

US EPA ARCHIVE DOCUMENT

<u>Chemical</u>	<u>CAS No.</u>	<u>Air</u> mg/m <sup>3</sup>	<u>Water</u> ug/l	<u>Sediment</u> <sup>s</sup> ug/kg	<u>Soil</u> <sup>v</sup> ug/kg
Acenaphthene	83-32-9		<b>38<sup>a</sup></b>	6.71 <sup>r</sup>	6.82 e+5
Acenaphthylene	208-96-8		4.84 e+3 <sup>b</sup>	5.87 <sup>r</sup>	6.82 e+5
Acetone	67-64-1	959	<b>1700<sup>a, c, z</sup></b>	<b>9.9<sup>z</sup></b>	2500 <sup>w</sup>
Acetonitrile	75-05-8	17.1	<b>12 e+3<sup>d, z</sup></b>	<b>56<sup>z</sup></b>	1370 <sup>w</sup>
Acetophenone	98-86-2		-----	-----	3 e+5
Acetylaminofluorene [2-]	53-96-3		535 <sup>b</sup>	15.3	596
Acrolein	107-02-8	0.578	<b>0.19<sup>c, z</sup></b>	<b>1.52 e-3<sup>z</sup></b>	5270 <sup>w</sup>
Acrylonitrile	107-13-1	0.797	<b>66<sup>a</sup></b>	<b>1.2</b>	23.9 <sup>w</sup>
Aldrin	309-00-2		<b>1.7 e-2<sup>a, z</sup></b>	2 <sup>t</sup>	3.32 <sup>x</sup>
Allyl chloride	107-05-1	1.22		-----	13.4
Aminobiphenyl [4-]	92-67-1			-----	3.05
Aniline	62-53-3		<b>4.1<sup>d</sup></b>	<b>0.31</b>	56.8 <sup>w</sup>
Anthracene	120-12-7		<b>0.035<sup>f</sup></b>	<b>57.2<sup>u</sup></b>	1.48 e+6
Antimony (Total)	7440-36-0		<b>80<sup>c</sup></b>		142
Aramite	140-57-8		3.09 <sup>g</sup>	1.11 e-3	1.66 e+5
Arsenic (Total)	7440-38-2		<b>148<sup>f</sup></b>	<b>9790<sup>u</sup></b>	5700
Azobenzene [p-(dimethylamino)]	60-11-7		1.65 <sup>b</sup>	318	40
Barium (Total)	7440-39-3		<b>220<sup>d, z</sup></b>		1040
Benzene	71-43-2	9.76	114 <sup>f</sup>	142	255
Benzo[a]anthracene	56-55-3		<b>0.025<sup>c, z</sup></b>	<b>108<sup>u</sup></b>	5210

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Benzo[a]pyrene	50-32-8		0.014 <sup>h</sup>	<b>150<sup>u</sup></b>	1520
Benzo[b]fluoranthene	205-99-2		9.07 <sup>b</sup>	1.04 e+4	5.98 e+4
Benzo[ghi]perylene	191-24-2		7.64 <sup>b</sup>	170 <sup>t</sup>	1.19 e+5
Benzo[k]fluoranthene	207-8-9		-----	240 <sup>t</sup>	1.48 e+5
Benzyl alcohol	100-51-6		<b>8.6<sup>h,z</sup></b>	<b>1.04<sup>z</sup></b>	6.58 e+4
Beryllium (Total)	7440-41-7		<b>3.6<sup>d,k,z</sup></b>		1060
BHC [alpha-]	319-84-6		12.4 <sup>b</sup>	6 <sup>t</sup>	99.4
BHC [beta-]	319-85-7		0.495 <sup>b</sup>	5 <sup>t</sup>	3.98 <sup>x</sup>
BHC [delta-]	319-86-8		667 <sup>g</sup>	7.15 e+4	9940
BHC [gamma-]	58-89-9		<b>0.026<sup>a</sup></b>	<b>2.37<sup>u</sup></b>	5 <sup>x</sup>
Bromodichloromethane	75-27-4			-----	540
Bromoform	75-25-2	9.11	<b>230<sup>d,z</sup></b>	<b>492<sup>z</sup></b>	1.59 e+4
Bromophenyl phenyl ether [4-]	101-55-3		1.5 <sup>h</sup>	1550	
Butylamine [N-Nitrosodi-n-]	924-16-3		-----	-----	267
Butylbenzyl phthalate	85-68-7		<b>23<sup>d,z</sup></b>	<b>1970<sup>z</sup></b>	239
Cadmium (Total)	7440-43-9		<b>0.15<sup>i,j,k</sup></b>	<b>990<sup>u</sup></b>	2.22
Carbon disulfide	75-15-0	3.67	<b>15<sup>d,z</sup></b>	<b>23.9<sup>z</sup></b>	94.1
Carbon tetrachloride	56-23-5	1.41	<b>240<sup>d</sup></b>	<b>1450</b>	2980
Chlordane	57-74-9		<b>4.3 e-3<sup>i</sup></b>	<b>3.24<sup>u,z</sup></b>	224 <sup>x</sup>
Chlorethyl ether [bis(2-)]	111-44-4		<b>19 e+3<sup>l</sup></b>	<b>3520</b>	2.37 e+4 <sup>w</sup>

