**Section 742.APPENDIX B Tier 1 Illustrations and Tables**

**Section 742.TABLE E Tier 1 Groundwater Remediation Objectives for the Groundwater Component of the Groundwater Ingestion Route**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Groundwater Remediation Objective | |
| CAS No. | Chemical Name | Class I  (mg/L) | Class II  (mg/L) |
|  | **Organics** |  |  |
| 83-32-9 | Acenaphthene | 0.42 | 2.1 |
| 67-64-1 | Acetone | 6.3 | 6.3 |
| 15972-60-8 | Alachlor | 0.002c | 0.01c |
| 116-06-3 | Aldicarb | 0.003c | 0.015c |
| 309-00-2 | Aldrin | 0.014a | 0.07 |
| 120-12-7 | Anthracene | 2.1 | 10.5 |
| 1912-24-9 | Atrazine | 0.003c | 0.015c |
| 71-43-2 | Benzene | 0.005c | 0.025c |
| 56-55-3 | Benzo(*a*)anthracene | 0.00013a | 0.00065 |
| 205-99-2 | Benzo(*b*)fluoranthene | 0.00018a | 0.0009 |
| 207-08-9 | Benzo(*k*)fluroanthene | 0.00017a | 0.00085 |
| 50-32-8 | Benzo(*a*)pyrene | 0.0002a,c | 0.002c |
| 65-85-0 | Benzoic Acid | 28 | 28 |
| 111-44-4 | Bis(2-chloroethyl)ether | 0.01a | 0.01 |
| 117-81-7 | Bis(2-ethylhexyl)phthalate (Di(2-ethylhexyl)phthalate) | 0.006c | 0.06c |
| 75-27-4 | Bromodichloromethane (Dichlorobromomethane) | 0.0002a | 0.0002 |
| 75-25-2 | Bromoform | 0.001a | 0.001 |
| 71-36-3 | Butanol | 0.7 | 0.7 |
| 85-68-7 | Butyl benzyl phthalate | 1.4 | 7.0 |
| 86-74-8 | Carbazole | --- | --- |
| 1563-66-2 | Carbofuran | 0.04c | 0.2c |
| 75-15-0 | Carbon disulfide | 0.7 | 3.5 |
| 56-23-5 | Carbon tetrachloride | 0.005c | 0.025c |
| 57-74-9 | Chlordane | 0.002c | 0.01c |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Groundwater Remediation Objective | |
| CAS No. | Chemical Name | Class I  (mg/L) | Class II  (mg/L) |
| 106-47-8 | 4-Chloroaniline (p-Chloroaniline) | 0.028 | 0.028 |
| 108-90-7 | Chlorobenzene (Monochlorobenzene) | 0.1c | 0.5c |
| 124-48-1 | Chlorodibromomethane (Dibromochloromethane) | 0.14 | 0.14 |
| 67-66-3 | Chloroform | 0.0002a | 0.001 |
| 95-57-8 | 2-Chlorophenol (pH 4.9-7.3) | 0.035 | 0.175 |
|  | 2-Chlorophenol (pH 7.4-8.0) | 0.035 | 0.035 |
| 218-01-9 | Chrysene | 0.0015a | 0.0075 |
| 94-75-7 | 2,4-D | 0.07c | 0.35c |
| 75-99-0 | Dalapon | 0.2c | 2.0c |
| 72-54-8 | DDD | 0.014a | 0.07 |
| 72-55-9 | DDE | 0.01a | 0.05 |
| 50-29-3 | DDT | 0.006a | 0.03 |
| 53-70-3 | Dibenzo(*a,h*)anthracene | 0.0003a | 0.0015 |
| 96-12-8 | 1,2-Dibromo-3-chloropropane | 0.0002c | 0.0002c |
| 106-93-4 | 1,2-Dibromoethane (Ethylene dibromide) | 0.00005c | 0.0005c |
| 84-74-2 | Di-*n*-butyl phthalate | 0.7 | 3.5 |
| 95-50-1 | 1,2-Dichlorobenzene (*o* - Dichlorobenzene) | 0.6c | 1.5c |
| 106-46-7 | 1,4-Dichlorobenzene (*p* - Dichlorobenzene) | 0.075c | 0.375c |
| 91-94-1 | 3,3'-Dichlorobenzidine | 0.02a | 0.1 |
| 75-34-3 | 1,1-Dichloroethane | 0.7 | 3.5 |
