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

**Section 742.TABLE C pH Specific Soil Remediation Objectives for Inorganics and Ionizing Organics for the Soil Component of the Groundwater Ingestion Route (Class I Groundwater)**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chemical (totals) (mg/kg) | pH 4.5 to 4.74 | pH 4.75 to 5.24 | pH 5.25 to 5.74 | pH 5.75 to 6.24 | pH 6.25 to 6.64 | pH  6.65 to 6.89 | pH  6.9 to 7.24 | pH  7.25 to 7.74 | pH  7.75 to 8.24 | pH 8.25 to 8.74 | pH 8.75 to 9.0 |
| **Inorganics** |  |  |  |  |  |  |  |  |  |  |  |
| Antimony | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Arsenic | 25 | 26 | 27 | 28 | 29 | 29 | 29 | 30 | 31 | 32 | 33 |
| Barium | 260 | 490 | 850 | 1,200 | 1,500 | 1,600 | 1,700 | 1,800 | 2,100 | \_\_a | \_\_a |
| Beryllium | 1.1 | 2.1 | 3.4 | 6.6 | 22 | 63 | 140 | 1,000 | 8,000 | \_\_a | \_\_a |
| Cadmium | 1.0 | 1.7 | 2.7 | 3.7 | 5.2 | 7.5 | 11 | 59 | 430 | \_\_a | \_\_a |
| Chromium (+6) | 70 | 62 | 54 | 46 | 40 | 38 | 36 | 32 | 28 | 24 | 21 |
| Copper | 330 | 580 | 2,100 | 11,000 | 59,000 | 130,000 | 200,000 | 330,000 | 330,000 | \_\_a | \_\_a |
| Cyanide | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| Lead | 23 | 23 | 23 | 23 | 107 | 107 | 107 | 107 | 107 | 107 | 282 |
| Mercury | 0.01 | 0.01` | 0.03 | 0.15 | 0.89 | 2.1 | 3.3 | 6.4 | 8.0 | \_\_a | \_\_a |
| Nickel | 20 | 36 | 56 | 76 | 100 | 130 | 180 | 700 | 3,800 | \_\_a | \_\_a |
| Selenium | 24 | 17 | 12 | 8.8 | 6.3 | 5.2 | 4.5 | 3.3 | 2.4 | 1.8 | 1.3 |
| Silver | 0.24 | 0.33 | 0.62 | 1.5 | 4.4 | 8.5 | 13 | 39 | 110 | \_\_a | \_\_a |
| Thallium | 1.6 | 1.8 | 2.0 | 2.4 | 2.6 | 2.8 | 3.0 | 3.4 | 3.8 | 4.4 | 4.9 |
| Vanadium | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 | 980 |
| Zinc | 1,000 | 1,800 | 2,600 | 3,600 | 5,100 | 6,200 | 7,500 | 16,000 | 53,000 | \_\_a | \_\_a |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Chemical (totals)  (mg/kg) | pH 4.5 to 4.74 | pH 4.75 to 5.24 | pH 5.25 to 5.74 | pH 5.75 to 6.24 | pH 6.25 to 6.64 | pH 6.65 to 6.89 | pH 6.9 to 7.24 | pH 7.25 to 7.74 | pH 7.75 to 8.24 | pH 8.25 to 8.74 | pH 8.75 to 9.0 |
| **Organics** |  |  |  |  |  |  |  |  |  |  |  |
| Benzoic Acid | 440 | 420 | 410 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |
| 2-Chlorophenol | 4.0 | 4.0 | 4.0 | 4.0 | 3.9 | 3.9 | 3.9 | 3.6 | 3.1 | 2.2 | 1.5 |
| 2,4-Dichlorophenol | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.86 | 0.69 | 0.56 | 0.48 |
| Dinoseb | 8.4 | 4.5 | 1.9 | 0.82 | 0.43 | 0.34 | 0.31 | 0.27 | 0.25 | 0.25 | 0.25 |
| Pentachlorophenol | 0.54 | 0.32 | 0.15 | 0.07 | 0.04 | 0.03 | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 |
| 2,4,5-TP (Silvex) | 26 | 16 | 12 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 2,4,5-Trichlorophenol | 400 | 390 | 390 | 370 | 320 | 270 | 230 | 130 | 64 | 36 | 26 |
| 2,4,6-Trichlorophenol | 0.37 | 0.36 | 0.34 | 0.29 | 0.20 | 0.15 | 0.13 | 0.09 | 0.07 | 0.07 | 0.07 |

a No data available for this pH range.

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