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Chloro-1-methylethyl)ether [bis(2-]	108-60-1		-----	-----	1.99 e+4
Chloroaniline [p-]	106-47-8		232 <sup>g</sup>	146	1100
Chlorobenzene	108-90-7	120	<b>47<sup>a</sup></b>	<b>291</b>	1.31 e+4
Chlorobenzilate	510-15-6		7.16 <sup>g</sup>	860	5050
Chloroethane	75-0-3	20	-----	-----	
Chloroform	67-66-3	1.34	<b>140<sup>d</sup></b>	<b>121</b>	1190
Chloronaphthalene [2-]	91-58-7		0.396 <sup>b</sup>	417	12.2
Chlorophenol [2-]	95-57-8		<b>24<sup>a</sup></b>	<b>31.9</b>	243
Chlorophenyl phenyl ether [4-]	7005-72-3			-----	
Chloroprene	126-99-8	4.16 E-2		-----	2.9
Chromium <sup>+3</sup> (Total)	7440-47-3		42 <sup>j, k</sup>	<b>4.34 e+4<sup>u</sup></b>	400 <sup>y</sup>
Chrysene	218-1-9		-----	<b>166<sup>u</sup></b>	4730
Cobalt (Total)	7440-48-4		<b>24<sup>d</sup></b>	5.00 e+4 <sup>t</sup>	140
Copper (Total)	7440-50-8		<b>1.58<sup>j, k, z</sup></b>	<b>3.16 e+4<sup>u</sup></b>	<b>5400</b>
Cresol [4,6-dinitro-o-]	534-52-1		<b>23<sup>m</sup></b>	<b>104</b>	144
Cresol [m-]	108-39-4		<b>62<sup>d</sup></b>	<b>52.4</b>	3490
Cresol [o-]	95-48-7		<b>67<sup>c</sup></b>	<b>55.4</b>	4.04 e+4
Cresol [p-chloro-m-]	59-50-7		34.8 <sup>g</sup>	388	7950
Cresol [p-]	106-44-5		<b>25<sup>a</sup></b>	<b>20.2</b>	1.63 e+5
Cyanide	57-12-5		5.2 <sup>a</sup>	0.1 <sup>t</sup>	1330 <sup>w</sup>