| 107-06-2 | 1,2-Dichloroethane (Ethylene dichloride) | 0.005c | 0.025c |
| 75-35-4 | 1,1-Dichloroethyleneb | 0.007c | 0.035c |
| 156-59-2 | *cis*-1,2-Dichloroethylene | 0.07c | 0.2c |
| 156-60-5 | *trans*-1,2-Dichloroethylene | 0.1c | 0.5c |
| 120-83-2 | 2,4-Dichlorophenol | 0.021 | 0.021 |
| 78-87-5 | 1,2-Dichloropropane | 0.005c | 0.025c |
| 542-75-6 | 1,3-Dichloropropene  (1,3-Dichloropropylene, *cis* + *trans*) | 0.001a | 0.005 |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Groundwater Remediation Objective | |
| CAS No. | Chemical Name | Class I  (mg/L) | Class II  (mg/L) |
| 60-57-1 | Dieldrin | 0.009a | 0.045 |
| 84-66-2 | Diethyl phthalate | 5.6 | 5.6 |
| 105-67-9 | 2,4-Dimethylphenol | 0.14 | 0.14 |
| 51-28-5 | 2,4-Dinitrophenol | 0.014 | 0.014 |
| 121-14-2 | 2,4-Dinitrotoluene~~a~~ | 0.00002a | 0.00002 |
| 606-20-2 | 2,6-Dinitrotoluene~~a~~ | 0.00031a | 0.00031 |
| 88-85-7 | Dinoseb | 0.007c | 0.07c |
| 117-84-0 | Di-*n*-octyl phthalate | 0.14 | 0.7 |
| 115-29-7 | Endosulfan | 0.042 | 0.21 |
| 145-73-3 | Endothall | 0.1c | 0.1c |
| 72-20-8 | Endrin | 0.002c | 0.01c |
| 100-41-4 | Ethylbenzene | 0.7c | 1.0c |
| 206-44-0 | Fluoranthene | 0.28 | 1.4 |
| 86-73-7 | Fluorene | 0.28 | 1.4 |
| 76-44-8 | Heptachlor | 0.0004c | 0.002c |
| 1024-57-3 | Heptachlor epoxide | 0.0002c | 0.001c |
| 118-74-1 | Hexachlorobenzene | 0.00006a | 0.0003 |
| 319-84-6 | *alpha*-HCH (*alpha*-BHC) | 0.00011a | 0.00055 |
| 58-89-9 | *gamma*-HCH (Lindane) | 0.0002c | 0.001c |
| 77-47-4 | Hexachlorocyclopentadiene | 0.05c | 0.5c |
| 67-72-1 | Hexachloroethane | 0.007 | 0.035 |
| 193-39-5 | Indeno(1,2,3-*c,d*)pyrene | 0.00043a | 0.00215 |
| 78-59-1 | Isophorone | 1.4 | 1.4 |
| 72-43-5 | Methoxychlor | 0.04c | 0.2c |
| 74-83-9 | Methyl bromide (Bromomethane) | 0.0098 | 0.049 |
| 75-09-2 | Methylene chloride  (Dichloromethane) | 0.005c | 0.05c |
| 95-48-7 | 2-Methylphenol (*o*-Cresol) | 0.35 | 0.35 |
| 91-20-3 | Naphthalene | 0.14 | 0.22 |
| 98-95-3 | Nitrobenzeneb | 0.0035 | 0.0035 |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Groundwater Remediation Objective | |
| CAS No. | Chemical Name | Class I  (mg/L) | Class II  (mg/L) |
| 86-30-6 | *N*-Nitrosodiphenylamine | 0.0032 a | 0.016 |
| 621-64-7 | *N*-Nitrosodi-*n*-propylamine | 0.0018 a | 0.0018 |
| 87-86-5 | Pentachlorophenol | 0.001c | 0.005c |
| 108-95-2 | Phenol | 0.1c | 0.1c |
| 1918-02-1 | Picloram | 0.5c | 5.0c |
| 1336-36-3 | Polychlorinated biphenyls (PCBs) | 0.0005c | 0.0025c |
| 129-00-0 | Pyrene | 0.21 | 1.05 |
| 122-34-9 | Simazine | 0.004c | 0.04c |
| 100-42-5 | Styrene | 0.1c | 0.5c |
| 93-72-1 | 2,4,5-TP (Silvex) | 0.05c | 0.25c |
| 127-18-4 | Tetrachloroethylene (Perchloroethylene) | 0.005c | 0.025c |
| 108-88-3 | Toluene | 1.0c | 2.5c |
| 8001-35-2 | Toxaphene | 0.003c | 0.015c |
