Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

	95% UCL Sediment Concentration, Study 20 (mg/kg-wet)					95% UCL Surface Water Concentration (µg/L)				
Chemical	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
Metals										
Aluminum	5206.467	5685.403	4727.105	4666.935	-	2601.68	2188.71	1240.40	1103.14	-
Antimony	0.334	0.695	0.580	0.254	-	1.05	1.05	1.05	5.62	-
Arsenic	3.820	3.521	10.672	5.103	-	2.01	3.37	1.15	1.15	-
Barium	49.866	75.470	81.624	144.199	-	63.48	69.27	86.09	70.37	-
Beryllium	0.255	0.289	0.280	0.340	-	-	-	-	-	-
Cadmium	0.976	1.003	1.965	1.146	-	0.18	0.10	0.24	0.10	-
Chromium	26.251	31.402	69.396	68.341	-	4.91	4.18	2.93	3.33	-
Cobalt	4.087	4.368	3.756	3.341	-	1.38	1.50	1.26	1.03	-
Copper	38.825	32.611	50.011	52.046	-	12.55	11.36	11.02	15.61	-
Iron	9765.153	11022.602	9877.814	9200.873	-	4311.86	4161.45	2747.10	1873.14	-
Lead	41.912	113.061	8243.797	155.900	-	7.55	7.28	6.49	5.32	-
Manganese	174.675	197.915	183.488	180.644	-	91.18	101.33	367.74	131.39	-
Mercury	0.087	0.110	0.404	0.124	-	0.15	0.17	0.16	0.23	-
Methyl Mercury	-	-	-	-	-	-	-	-	-	-
Nickel	18.808	20.561	20.674	11.016	-	8.19	7.86	8.81	6.66	-
Selenium	1.025	0.739	1.216	2.731	-	5.90	5.88	5.83	6.63	-
Silver	0.284	0.526	1.008	5.349	-	-	-	-	-	-
Thallium	2.201	2.676	1.891	3.437	-	2.52	1.60	1.60	1.60	-
Vanadium	11.986	13.163	11.494	13.403	-	6.88	6.05	3.77	3.63	-
Zinc	101.510	133.217	162.288	324.363	-	24.00	22.57	29.33	36.69	-
Conventionals										
Ammonia	-	-	-	-	-	0.24	0.29	3.12	0.31	-
Cyanide	0.102	0.123	0.258	1.413	-	5.26	5.17	12.63	3.73	-
PAHs										
Anthracene	1.509	1.570	2.684	6.576	-	-	-	-	-	-
Benzo[a]anthracene	1.351	1.634	1.025	3.888	-	5.00	5.00	5.00	23.28	-
Benzo[a]pyrene	1.429	1.419	0.960	4.219	-	6.59	5.00	9.19	23.28	-
Benzo[b]fluoranthene	1.383	1.164	1.288	4.822	-	6.59	5.00	9.19	23.28	-
Benzo[g,h,i]perylene	1.452	0.947	2.535	3.006	-	6.59	5.00	9.19	23.28	-
Benzo[k]fluoranthene	1.413	1.546	1.239	5.323	-	6.59	5.00	9.19	23.28	-
Chrysene	1.450	1.138	1.417	5.926	-	5.00	5.00	5.00	23.28	-
Dibenz[a,h]anthracene	1.639	1.563	2.684	6.516	-	6.59	5.00	9.19	23.28	-
Fluoranthene	1.953	2.201	2.380	13.356	-	-	-	-	-	-

Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

Chemical	95% UCL Sediment Concentration, Study 20 (mg/kg-wet)					95% UCL Surface Water Concentration (µg/L)				
	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
Indeno[1,2,3-cd]pyrene	1.380	1.349	0.886	3.014	-	6.59	5.00	9.19	23.28	-
Phenanthrene	1.657	1.745	2.392	4.674	-	-	-	-	-	-
Pyrene	1.758	1.859	2.061	8.340	-	5.00	5.00	5.00	23.28	-
PCBs										
PCB Aroclor 1242	0.185	1.260	1.439	1.536	-	-	-	-	-	-
PCB Aroclor 1260	0.032	0.046	0.062	0.401	-	-	-	-	-	-
PCB (total)[1]	0.217	1.307	1.501	1.937	-	-	-	-	-	-
Pesticides										
4,4'-DDD (p,p'-)	0.005	0.009	0.020	0.049	-	-	-	-	-	-
4,4'-DDE (p,p'-)	0.006	0.014	0.022	0.027	-	-	-	-	-	-
4,4'-DDT (p,p'-)	0.002	0.002	0.007	0.011	-	-	-	-	-	-
Aldrin	0.006	0.034	0.021	0.007	-	-	-	-	-	-
alpha-Chlordane	0.002	0.003	0.007	0.014	-	-	-	-	-	-
cis-Nonachlor	-	-	-	-	-	-	-	-	-	-
d-BHC	0.001	0.003	0.007	0.001	-	-	-	-	-	-
Dieldrin	0.006	0.012	0.008	0.010	-	-	-	-	-	-
Endosulfan II	0.002	0.006	0.008	0.021	-	-	-	-	-	-
Endrin	-	-	-	-	-	-	-	-	-	-
Endrin ketone	0.002	0.003	0.004	0.027	-	-	-	-	-	-
gamma-Chlordane	0.005	0.008	0.009	0.007	-	-	-	-	-	-
[alpha, gamma]-Chlordane[2]	0.007	0.011	0.017	0.020	-	-	-	-	-	-
Heptachlor	0.002	0.004	0.002	0.001	-	-	-	-	-	-
Heptachlor epoxide	0.008	0.028	0.015	0.011	-	-	-	-	-	-
Oxychlordane	-	-	-	-	-	-	-	-	-	-
trans-Nonachlor	-	-	-	-	-	-	-	-	-	-
Semivolatile Organics										
1,1'-Biphenyl	-	-	-	-	-	5.00	5.00	5.00	23.28	-
2-Chlorophenol	-	-	-	-	-	5.00	5.00	5.00	23.28	-
2,4,5-Trichlorophenol	-	-	-	-	-	12.50	12.50	12.50	58.21	-
2,4,6-Trichlorophenol	-	-	-	-	-	5.00	5.00	5.00	23.28	-
2,4-Dichlorophenol	-	-	-	-	-	5.00	5.00	5.00	23.28	-
2,4-Dimethylphenol	-	-	-	-	-	5.00	5.00	5.00	23.28	-
2,4-Dinitrophenol	-	-	-	-	-	12.50	12.50	12.50	58.21	-

Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

	95% UCL Sediment Concentration, Study 20 (mg/kg-wet)					95% UCL Surface Water Concentration (µg/L)				
Chemical	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
2-Methylphenol	-	-	-	-	-	5.00	5.00	5.00	23.28	-
2-Nitrophenol	-	-	-	-	-	5.00	5.00	5.00	23.28	-
3,3'-Dichlorobenzidine	-	-	-	-	-	5.00	5.00	5.00	23.28	-
4,6-Dinitro-2-methylphenol	-	-	-	-	-	12.50	12.50	12.50	58.21	-
4-Chloro-3-methylphenol	-	-	-	-	-	5.00	5.00	5.00	23.28	-
4-Methylphenol	1.671	1.689	2.684	4.822	-	5.00	5.00	5.00	23.28	-
4-Nitrophenol	-	-	-	-	-	12.50	12.50	12.50	58.21	-
bis(2-Ethylhexyl)phthalate	1.465	3.192	2.718	15.747	-	5.00	6.02	6.02	28.60	-
Butylbenzylphthalate	1.671	1.578	2.684	4.822	-	5.00	5.00	5.00	23.28	-
Dimethyl phthalate	-	-	-	-	-	5.00	5.00	5.00	5.00	-
Di-n-octylphthalate	1.671	2.102	2.547	1.579	-	6.59	5.00	9.19	23.28	-
Pentachlorophenol	-	-	-	-	-	12.50	12.50	12.50	58.21	-
Phenol	-	-	-	-	-	5.00	5.00	5.00	23.28	-

[1] - PCB (total) = sum of A1242 and A1260 concentrations.
[2] - [alpha, gamma]Chlordane = sum of alpha and gamma Chlordane isomer concentrations.

Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

	95% UCL Fish Tissue Concentration (mg/kg-wet)					Estimated 95% UCL Invertebrate Tissue Concentration (mg/kg-wet)				
Chemical	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
Metals										
Aluminum	-	-	-	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-	-	-	-
Arsenic	0.020	0.020	0.046	0.020	0.112	-	-	-	-	-
Barium	-	-	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-	-	-
Cadmium	0.010	0.013	0.024	0.024	0.058	-	-	-	-	-
Chromium	-	-	-	-	-	-	-	-	-	-
Cobalt	-	-	-	-	-	-	-	-	-	-
Copper	-	-	-	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-	-	-
Lead	0.262	0.422	0.830	0.756	1.621	-	-	-	-	-
Manganese	-	-	-	-	-	-	-	-	-	-
Mercury	0.011	0.040	0.028	0.043	0.095	-	-	-	-	-
Methyl Mercury	0.011	0.040	0.028	0.043	0.095	-	-	-	-	-
Nickel	-	-	-	-	-	-	-	-	-	-
Selenium	1.030	0.102	1.073	0.706	0.874	-	-	-	-	-
Silver	-	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-	-
Zinc	-	-	-	-	-	-	-	-	-	-
Conventionals										
Ammonia	-	-	-	-	-	-	-	-	-	-
Cyanide	-	-	-	-	-	-	-	-	-	-
PAHs										
Anthracene	-	-	-	-	-	0.529	0.585	0.667	1.178	-
Benzo[a]anthracene	-	-	-	-	-	0.412	0.556	0.222	0.653	-
Benzo[a]pyrene	-	-	-	-	-	0.425	0.474	0.203	0.679	-
Benzo[b]fluoranthene	-	-	-	-	-	0.400	0.393	0.269	0.767	-
Benzo[g,h,i]perylene	-	-	-	-	-	0.427	0.303	0.526	0.473	-
Benzo[k]fluoranthene	-	-	-	-	-	0.416	0.517	0.263	0.842	-
Chrysene	-	-	-	-	-	0.446	0.425	0.327	0.988	-
Dibenz[a,h]anthracene	-	-	-	-	-	0.484	0.474	0.551	0.966	-
Fluoranthene	-	-	-	-	-	0.665	0.869	0.535	2.344	-

Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

Chemical	95% UCL Fish Tissue Concentration (mg/kg-wet)					Estimated 95% UCL Invertebrate Tissue Concentration (mg/kg-wet)				
	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
Indeno[1,2,3-cd]pyrene	-	-	-	-	-	0.382	0.404	0.188	0.447	-
Phenanthrene	-	-	-	-	-	0.586	0.666	0.592	0.870	-
Pyrene	-	-	-	-	-	0.598	0.746	0.484	1.498	-
PCBs										
PCB Aroclor 1242	0.865	2.812	2.437	2.026	0.029	0.219	1.552	0.969	0.776	-
PCB Aroclor 1260	0.132	0.421	0.179	0.113	0.046	0.038	0.055	0.047	0.198	-
PCB (total)[1]	0.997	3.232	2.616	2.139	0.075	0.257	1.607	1.017	0.974	-
Pesticides										
4,4'-DDD (p,p'-)	0.024	0.045	0.057	0.064	0.073	0.006	0.011	0.014	0.023	-
4,4'-DDE (p,p'-)	0.070	0.164	0.123	0.097	0.313	0.007	0.016	0.016	0.012	-
4,4'-DDT (p,p'-)	0.004	0.009	0.012	0.020	0.043	0.002	0.002	0.005	0.005	-
Aldrin	0.002	0.002	0.005	0.002	0.006	0.007	0.040	0.016	0.004	-
alpha-Chlordane	0.004	0.007	0.015	0.020	0.026	0.002	0.004	0.005	0.006	-
cis-Nonachlor	0.004	0.005	0.008	0.007	0.011	-	-	-	-	-
d-BHC	-	-	-	-	-	0.001	0.004	0.005	0.000	-
Dieldrin	0.014	0.014	0.019	0.022	0.062	0.007	0.013	0.005	0.005	-
Endosulfan II	-	-	-	-	-	0.002	0.007	0.005	0.010	-
Endrin	-	-	-	-	-	-	-	-	-	-
Endrin ketone	-	-	-	-	-	0.002	0.003	0.003	0.013	-
gamma-Chlordane	0.018	0.036	0.038	0.044	0.012	0.005	0.010	0.006	0.003	-
[alpha, gamma]-Chlordane[2]	0.022	0.044	0.053	0.065	0.038	0.007	0.014	0.012	0.009	-
Heptachlor	0.002	0.032	0.026	0.002	0.006	0.002	0.004	0.001	0.000	-
Heptachlor epoxide	0.002	0.005	0.005	0.006	0.006	0.009	0.033	0.010	0.006	-
Oxychlordane	0.011	0.023	0.019	0.018	0.010	-	-	-	-	-
trans-Nonachlor	0.008	0.015	0.018	0.022	0.031	-	-	-	-	-
Semivolatile Organics										
1,1'-Biphenyl	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	-	-	-	-	-

Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

	95% UCL Fish Tissue Concentration (mg/kg-wet)					Estimated 95% UCL Invertebrate Tissue Concentration (mg/kg-wet)				
Chemical	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
2-Methylphenol	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	-	-	-	-	-	0.738	0.803	0.835	1.117	-
4-Nitrophenol	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	-	-	-	-	-	0.488	1.273	0.650	2.765	-
Butylbenzylphthalate	-	-	-	-	-	0.573	0.572	0.648	0.868	-
Dimethyl phthalate	-	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	-	-	-	-	-	0.877	1.235	0.960	0.349	-
Pentachlorophenol	-	-	-	-	-	-	-	-	-	-
Phenol	-	-	-	-	-	-	-	-	-	-

[1] - PCB (total) = sum of A1242 anc

[2] - [alpha, gamma]Chlordane = sun

Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

	Chronic Wildlife Screening Dose (mg/kg/day)		Hazard Quotients for the Bald Eagle					Hazard Quotients for the Common Tern				
			RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
Chemical	Mammal	Bird	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined
Metals												
Aluminum	1.48	100	6.36E-02	6.93E-02	5.74E-02	5.66E-02	-	3.21E-01	3.49E-01	2.90E-01	2.86E-01	-
Antimony	0.052	-	-	-	-	-	-	-	-	-	-	-
Arsenic	0.25	5.5	1.28E-03	1.23E-03	3.36E-03	1.56E-03	2.44E-03	6.45E-03	6.17E-03	1.70E-02	7.88E-03	1.24E-02
Barium	3.92	208	2.99E-04	4.49E-04	4.87E-04	8.47E-04	-	1.50E-03	2.25E-03	2.44E-03	4.27E-03	-
Beryllium	0.27	-	-	-	-	-	-	-	-	-	-	-
Cadmium	0.742	1.45	1.68E-03	1.92E-03	3.66E-03	2.95E-03	4.83E-03	8.51E-03	9.72E-03	1.85E-02	1.49E-02	2.45E-02
Chromium	2.54	1	3.18E-02	3.80E-02	8.37E-02	8.25E-02	-	1.61E-01	1.92E-01	4.24E-01	4.17E-01	-
Cobalt	0.92	1.3	3.83E-03	4.09E-03	3.51E-03	3.12E-03	-	1.93E-02	2.06E-02	1.77E-02	1.58E-02	-
Copper	1.11	2.3	2.05E-02	1.73E-02	2.64E-02	2.75E-02	-	1.04E-01	8.71E-02	1.33E-01	1.39E-01	-
Iron	49.94	-	-	-	-	-	-	-	-	-	-	-
Lead	0.15	3.85	2.14E-02	4.87E-02	2.61E+00	7.25E-02	5.07E-02	1.08E-01	2.46E-01	1.32E+01	3.67E-01	2.57E-01
Manganese	68	997	2.14E-04	2.43E-04	2.34E-04	2.23E-04	-	1.08E-03	1.22E-03	1.17E-03	1.12E-03	-
Mercury	0.027	0.039	2.80E-03	3.57E-03	1.26E-02	4.02E-03	-	1.40E-02	1.78E-02	6.36E-02	2.00E-02	-
Methyl Mercury	0.08	2.6	5.27E-04	1.85E-03	1.27E-03	2.01E-03	4.41E-03	2.67E-03	9.39E-03	6.45E-03	1.02E-02	2.23E-02
Nickel	30.77	65	3.53E-04	3.85E-04	3.88E-04	2.08E-04	-	1.78E-03	1.94E-03	1.96E-03	1.05E-03	-
Selenium	0.154	0.57	2.20E-01	2.35E-02	2.30E-01	1.55E-01	1.85E-01	1.11E+00	1.18E-01	1.16E+00	7.86E-01	9.35E-01
Silver	17.08	-	-	-	-	-	-	-	-	-	-	-
Thallium	0.006	-	-	-	-	-	-	-	-	-	-	-
Vanadium	0.65	11.4	1.29E-03	1.41E-03	1.23E-03	1.43E-03	-	6.48E-03	7.11E-03	6.19E-03	7.21E-03	-
Zinc	66.59	17.2	7.16E-03	9.38E-03	1.14E-02	2.28E-02	-	3.62E-02	4.74E-02	5.78E-02	1.15E-01	-
Conventionals												
Ammonia	-	-	-	-	-	-	-	-	-	-	-	-
Cyanide	52.84	0.04	7.53E-03	8.08E-03	1.85E-02	4.57E-02	-	3.09E-02	3.38E-02	7.62E-02	2.26E-01	-
PAHs												
Anthracene	58.02	280	6.50E-06	6.76E-06	1.16E-05	2.83E-05	-	3.29E-05	3.42E-05	5.85E-05	1.43E-04	-
Benzo[a]anthracene	0.42	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	0.42	-	-	-	-	-	-	-	-	-	-	-
Benzo[b]fluoranthene	0.42	-	-	-	-	-	-	-	-	-	-	-
Benzo[g,h,i]perylene	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	0.42	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]anthracene	0.42	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	52.02	280	8.41E-06	9.48E-06	1.02E-05	5.75E-05	-	4.26E-05	4.80E-05	5.19E-05	2.91E-04	-

Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

	Chronic Wildlife Screening Dose (mg/kg/day)		Hazard Quotients for the Bald Eagle					Hazard Quotients for the Common Tern				
			RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
Chemical	Mammal	Bird	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined
Indeno[1,2,3-cd]pyrene	0.42	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	52.02	280	7.13E-06	7.51E-06	1.03E-05	2.01E-05	-	3.61E-05	3.80E-05	5.21E-05	1.02E-04	-
Pyrene	31.21	-	-	-	-	-	-	-	-	-	-	-
PCBs												
PCB Aroclor 1242	0.6	0.46	2.27E-01	7.40E-01	6.42E-01	5.35E-01	7.66E-03	1.15E+00	3.75E+00	3.25E+00	2.71E+00	3.88E-02
PCB Aroclor 1260	0.05	-	-	-	-	-	-	-	-	-	-	-
PCB (total)[1]	-	0.09	1.34E+00	4.35E+00	3.52E+00	2.89E+00	1.01E-01	6.77E+00	2.20E+01	1.78E+01	1.46E+01	5.11E-01
Pesticides												
4,4'-DDD (p,p'-)	21.54	-	-	-	-	-	-	-	-	-	-	-
4,4'-DDE (p,p'-)	14.15	0.845	1.00E-02	2.35E-02	1.75E-02	1.39E-02	4.47E-02	5.07E-02	1.19E-01	8.86E-02	7.04E-02	2.26E-01
4,4'-DDT (p,p'-)	0.03	0.003	1.48E-01	3.75E-01	4.75E-01	7.90E-01	1.72E+00	7.50E-01	1.90E+00	2.40E+00	4.00E+00	8.71E+00
Aldrin	0.154	-	-	-	-	-	-	-	-	-	-	-
alpha-Chlordane	-	-	-	-	-	-	-	-	-	-	-	-
cis-Nonachlor	-	-	-	-	-	-	-	-	-	-	-	-
d-BHC	0.014	0.56	1.84E-06	7.28E-06	1.55E-05	2.18E-06	-	9.30E-06	3.68E-05	7.86E-05	1.11E-05	-
Dieldrin	0.015	0.077	2.24E-02	2.22E-02	2.92E-02	3.43E-02	9.76E-02	1.13E-01	1.13E-01	1.48E-01	1.74E-01	4.94E-01
Endosulfan II	0.12	10	1.99E-07	7.41E-07	9.93E-07	2.55E-06	-	1.01E-06	3.75E-06	5.03E-06	1.29E-05	-
Endrin	0.038	0.01	-	-	-	-	-	-	-	-	-	-
Endrin ketone	-	-	-	-	-	-	-	-	-	-	-	-
gamma-Chlordane	-	-	-	-	-	-	-	-	-	-	-	-
[alpha, gamma]-Chlordane[2]	1.9	2.1	1.26E-03	2.52E-03	3.07E-03	3.72E-03	2.18E-03	6.38E-03	1.28E-02	1.56E-02	1.88E-02	1.10E-02
Heptachlor	0.1	0.065	3.75E-03	5.95E-02	4.76E-02	3.73E-03	1.08E-02	1.90E-02	3.01E-01	2.41E-01	1.89E-02	5.49E-02
Heptachlor epoxide	0.24	-	-	-	-	-	-	-	-	-	-	-
Oxychlordane	-	-	-	-	-	-	-	-	-	-	-	-
trans-Nonachlor	-	-	-	-	-	-	-	-	-	-	-	-
Semivolatile Organics												
1,1'-Biphenyl	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	2.31	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	92.3	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	541.03	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	46.15	-	-	-	-	-	-	-	-	-	-	-

Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

	Chronic Wildlife Screening Dose (mg/kg/day)		Hazard Quotients for the Bald Eagle					Hazard Quotients for the Common Tern				
			RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
Chemical	Mammal	Bird	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined
2-Methylphenol	219	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	-	-	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	346.12	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	-	-	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	7.6	1.1	1.76E-03	3.68E-03	3.16E-03	1.81E-02	-	8.66E-03	1.83E-02	1.57E-02	9.04E-02	-
Butylbenzylphthalate	122.3	-	-	-	-	-	-	-	-	-	-	-
Dimethyl phthalate	769.16	-	-	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	3121.34	-	-	-	-	-	-	-	-	-	-	-
Pentachlorophenol	0.185	4.03	1.05E-04	1.05E-04	1.05E-04	4.90E-04	-	3.62E-04	3.62E-04	3.62E-04	1.69E-03	-
Phenol	58.27	-	-	-	-	-	-	-	-	-	-	-

[1] - PCB (total) = sum of A1242 anc

[2] - [alpha, gamma]Chlordane = sun

Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

	Hazard Quotients for the Spotted Sandpiper					Hazard Quotients for the Mink				
	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
Chemical	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined
Metals										
Aluminum	1.74E+00	1.89E+00	1.57E+00	1.55E+00	-	1.63E+01	1.77E+01	1.47E+01	1.45E+01	-
Antimony	-	-	-	-	-	3.14E-02	6.33E-02	5.31E-02	3.32E-02	-
Arsenic	2.32E-02	2.14E-02	6.45E-02	3.09E-02	-	8.87E-02	8.40E-02	2.38E-01	1.12E-01	1.02E-01
Barium	8.02E-03	1.21E-02	1.31E-02	2.31E-02	-	5.99E-02	8.99E-02	9.76E-02	1.70E-01	-
Beryllium	-	-	-	-	-	4.33E-03	4.90E-03	4.75E-03	5.77E-03	-
Cadmium	2.24E-02	2.30E-02	4.51E-02	2.63E-02	-	9.27E-03	1.02E-02	1.97E-02	1.45E-02	1.79E-02