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DDD [4,4'-]	72-54-8		-----	<b>4.88<sup>u, z</sup></b>	758
DDE [4,4'-]	72-55-9		4.51 e-9 <sup>c</sup>	<b>3.16<sup>u</sup></b>	596
DDT [4,4'-]	50-29-3		<b>1.1 e-5<sup>a, z</sup></b>	<b>4.16<sup>u</sup></b>	<b>3.5<sup>z</sup></b>
Di-n-butyl phthalate	84-74-2		<b>9.7<sup>a</sup></b>	<b>1114</b>	150
Di-n-octyl phthalate	117-84-0		30 <sup>f</sup>	4.06 e+4	7.09 e+5
Diallate	2303-16-4		-----	-----	452 <sup>w</sup>
Dibenzofuran	132-64-9		<b>4<sup>a, z</sup></b>	<b>449<sup>z</sup></b>	
Dibenz[a,h]anthracene	53-70-3		-----	<b>33<sup>u</sup></b>	1.84 e+4
Dibromo-3-chloropropane [1,2-]	96-12-8	0.32	-----	-----	35.2
Dibromochloromethane	124-48-1		-----	-----	2050
Dibromoethane [1,2-]	106-93-4	176	-----	-----	1230
Dichloro-2-butene [trans-1,4-]	110-57-6	4.03		-----	
Dichlorobenzene [m-]	541-73-1	273	<b>38<sup>a, z</sup></b>	<b>1315<sup>z</sup></b>	3.77 e+4
Dichlorobenzene [o-]	95-50-1	270	<b>14<sup>h</sup></b>	<b>294</b>	2960
Dichlorobenzene [p-]	106-46-7	275	<b>9.4<sup>d, z</sup></b>	<b>318<sup>z</sup></b>	546
Dichlorobenzidine [3,3'-]	91-94-1		<b>4.5<sup>a, z</sup></b>	<b>127</b>	646
Dichlorodifluoromethane	75-71-8	1550		-----	3.95 e+4
Dichloroethane [1,1-]	75-34-3	1240	47 <sup>h</sup>	0.575	2.01 e+4
Dichloroethane [1,2-]	107-6-2	29.7	<b>910<sup>h</sup></b>	<b>260</b>	2.12 e+4
Dichloroethene [1,1-]	75-35-4	0.303	<b>65<sup>a, z</sup></b>	<b>19.4<sup>z</sup></b>	8280

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Dichloroethylene [trans-1,2-]	156-60-5	29.1	<b>970<sup>d</sup></b>	<b>654</b>	784
Dichlorophenol [2,4-]	120-83-2		<b>11<sup>d,z</sup></b>	<b>81.7<sup>z</sup></b>	8.75 e+4
Dichlorophenol [2,6-]	87-65-0			-----	1170
Dichloropropane [1,2-]	78-87-5	70.6	<b>360<sup>a,z</sup></b>	<b>333<sup>z</sup></b>	3.27 e+4
Dichloropropene [cis-1,3-]	10061-1-5	5.89	-----	-----	398
Dichloropropene [trans-1,3-]	10061-2-6	5.89	-----	-----	398
Dieldrin	60-57-1		<b>7.1 e-5<sup>a</sup></b>	<b>1.9<sup>u,z</sup></b>	2.38
Diethyl O-2-pyrazinyl phosphorothioate [O,O-]	297-97-2			-----	799
Diethyl phthalate	84-66-2		<b>110<sup>a</sup></b>	<b>295</b>	2.48 e+4
Dimethoate	60-51-5		-----	-----	218
Dimethyl phthalate	131-11-3		-----	-----	7.34 e+5
Dimethylbenzidine [3,3'-]	119-93-7			-----	104
Dimethylbenz[a]anthracene [7,12-]	57-97-6		0.548 <sup>b</sup>	6.64 e+4	1.63 e+4
Dimethylphenethylamine [alpha,alpha-]	122-9-8			-----	300
Dimethylphenol [2,4-]	105-67-9		100 <sup>b</sup>	304	10 <sup>x</sup>
Dinitrobenzene [m-]	99-65-0		<b>22<sup>d</sup></b>	<b>8.61</b>	655
Dinitrophenol [2,4-]	51-28-5		<b>19<sup>a</sup></b>	<b>6.21</b>	60.9
Dinitrotoluene [2,4-]	121-14-2		<b>44<sup>d,z</sup></b>	<b>14.4<sup>z</sup></b>	1280
Dinitrotoluene [2,6-]	606-20-2		<b>81<sup>d</sup></b>	<b>39.8</b>	32.8

