Table 2-5. Summary of Water Quality Screening Guidelines Derived for PAHs and Pesticides[a]

Chemical	TEC	PEC	log Kow	Kow	log Koc	Koc	TEC-Based WQC	PEC-Based WQC
PAHS[b.]	ug/kg	ug/kg					ug/L	ug/L
Naphthalene	176	561	3.3560	2.27E+03	3.2990	1.99E+03	7.75E+00	2.47E+01
Acenaphthylene	44	640	3.2230	1.67E+03	3.1680	1.47E+03	2.63E+00	3.83E+01
Acenaphthene	16	500	4.0120	1.03E+04	3.9440	8.79E+03	1.56E-01	4.86E+00
Fluorene	77.4	536	4.2080	1.61E+04	4.1370	1.37E+04	4.81E-01	3.33E+00
Phenanthrene	204	1170	4.5710	3.72E+04	4.4940	3.12E+04	5.48E-01	3.15E+00
Anthracene	57.2	845	4.5340	3.42E+04	4.4570	2.86E+04	1.67E-01	2.47E+00
Fluoranthene	423	2230	5.0840	1.21E+05	4.9980	9.95E+04	3.50E-01	1.84E+00
Pyrene	195	1520	4.9220	8.36E+04	4.8390	6.90E+04	2.33E-01	1.82E+00
Benzo(a)anthracene	108	1050	5.6730	4.71E+05	5.5770	3.78E+05	2.29E-02	2.23E-01
Chrysene	166	1290	5.7130	5.16E+05	5.6160	4.13E+05	3.22E-02	2.50E-01
Benzo(b)fluoranthene	240	1340	6.2660	1.85E+06	6.1600	1.45E+06	1.30E-02	7.26E-02
Benzo(k)fluoranthene	240	1340	6.2910	1.95E+06	6.1840	1.53E+06	1.23E-02	6.86E-02
Benzo(a)pyrene	150	1450	6.1070	1.28E+06	6.0030	1.01E+06	1.17E-02	1.13E-01
Indeno(1,2,3-c,d)pyrene	200	320	6.7220	5.27E+06	6.6080	4.06E+06	3.79E-03	6.07E-03
Dibenz(a,h)anthracene	33	130	6.7130	5.16E+06	6.5990	3.97E+06	6.40E-04	2.52E-03
Benzo(g,h,i)perylene	170	320	6.5070	3.21E+06	6.3970	2.49E+06	5.29E-03	9.96E-03
Benzo(e)pyrene	NC	NC	6.1350	1.36E+06	6.0310	1.07E+06	--	--
Perylene	NC	NC	6.1350	1.36E+06	6.0310	1.07E+06	--	--
2-Methylnaphthalene	NC	NC	3.8570	7.19E+03	3.7920	6.19E+03	--	--
1-Methylnaphthalene	NC	NC	3.8370	6.87E+03	3.7720	5.92E+03	--	--
2,6-Dimethylnaphthalene	NC	NC	4.3730	2.36E+04	4.2990	1.99E+04	--	--
2,3,5-Trimethylnaphthalene	NC	NC	4.8580	7.21E+04	4.7760	5.97E+04	--	--
1-Methylphenanthrenes	NC	NC	5.0370	1.09E+05	4.9520	8.95E+04	--	--
dibenzothiophene	NC	NC	4.4900	3.09E+04	4.4140	2.59E+04	--	--
Biphenyl	NC	NC	3.9500	8.91E+03	3.8831	7.64E+03	--	--
C1-napthalenes	NC	NC	3.8000	6.31E+03	3.7360	5.45E+03	--	--
C2-naphthalenes	NC	NC	4.3000	2.00E+04	4.2270	1.69E+04	--	--
C3-naphthalenes	NC	NC	4.8000	6.31E+04	4.7190	5.24E+04	--	--
C4-naphthalenes	NC	NC	5.3000	2.00E+05	5.2100	1.62E+05	--	--
C1-fluorenes	NC	NC	4.7200	5.25E+04	4.6400	4.37E+04	--	--
C2-fluorenes	NC	NC	5.2000	1.58E+05	5.1120	1.29E+05	--	--