Chromium	8.74E-01	1.04E+00	2.31E+00	2.27E+00	-	4.75E-02	5.68E-02	1.25E-01	1.23E-01	-
Cobalt	1.05E-01	1.12E-01	9.62E-02	8.56E-02	-	2.05E-02	2.19E-02	1.88E-02	1.67E-02	-
Copper	5.62E-01	4.72E-01	7.24E-01	7.53E-01	-	1.61E-01	1.36E-01	2.07E-01	2.16E-01	-
Iron	-	-	-	-	-	9.04E-01	1.02E+00	9.11E-01	8.48E-01	-
Lead	3.62E-01	9.77E-01	7.12E+01	1.35E+00	-	1.70E+00	4.13E+00	2.54E+02	5.95E+00	2.49E+00
Manganese	5.84E-03	6.62E-03	6.18E-03	6.05E-03	-	1.19E-02	1.35E-02	1.29E-02	1.24E-02	-
Mercury	7.45E-02	9.50E-02	3.45E-01	1.07E-01	-	1.52E-02	1.94E-02	6.91E-02	2.18E-02	-
Methyl Mercury	-	-	-	-	-	3.26E-02	1.15E-01	7.87E-02	1.24E-01	2.72E-01
Nickel	9.64E-03	1.05E-02	1.06E-02	5.65E-03	-	2.83E-03	3.09E-03	3.11E-03	1.66E-03	-
Selenium	6.16E-02	4.49E-02	7.27E-02	1.61E-01	-	1.57E+00	1.77E-01	1.63E+00	1.14E+00	1.30E+00
Silver	-	-	-	-	-	7.61E-05	1.41E-04	2.70E-04	1.43E-03	-
Thallium	-	-	-	-	-	1.72E+00	2.07E+00	1.47E+00	2.65E+00	-
Vanadium	3.51E-02	3.85E-02	3.36E-02	3.91E-02	-	8.55E-02	9.37E-02	8.16E-02	9.50E-02	-
Zinc	1.96E-01	2.58E-01	3.14E-01	6.27E-01	-	7.02E-03	9.20E-03	1.12E-02	2.24E-02	-
Conventionals										
Ammonia	-	-	-	-	-	-	-	-	-	-
Cyanide	1.08E-01	1.25E-01	2.70E-01	1.19E+00	-	1.88E-05	2.04E-05	4.63E-05	1.30E-04	-
PAHs										
Anthracene	1.92E-03	2.12E-03	2.52E-03	4.67E-03	-	1.19E-04	1.24E-04	2.12E-04	5.19E-04	-
Benzo[a]anthracene	-	-	-	-	-	1.59E-02	1.90E-02	1.24E-02	4.79E-02	-
Benzo[a]pyrene	-	-	-	-	-	1.71E-02	1.67E-02	1.27E-02	5.15E-02	-
Benzo[b]fluoranthene	-	-	-	-	-	1.67E-02	1.39E-02	1.62E-02	5.81E-02	-
Benzo[g,h,i]perylene	-	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene	-	-	-	-	-	-	-	-	-	-
Chrysene	-	-	-	-	-	1.70E-02	1.36E-02	1.66E-02	7.02E-02	-
Dibenz[a,h]anthracene	-	-	-	-	-	1.94E-02	1.82E-02	3.15E-02	7.66E-02	-
Fluoranthene	2.43E-03	3.13E-03	2.05E-03	9.32E-03	-	1.72E-04	1.94E-04	2.10E-04	1.18E-03	-

Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

	Hazard Quotients for the Spotted Sandpiper					Hazard Quotients for the Mink				
	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
Chemical	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined
Indeno[1,2,3-cd]pyrene	-	-	-	-	-	1.66E-02	1.59E-02	1.19E-02	3.84E-02	-
Phenanthrene	2.13E-03	2.40E-03	2.24E-03	3.42E-03	-	1.46E-04	1.54E-04	2.11E-04	4.12E-04	-
Pyrene	-	-	-	-	-	2.74E-04	2.89E-04	3.18E-04	1.30E-03	-
PCBs										
PCB Aroclor 1242	4.52E-01	3.21E+00	2.05E+00	1.67E+00	-	3.32E-01	1.08E+00	9.41E-01	7.85E-01	1.12E-02
PCB Aroclor 1260	-	-	-	-	-	6.05E-01	1.93E+00	8.26E-01	5.53E-01	2.11E-01
PCB (total)[1]	2.72E+00	1.70E+01	1.10E+01	1.07E+01	-	-	-	-	-	-
Pesticides										
4,4'-DDD (p,p'-)	-	-	-	-	-	2.59E-04	4.83E-04	6.08E-04	6.86E-04	7.74E-04
4,4'-DDE (p,p'-)	8.11E-03	1.78E-02	1.79E-02	1.47E-02	-	1.14E-03	2.67E-03	1.99E-03	1.58E-03	5.07E-03
4,4'-DDT (p,p'-)	6.51E-01	6.92E-01	1.63E+00	1.66E+00	-	2.83E-02	7.14E-02	9.08E-02	1.51E-01	3.27E-01
Aldrin	-	-	-	-	-	3.16E-03	4.01E-03	8.77E-03	3.19E-03	8.70E-03
alpha-Chlordane	-	-	-	-	-	-	-	-	-	-
cis-Nonachlor	-	-	-	-	-	-	-	-	-	-
d-BHC	1.81E-03	6.29E-03	8.26E-03	7.18E-04	-	2.79E-04	1.11E-03	2.36E-03	3.32E-04	-
Dieldrin	8.77E-02	1.65E-01	6.38E-02	6.95E-02	-	2.19E-01	2.19E-01	2.86E-01	3.36E-01	9.52E-01
Endosulfan II	1.95E-04	6.42E-04	5.30E-04	9.98E-04	-	6.29E-05	2.35E-04	3.15E-04	8.07E-04	-
Endrin	-	-	-	-	-	-	-	-	-	-
Endrin ketone	-	-	-	-	-	-	-	-	-	-
gamma-Chlordane	-	-	-	-	-	-	-	-	-	-
[alpha, gamma]-Chlordane[2]	3.38E-03	6.30E-03	5.47E-03	4.39E-03	-	2.65E-03	5.31E-03	6.48E-03	7.83E-03	4.57E-03
Heptachlor	2.98E-02	5.98E-02	1.98E-02	6.19E-03	-	4.67E-03	7.36E-02	5.88E-02	4.63E-03	1.34E-02
Heptachlor epoxide	-	-	-	-	-	2.07E-03	5.54E-03	5.14E-03	5.89E-03	5.61E-03
Oxychlordane	-	-	-	-	-	-	-	-	-	-
trans-Nonachlor	-	-	-	-	-	-	-	-	-	-
Semivolatile Organics										
1,1'-Biphenyl	-	-	-	-	-	-	-	-	-	-
2-Chlorophenol	-	-	-	-	-	2.16E-04	2.16E-04	2.16E-04	1.01E-03	-
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	-	-	-	-	-	5.42E-06	5.42E-06	5.42E-06	2.52E-05	-
2,4-Dichlorophenol	-	-	-	-	-	9.24E-07	9.24E-07	9.24E-07	4.30E-06	-
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrophenol	-	-	-	-	-	2.71E-05	2.71E-05	2.71E-05	1.26E-04	-

Table C-2. Chronic hazard quotients for wildlife receptors in the lower Ottawa River.

	Hazard Quotients for the Spotted Sandpiper					Hazard Quotients for the Mink				
	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8	RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8	RM >8.8
Chemical	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined	Combined
2-Methylphenol	-	-	-	-	-	2.28E-06	2.28E-06	2.28E-06	1.06E-05	-
2-Nitrophenol	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	-	-	-	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	-	-	-	-	-	2.35E-05	2.38E-05	3.70E-05	7.05E-05	-
4-Nitrophenol	-	-	-	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate	4.54E-01	1.17E+00	6.29E-01	2.80E+00	-	9.49E-04	2.00E-03	1.72E-03	9.87E-03	-
Butylbenzylphthalate	-	-	-	-	-	6.66E-05	6.32E-05	1.05E-04	2.00E-04	-
Dimethyl phthalate	-	-	-	-	-	6.50E-07	6.50E-07	6.50E-07	6.50E-07	-
Di-n-octylphthalate	-	-	-	-	-	2.66E-06	3.25E-06	4.03E-06	3.06E-06	-
Pentachlorophenol	5.40E-04	5.40E-04	5.40E-04	2.52E-03	-	6.76E-03	6.76E-03	6.76E-03	3.15E-02	-
Phenol	-	-	-	-	-	8.58E-06	8.58E-06	8.58E-06	4.00E-05	-

[1] - PCB (total) = sum of A1242 anc

[2] - [alpha, gamma]Chlordane = sun