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Dinoseb	88-85-7		<b>0.48<sup>a</sup></b>	<b>14.5</b>	21.8
Dioxane [1,4-]	123-91-1	367	<b>22 e+3<sup>a</sup></b>	<b>119</b>	2050 <sup>w</sup>
Diphenylamine	122-39-4		412 <sup>b</sup>	34.6	1010
Disulfoton	298-4-4		4.02 e-2 <sup>c</sup>	324	19.9
D [2,4-]	94-75-7		<b>220<sup>a</sup></b>	<b>1273</b>	27.2
Endosulfan I	959-98-8		<b>0.056<sup>j</sup></b>	<b>3.26</b>	119
Endosulfan II	33213-65-9		<b>0.056<sup>j</sup></b>	<b>1.94</b>	119
Endosulfan sulfate	1031-7-8		2.22 <sup>b</sup>	34.6	35.8
Endrin	72-20-8		<b>0.036<sup>a</sup></b>	<b>2.22<sup>u, z</sup></b>	10.1
Endrin aldehyde	7421-93-4		0.15 <sup>b</sup>	<b>480<sup>z</sup></b>	10.5
Ethyl methacrylate	97-63-2	356		-----	3 e+4
Ethyl methane sulfonate	62-50-0			-----	
Ethylbenzene	100-41-4	304	<b>14<sup>o, z</sup></b>	<b>175</b>	5160
Famphur	52-85-7			-----	49.7
Fluoranthene	206-44-0		<b>1.9<sup>f, z</sup></b>	<b>423<sup>u</sup></b>	1.22 e+5
Fluorene	86-73-7		<b>19<sup>d</sup></b>	<b>77.4<sup>u</sup></b>	1.22 e+5
Heptachlor	76-44-8		<b>3.8 e-3<sup>j</sup></b>	0.6 <sup>r</sup>	5.98
Heptachlor epoxide	1024-57-3		<b>3.8 e-3<sup>j</sup></b>	<b>2.47<sup>u</sup></b>	152
Hexachlorobenzene	118-74-1		<b>3 e-4<sup>a</sup></b>	20 <sup>t</sup>	199
Hexachlorobutadiene	87-68-3		<b>0.053<sup>a, z</sup></b>	<b>26.5<sup>z</sup></b>	39.8

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Hexachlorocyclopentadiene	77-47-4		77 <sup>b</sup>	901	755
Hexachloroethane	67-72-1		<b>8<sup>a, z</sup></b>	<b>584<sup>z</sup></b>	596
Hexachlorophene	70-30-4		0.228 <sup>e</sup>	2.31 e+5	199
Hexachloropropene	1888-71-7		-----	-----	
Hexanone [2-]	591-78-6	105	<b>99<sup>h, z</sup></b>	<b>58.2<sup>z</sup></b>	1.26 e+4
Indeno (1,2,3-cd) pyrene	193-39-5		4.31 <sup>b</sup>	200 <sup>t</sup>	1.09 e+5
Isobutyl alcohol	78-83-1	32.8	-----	-----	2.08 e+4 <sup>w</sup>
Isodrin	465-73-6		3.09 e-2 <sup>e</sup>	55.2	3.32 <sup>x</sup>
Isophorone	78-59-1		<b>920<sup>d</sup></b>	<b>432</b>	1.39 e+5
Isosafrole	120-58-1			-----	9940
Kepone	143-50-0		0.132 <sup>e</sup>	3.31	32.7
Lead (Total)	7439-92-1		<b>1.17<sup>i, k, z</sup></b>	<b>3.58 e+4<sup>u</sup></b>	53.7
Mercury (Total)	7439-97-6		1.3 e-3 <sup>a</sup>	174 <sup>r</sup>	100 <sup>y</sup>
Methacrylonitrile	126-98-7	3.38		-----	57 <sup>w</sup>
Methane [bis(2-chloroethoxy)]	111-91-1		-----	-----	302 <sup>w</sup>
Methapyrilene	91-80-5			-----	2780 <sup>w</sup>
Methoxychlor	72-43-5		<b>0.019<sup>h</sup></b>	<b>13.6</b>	19.9
Methyl bromide	74-83-9	26.5	<b>16<sup>d</sup></b>	<b>1.37</b>	235 <sup>w</sup>
Methyl chloride	74-87-3	2.63		-----	1.04 e+4 <sup>w</sup>
Methyl ethyl ketone	78-93-3	642	<b>2200<sup>a, z</sup></b>	<b>42.4<sup>z</sup></b>	8.96 e+4 <sup>w</sup>



