0E+00	5.4E-03	0.0E+00			
123	0	0.00003			0.30%	0.70%	0.00%	0								
126	0	0.1	0.00		0.00%	0.01%	0.07%									
128	0.009		0.31	0.001		1.85%						5.2E-05			2.1E-07	
138	0.31		0.12	0.214		3.61%						1.3E-03			2.4E-03	
141	0.007		0.12			3.72%						2.8E-05				
151	0.009		0.44			3.14%						1.3E-04				
153	1		0.09			1.14%						1.0E-03				
156	0.059	0.00003	0.36		0.00%	1.85%	0.00%	0	3.3E-08	0	0.0E+00	3.9E-04	0.0E+00			
157	0.018	0.00003			0.00%	0.65%	0.00%	0	3.6E-09	0						
163	0.31					0.54%										
167	0.025	0.00003			0.00%	0.27%	0.00%	0	2.0E-09	0						
169	0	0.00003			0.00%	0.00%	0.00%									

Table 27. Relative Potency Estimates for the Three Aroclor Mixtures for Three Modes of Action

		Relative potency estimates			Percent Composition			Relative TEQ Amounts			Relative NEQ Amounts			Relative thyroid-disrupting Amounts		
IUPAC Name	Rel. Persist.	Dioxin TEQ	Ca ²⁺ NEQ	Thyroid Relative to PCB127	Aroclor 1016	Aroclor 1254	Aroclor 1268	Aroclor 1016	Aroclor 1254	Aroclor 1268	Aroclor 1016	Aroclor 1254	Aroclor 1268	Aroclor 1016	Aroclor 1254	Aroclor 1268
178	0.041		0.19				2.78%						2.1E-04			
180	0.518		0.36	0.009		1.50%						2.8E-03		6.6E-05		
189	0.007	0.00003			0.00%	0.01%	0.00%		1.5E-11	0.00E+00						
194	0.095						3.19%									
195	0.017						6.12%									
196	0.032						5.67%									
200	0.005						1.46%									
201	0.092						14.92%									
202	0.024						2.78%									
203	0.05						5.67%									
206	0.029						28.70%									
207	0.004						2.47%									
208	0.008						6.12%									
209	0.02						8.12%									
								Relative TEQ Amounts			Relative NEQ Amounts			Relative thyroid-disrupting Amounts		
								Aroclor 1016	Aroclor 1254	Aroclor 1268	Aroclor 1016	Aroclor 1254	Aroclor 1268	Aroclor 1016	Aroclor 1254	Aroclor 1268
Mixture Relative Potency Estimates								0.00E+00	6.60E-07	4.50E-09	2.50E-03	1.40E-02	2.90E-04	2.20E-05	2.60E-03	7.30E-07