| 120-82-1 | 1,2,4-Trichlorobenzene | 0.07c | 0.7c |
| 71-55-6 | 1,1,1-Trichloroethaneb | 0.2c | 1.0c |
| 79-00-5 | 1,1,2-Trichloroethane | 0.005c | 0.05c |
| 79-01-6 | Trichloroethylene | 0.005c | 0.025c |
| 95-95-4 | 2,4,5-Trichlorophenol (pH 4.9-7.8) | 0.7 | 3.5 |
|  | 2,4,5-Trichlorophenol (pH 7.9-8.0) | 0.7 | 0.7 |
| 88-06-2 | 2,4,6-Trichlorophenol (pH 4.9-6.8) | 0.01a | 0.05 |
|  | 2,4,6-Trichlorophenol (pH 6.9-8.0) | 0.01 | 0.01 |
| 108-05-4 | Vinyl acetate | 7.0 | 7.0 |
| 75-01-4 | Vinyl chloride | 0.002c | 0.01c |
| 1330-20-7 | Xylenes (total) | 10.0c | 10.0c |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Groundwater Remediation Objective | |
| CAS No. | Chemical Name | Class I  (mg/L) | Class II  (mg/L) |
|  | **Inorganics** |  |  |
| 7440-36-0 | Antimony | 0.006c | 0.024c |
| 7440-38-2 | Arsenic | 0.05c | 0.2c |
| 7440-39-3 | Barium | 2.0c | 2.0c |
| 7440-41-7 | Beryllium | 0.004c | 0.5c |
| 7440-42-8 | Boron | 2.0c | 2.0c |
| 7440-43-9 | Cadmium | 0.005c | 0.05c |
| 7440-70-2 | Calcium | ---d | ---d |
| 16887-00-6 | Chloride | 200c | 200c |
| 7440-47-3 | Chromium, total | 0.1c | 1.0c |
| 18540-29-9 | Chromium, ion, hexavalent | --- | --- |
| 7440-48-4 | Cobalt | 1.0c | 1.0c |
| 7440-50-8 | Copper | 0.65c | 0.65c |
| 57-12-5 | Cyanide | 0.2c | 0.6c |
| 7782-41-4 | Fluoride | 4.0c | 4.0c |
| 15438-31-0 | Iron | 5.0c | 5.0c |
| 7439-92-1 | Lead | 0.0075c | 0.1c |
| 7439-95-4 | Magnesium | ---d | ---d |
| 7439-96-5 | Manganese | 0.15c | 10.0c |
| 7439-97-6 | Mercury | 0.002c | 0.01c |
| 7440-02-0 | Nickel | 0.1c | 2.0c |
| 14797-55-8 | Nitrate as N | 10.0c | 100c |
| 7723-14-0 | Phosphorus | ---d | ---d |
| 7440-09-7 | Potassium | ---d | ---d |
| 7782-49-2 | Selenium | 0.05c | 0.05c |
| 7440-22-4 | Silver | 0.05c | --- |
| 7440-23-5 | Sodium | ---d | ---d |
| 14808-79-8 | Sulfate | 400c | 400c |

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Groundwater Remediation Objective | |
| CAS No. | Chemical Name | Class I  (mg/L) | Class II  (mg/L) |
| 7440-28-0 | Thallium | 0.002c | 0.02c |
| 7440-62-2 | Vanadiumb | 0.049 | 0.1 |
| 7440-66-6 | Zinc | 5.0c | 10c |

Chemical Name and Groundwater Remediation Objective Notations

a The groundwater remediation objective is equal to the ADL for carcinogens according to the procedures specified in 35 Ill. Adm. Code 620.

b Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change.

c Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.

d This chemical is included in the Total Dissolved Solids (TDS) Groundwater Quality Standard of 1,200 mg/L pursuant to 35 Ill. Adm. Code 620.410 for Class I Groundwater or 35 Ill. Adm. Code 620.420 for Class II Groundwater.

(Source: Amended at 31 Ill. Reg. 4063, effective February 23, 2007)