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Methyl iodide	74-88-4	11.7		-----	1230
Methyl mercury	22967-92-6		2.46 e-3 <sup>c</sup>	0.01	1.58
Methyl methacrylate	80-62-6	87.1	2800 <sup>g</sup>	168	9.84 e+5 <sup>w</sup>
Methyl methanesulfanate	66-27-3			-----	315 <sup>w</sup>
Methyl parathion	298-0-0			-----	0.292
Methyl-2-pentanone [4-]	108-10-1	45.9	<b>170<sup>h, z</sup></b>	<b>25.1<sup>z</sup></b>	4.43 e+5
Methylcholanthrene [3-]	56-49-5		8.91 e-2 <sup>b</sup>	8.19 e+6	77.9
Methylene bromide	74-95-3	344		-----	6.5 e+4 <sup>w</sup>
Methylene chloride	75-9-2	4780	<b>940<sup>a</sup></b>	<b>159<sup>z</sup></b>	4050 <sup>w</sup>
Methylnaphthalene [2-]	91-57-6		330 <sup>b</sup>	20.2 <sup>r</sup>	3240
Naphthalene	91-20-3	80.1	<b>13<sup>a, z</sup></b>	<b>176<sup>u</sup></b>	99.4
Naphthoquinone [1,4-]	130-15-4		-----	-----	1670
Naphthylamine [1-]	134-32-7		-----	-----	9340
Naphthylamine [2-]	91-59-8			-----	3030
Nickel (Total)	7440-2-0		<b>28.9<sup>j, k, z</sup></b>	<b>2.27 e+4<sup>u</sup></b>	1.36 e+4
Nitroaniline [m-]	99-9-2			-----	3160
Nitroaniline [o-]	88-74-4			-----	7.41 e+4
Nitroaniline [p-]	100-1-6			-----	2.19 e+4
Nitrobenzene	98-95-3		<b>220<sup>a, z</sup></b>	<b>145<sup>z</sup></b>	1310
Nitrophenol [o-]	88-75-5		-----	-----	1600

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Nitrophenol [p-]	100-2-7		<b>60<sup>a</sup></b>	<b>13.3</b>	5120
Nitroquinoline-1-oxide [4-]	56-57-5			-----	122
Nitrosodiethylamine [N-]	55-18-5		768 <sup>g</sup>	22.8	69.3 <sup>w</sup>
Nitrosodimethylamine [N-]	62-75-9			-----	0.0321 <sup>w</sup>
Nitrosodiphenylamine [N-]	86-30-6		-----	-----	545
Nitrosomethylethylamine [N-]	10595-95-6			-----	1.66 <sup>w</sup>
Nitrosomorpholine [N-]	59-89-2			-----	70.6 <sup>w</sup>
Nitrosopiperidine [N-]	100-75-4			-----	6.65 <sup>w</sup>
Nitrosopyrrolidine [N-]	930-55-2			-----	12.6 <sup>w</sup>
Parathion	56-38-2		<b>0.013<sup>a, d</sup></b>	<b>0.757</b>	0.34 <sup>y</sup>
Pentachlorobenzene	608-93-5		<b>0.019<sup>a, z</sup></b>	<b>24<sup>z</sup></b>	497
Pentachloroethane	76-1-7	0.68	56.4 <sup>g</sup>	689	1.07 e+4
Pentachloronitrobenzene	82-68-8		-----	-----	7090
Pentachlorophenol	87-86-5		<b>4.0<sup>j, p, z</sup></b>	<b>2.3 e+4<sup>z</sup></b>	119
Phenacetin	62-44-2		-----	-----	1.17 e+4
Phenanthrene	85-1-8		<b>3.6<sup>f</sup></b>	<b>204<sup>u</sup></b>	4.57 e+4
Phenol	108-95-2	4.31	<b>180<sup>c</sup></b>	<b>49.1</b>	1.2 e+5
Phenylenediamine [p-]	106-50-3			-----	6160 <sup>w</sup>
Phorate	298-02-2		3.62 <sup>g</sup>	0.861	0.496
Phthalate [bis(2-ethylhexyl)]	117-81-7		<b>0.3<sup>q, z</sup></b>	182 <sup>r</sup>	925