C3-fluorenes	NC	NC	5.7000	5.01E+05	5.6030	4.01E+05	--	--
C1-phenanthrenes/anthracene	NC	NC	5.0400	1.10E+05	4.9550	9.02E+04	--	--
C2-phenanthrenes/anthracene	NC	NC	5.4600	2.88E+05	5.3670	2.33E+05	--	--
C3-phenanthrenes/anthracene	NC	NC	5.9200	8.32E+05	5.8200	6.61E+05	--	--
C4-phenanthrenes/anthracene	NC	NC	6.3200	2.09E+06	6.2130	1.63E+06	--	--
C1-benzo(a)anthracenes/chrysenes	NC	NC	6.1400	1.38E+06	6.0360	1.09E+06	--	--
C2-benzo(a)anthracenes/chrysenes	NC	NC	6.4290	2.69E+06	6.3200	2.09E+06	--	--
C3-benzo(a)anthracenes/chrysenes	NC	NC	6.9400	8.71E+06	6.8220	6.64E+06	--	--
C4-benzo(a)anthracenes/chrysenes	NC	NC	7.3600	2.29E+07	7.2350	1.72E+07	--	--
C1-pyrene/fluoranthene	NC	NC	5.2870	1.94E+05	5.1970	1.57E+05	--	--
C1-fluoranthenes/anthracene	NC	NC	NA	NA	NA	NA	--	--
C2-fluoranthenes/anthracene	NC	NC	NA	NA	NA	NA	--	--
Total PAHs	1610	22800	5.9800	9.55E+05	5.8800	7.60E+05	1.69	23.87
Pesticides								
DDE[c]	3.16	31.3	7.0000	1.00E+07	6.8813	7.61E+06	3.16E-05	3.13E-04
DDD[c]	4.88	28	6.2000	1.58E+06	6.0949	1.24E+06	3.09E-04	1.77E-03
DDT[c]	4.16	62.9	6.1900	1.55E+06	6.0851	1.22E+06	2.68E-04	4.06E-03
Aldrin[d]	NC	NC	5.66	4.57E+05	5.5641	3.67E+05		
cis-Chlordane[d,e]	3.24	17.6	6	1.00E+06	5.8983	7.91E+05	3.24E-04	1.76E-03
gamma-Chlordane[d,e]	3.24	17.6	6	1.00E+06	5.8983	7.91E+05	3.24E-04	1.76E-03
trans-Nonachlor[d]	7	6	NA	NA	NA	NA	--	--
Dieldrin	1.9	61.8	5.16	1.45E+05	5.0726	1.18E+05	1.31E-03	4.26E-02
Heptachlor	--	--	5.44	2.75E+05	5.3478	2.22E+05	--	--
Heptachlor epoxide	2.47	16	5.4	2.51E+05	5.3085	2.03E+05	9.84E-04	6.37E-03
Hexachlorobenzene	2.37	24	5.66	4.57E+05	5.5641	3.66E+05	5.19E-04	1.01E-01
Lindane	2.37	4.99	3.85	7.07E+03	3.7848	6.09E+03	3.35E-02	7.06E-02
Mirex	7	130	6.89	7.76E+06	6.7732	5.93E+06	9.02E-05	1.68E-03
Endrin	2.22	207	4.56	3.63E+04	4.4828	3.04E+04	6.12E-03	5.70E-01

TEC = Threshold Effect Concentration
PEC = Probable Effect Concentration

a. Based on sediment guidelines summarized in Table 2-3.

b. Reported by EPA (2000b) unless otherwise noted.

c. DDE, DDD, DDT Kow values reported by the U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry (1992).

d. Pesticide Kow values reported by Isnard and Lambert (1988).

e. Kow provided for a-Chlordane and TEC/PEC values provided for Total Chlordane

NC - No criteria available