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Picoline [2-]	109-6-8	140	-----	-----	9900 <sup>w</sup>
Polychlorinated biphenyls	1336-36-3		<b>1.2 e-4<sup>a,z</sup></b>	<b>59.8<sup>u</sup></b>	0.332
Polychlorinated dibenzo-p-dioxins	PCDD-S		2.78 e-7 <sup>b</sup>	<b>0.011</b>	1.99 e-4
Polychlorinated dibenzofurans	51207-31-9		-----	-----	0.0386
Pronamide	23950-58-5		-----	-----	13.6 <sup>x</sup>
Propionitrile	107-12-0	1.87	-----	-----	49.8 <sup>w</sup>
Propylamine [N-nitrosodi-n-]	621-64-7			-----	544
Pyrene	129-0-0		0.3 <sup>g</sup>	<b>195<sup>u</sup></b>	7.85 e+4
Pyridine	110-86-1	13.7	2380 <sup>g</sup>	106	1030 <sup>w</sup>
Safrole	94-59-7		-----	-----	404
Selenium (Total)	7782-49-2		5 <sup>j</sup>		27.6
Silver (Total)	7440-22-4		<b>0.12<sup>f,z</sup></b>	500 <sup>t</sup>	4040
Silvex	93-72-1		<b>30<sup>a,z</sup></b>	<b>675<sup>z</sup></b>	109 <sup>x</sup>
Styrene	100-42-5	0.946	<b>32<sup>d,z</sup></b>	<b>254<sup>z</sup></b>	4690
Sulfide	18496-25-8				3.58
Tetrachlorobenzene [1,2,4,5-]	95-94-3		<b>3<sup>a,z</sup></b>	<b>1252<sup>z</sup></b>	2020
Tetrachlorodibenzo-p-dioxin [2,3,7,8-]	1746-1-6		<b>3 e-9<sup>a,z</sup></b>	<b>1.2 e-4<sup>z</sup></b>	1.99 e-4
Tetrachloroethane [1,1,1,2-]	630-20-6	22.5	-----	-----	2.25 e+5
Tetrachloroethane [1,1,2,2-]	79-34-5	353	<b>380<sup>a</sup></b>	<b>850</b>	127
Tetrachloroethene	127-18-4	69	<b>45<sup>a</sup></b>	<b>990</b>	9920

<u>Chemical</u>	<u>CAS No.</u>	<u>Air</u> mg/m <sup>3</sup>	<u>Water</u> ug/l	<u>Sediment<sup>s</sup></u> ug/kg	<u>Soil<sup>v</sup></u> ug/kg
Tetrachlorophenol [2,3,4,6-]	58-90-2		<b>1.2<sup>a,z</sup></b>	<b>129<sup>z</sup></b>	199
Tetraethyl dithiopyrophosphate	3689-24-5		13.9 <sup>b</sup>	560	596
Thallium (Total)	7440-28-0		<b>10<sup>a</sup></b>		56.9
Tin (Total)	7440-31-5		<b>180<sup>d</sup></b>		7620
Toluene	108-88-3	1040	253 <sup>f</sup>	<b>1220<sup>z</sup></b>	5450
Toluidine [5-nitro-o-]	99-55-8			-----	8730
Toluidine [o-]	95-53-4			-----	2970 <sup>w</sup>
Toxaphene	8001-35-2		<b>1.4 e-4<sup>a,z</sup></b>	<b>0.077<sup>z</sup></b>	119
Trichlorobenzene [1,2,4-]	120-82-1		<b>30<sup>a,z</sup></b>	<b>5062<sup>z</sup></b>	1.11 e+4
Trichloroethane [1,1,1-]	71-55-6	4170	<b>76<sup>d,z</sup></b>	<b>213<sup>z</sup></b>	2.98 e+4
Trichloroethane [1,1,2-]	79-0-5	11.6	<b>500<sup>a,z</sup></b>	<b>518<sup>z</sup></b>	2.86 e+4
Trichloroethylene	79-1-6	1220	<b>47<sup>h,z</sup></b>	<b>112<sup>z</sup></b>	1.24 e+4
Trichlorofluoromethane	75-69-4	5150		-----	1.64 e+4
Trichlorophenol [2,4,5-]	95-95-4			-----	1.41 e+4
Trichlorophenol [2,4,6-]	88-6-2		<b>4.9<sup>d</sup></b>	<b>208</b>	9940
Trichloropropane [1,2,3-]	96-18-4	3.32	-----	-----	3360
Trichlorophenoxyacetic acid [2,4,5-]	93-76-5		686 <sup>g</sup>	5.87 e+4	596
Triethyl phosphorothioate [O,O,O-]	126-68-1		58.2 <sup>b</sup>	189	818
Trinitrobenzene [Sym-]	99-35-4			-----	376 <sup>w</sup>
Vanadium (Total)	7440-62-2		<b>12<sup>a,z</sup></b>		1590

<u>Chemical</u>	<u>CAS No.</u>	<u>Air</u> mg/m <sup>3</sup>	<u>Water</u> ug/l	<u>Sediment<sup>s</sup></u> ug/kg	<u>Soil<sup>v</sup></u> ug/kg
Vinyl acetate	108-5-4	359	248 <sup>g</sup>	13	1.27 e+4 <sup>w</sup>
Vinyl chloride	75-1-4	0.221	<b>930<sup>a</sup></b>	<b>202</b>	646
Xylenes (total)	1330-20-7	135	<b>27<sup>d, z</sup></b>	<b>433<sup>z</sup></b>	1 e+4 <sup>x</sup>
Zinc (Total)	7440-66-6		<b>65.7<sup>j, k, z</sup></b>	<b>1.21 e+5<sup>u</sup></b>	6620 <sup>y</sup>

<sup>a</sup> = Michigan water quality standards, Rule 57 water quality values, July 23, 2003. Available at: [http://www.michigan.gov/deq/0,1607,7-135-3313\\_3686\\_3728-11383--,00.html](http://www.michigan.gov/deq/0,1607,7-135-3313_3686_3728-11383--,00.html). The water ESL data for acenaphthene, BHC (gamma), cyanide and parathion are Michigan (final chronic value or FCV) Tier I criteria. Likewise, water ESL data for dieldrin, dioxin, DDT, endrin, hexachlorobenzene, hexachlorobutadiene, mercury, PCB's and toxaphene represent wildlife values (see Notes at end of these footnotes for dioxin, DDT, mercury and PCB's). All of the remaining data are Tier II values.

<sup>b</sup> = Water Ecological Screening Level (ESL) based on exposure to a mink (*Mustela vison*).

<sup>c</sup> = Indiana water quality standards, Title 327, Article 2, of the Indiana Administrative Code, Feb. 4, 2002.

Available at: <http://www.ai.org/legislative/iac/t03270/a00020.pdf> The water ESL for toxaphene is from the Indiana chronic aquatic criterion for all waters outside of mixing zones (see Table 1 under Rule 1 of 327 IAC 2-1-6 Minimum Surface Water Quality Standards at the above Internet site). The remaining water ESL data are either wildlife values (for dioxin, DDT, mercury and PCB's) or Tier II values for the Indiana Great Lakes Basin (see Great Lakes Basin Criteria and Values Table as developed under Rule 1.5 of 327 IAC Article 2 as referenced above).

<sup>d</sup> = Ohio water quality standards, Chapter 3745-1 of the Ohio Administrative Code, Dec. 30, 2002. Available at: <http://www.epa.state.oh.us/dsw/rules/3745-1.html> The water ESL data for endrin and parathion are Ohio aquatic life Tier I criteria from the Outside Mixing Zone Average (OMZA). Wildlife values are available for dioxin, DDT, mercury and PCB's. All of the remaining data are Ohio aquatic life Tier II values from the OMZA. See Ohio summary tables for water quality criteria and values along with reference on the development of Tier I criteria and Tier II values.

<sup>e</sup> = Water ESL based on exposure to a belted kingfisher (*Ceryle alcyon*).

<sup>f</sup> = Minnesota water quality standards, Rule 7052.0100, Subpart 2 (water ESL data for arsenic & benzene represents aquatic life chronic standards and dioxin, DDT, mercury and PCB's represents wildlife values), April 13, 2000. Rule 7050.0222, Subpart 2, Feb. 12, 2003. Available at:

<http://www.revisor.leg.state.mn.us/arule/7050/0100.html> and

<http://www.revisor.leg.state.mn.us/arule/7052/0222.html>

<sup>g</sup> = Region 5, RCRA Interim Criteria, based on Aquire database with acceptable review codes and endpoints (life cycle). Must have eight or more acceptable studies (i.e., chronic and/or acute).

<sup>h</sup> = GLWQI Tier II value as presented in: Suter, G.W. II and Tsao, C.L. 1996. Toxicological benchmarks for screening potential contaminants of concern for effects on aquatic biota, 1996 Revision. ES/ER/TM-96/R2. Available at:

<http://www.esd.oml.gov/programs/ecorisk/ecorisk.html>

<sup>i</sup> = U.S. EPA 2001 Update of Ambient Water Quality Criteria for Cadmium (EPA 822-R-01-001).

<sup>j</sup> = U.S. EPA National Recommended Water Quality Criteria: 2002 (EPA 822-R-02-047)

<sup>k</sup> = For hardness-dependent metals (beryllium, cadmium, chromium<sup>+3</sup>, copper, lead, nickel and zinc), freshwater chronic criteria are based on soft water with a total hardness of 50 mg/L as CaCO<sub>3</sub>. Soft water is common within Region 5 and this water ESL may be recalculated when site specific water hardness is less than 50 mg/L.

<sup>l</sup> = U.S. EPA Ambient Water Quality for Chloroalkyl Ethers (EPA 440/5-80-030). No definitive data available concerning chronic toxicity. The water ESL is based on no adverse effects for a chronic toxicity embryo-larval test of the fathead minnow.

<sup>m</sup> = U.S. EPA Ambient Water Quality for Nitrophenols (EPA 440/5-80-063). The acute value of 230 ug/l was adjusted with an uncertainty factor of ten for 2,4-dinitrophenol and 4,6-dinitro-*o*-cresol since no chronic criteria are available.

<sup>n</sup> = Wisconsin Surface Water Quality Criteria and Secondary Values for Toxic Substances, NR 105.07(1)(b), Sept.1, 1997. Available at: <http://www.legis.state.wi.us/rsb/code/nr/nr100.html>

<sup>o</sup> = Illinois water quality standards, Title 35, Part 302.208, Dec. 20, 2002. Available at: <http://www.ipcb.state.il.us/SLR/IPCBandIEPAEnvironmentalRegulations-Title35.asp>

<sup>p</sup> = The criterion for pentachlorophenol is pH dependent and is based on a pH of 6.5.

<sup>q</sup> = U.S. EPA Ambient Water Quality for Phthalate Esters (EPA 440/5-80-067). A chronic value of 3 ug/L that resulted in significant reproductive impairment was adjusted with an uncertainty factor of ten.

<sup>r</sup> = Environment Canada. September 1994. Interim Sediment Quality Assessment Values. Ecosystem Conservation Directorate. Evaluation and Interpretation Branch.

<sup>s</sup> = Unless noted otherwise, all Sediment ESLs were derived using equilibrium partitioning (EqP) equation and the corresponding water ESL. Note: Sediment ESL =  $K_{oc} \times \text{Water ESL} \times 0.01$ .

<sup>t</sup> = Ontario Ministry of the Environment. August 1993. Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario.

<sup>u</sup> = Consensus based threshold effect concentrations (TEC) as presented in MacDonald et. al. 2000. Development and evaluation of consensus-based sediment quality guidelines for freshwater ecosystems. Arch Environ Contam Toxicol 39:20-31 (see Table 2). The TEC for mercury had a high incidence of toxicity and was not used. These values do not consider bioaccumulation nor biomagnification.

<sup>v</sup> = Unless noted otherwise, all Soil ESLs are based on exposure to a masked shrew (*Sorex cinerus*).

<sup>w</sup> = Soil ESL is based on exposure to a meadow vole (*Microtus pennsylvanicus*).

<sup>x</sup> = Soil ESL is based on exposure to a plant.

<sup>y</sup> = Soil ESL is based on exposure to soil invertebrates (e.g., earthworms).

<sup>z</sup> = New ESL data is lower than the previous table.

Notes: New ESL data are displayed in bold font and a dashed line (e.g., ----) is used to show when data was deleted from the previous table (i.e., supporting data was inadequate). All six states in EPA Region 5 have the same water ESL's for dioxin, DDT, mercury and PCB's which are based on a wildlife value. A summary report will be created on the development of soil benchmarks including equations, criteria and references. Likewise, a report will be prepared on the development of water benchmarks that are based on mink and belted kingfisher exposure.