**Section 259.APPENDIX D Groundwater Cleanup Objectives (GWobj)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name |  | CAS No.a |  | Recommended  Test Methodb |  | Subsurface  (mg/L)c |  | Surface  (mg/L)d |
|  |  |  |  |  |  |  |  |  |
| acetochlor |  | 34256-82-1 |  | 505 |  | 0.002j |  | 0.01g |
| acifluorfen sodium |  | 62476-59-9 |  | 515.1 |  | 0.091f |  | 0.455g |
| alachlor |  | 15972-60-8 |  | 505 |  | 0.002 |  | 0.01 |
| aldicarb |  | 116-06-3 |  | 531.1 |  | 0.003 |  | 0.015 |
| aldrin |  | 309-00-2 |  | 508 |  | 0.000005e |  | 0.000025e |
| ammonia |  | 7664-41-7 |  | 350.2 |  | 10.0o |  | 50.0o |
| atrazine |  | 1912-24-9 |  | 505 |  | 0.003 |  | 0.015 |
| bentazon sodium |  | 50723-80-3 |  | 515.1 |  | 0.21f |  | 1.05g |
| bromacil |  | 314-40-9 |  | 507 |  | 0.7f |  | 3.5g |
| bromoxynil(o) |  | 1689-99-2 |  |  |  | 0.14f |  | 0.7g |
| butylate |  | 2008-41-5 |  | 507 |  | 0.35f |  | 1.75g |
| carbofuran |  | 1563-66-2 |  | 531.1 |  | 0.04 |  | 0.2 |
| chlordane |  | 57-74-9 |  | 508 |  | 0.002 |  | 0.01 |
| chlorimuron-ethyl |  | 90982-32-4 |  |  |  | 0.14f |  | 0.7g |
| chlorpyrifos |  | 2921-88-2 |  | 525.2 |  | 0.021f |  | 0.105g |
| cyanazine |  | 21725-46-2 |  | 508.1 |  | 0.014l |  | 0.07g |
| 2,4-D |  | 94-75-7 |  | 515.1 |  | 0.07 |  | 0.35 |
| 4,4'-DDD |  | 72-54-8 |  | 508 |  | 0.0004e |  | 0.002e |
| 4,4'-DDE |  | 72-55-9 |  | 508 |  | 0.0003e |  | 0.0015e |
| 4,4'-DDT |  | 50-29-3 |  | 508 |  | 0.0003e |  | 0.0015e |
| diazinon |  | 333-41-5 |  | 507 |  | 0.00063l |  | 0.00315g |
| dicamba |  | 1918-00-9 |  | 515.1 |  | 0.21f |  | 1.05g |
| dieldrin |  | 60-57-1 |  | 508 |  | 0.000005e |  | 0.000025e |
| dimethoate |  | 60-51-5 |  | 8141h |  | 0.0014f |  | 0.007g |
| dinoseb |  | 88-85-7 |  | 515.1 |  | 0.007 |  | 0.07 |
| disulfoton |  | 298-04-4 |  | 507 |  | 0.00028f |  | 0.0014g |
| endosulfan |  | 115-29-7 |  | 508 |  | 0.2e |  | 1.0e |
| endothall |  | 145-73-3 |  | 548.1 |  | 0.1 |  | 0.1 |
| endrin |  | 72-20-8 |  | 508 |  | 0.002 |  | 0.01 |
| EPTC |  | 759-94-4 |  | 507 |  | 0.175f |  | 0.875g |
| glyphosate |  | 1071-83-6 |  |  |  | 0.7k |  | 3.5g |
| HCH-alpha |  | 319-84-6 |  | 508 |  | 0.00001e |  | 0.00005e |
| heptachlor |  | 76-44-8 |  | 505 |  | 0.0004 |  | 0.002 |
| heptachlor epoxide |  | 1024-57-3 |  | 505 |  | 0.0002 |  | 0.001 |
| lindane |  | 58-89-9 |  | 508 |  | 0.0002 |  | 0.001 |
| linuron |  | 330-55-2 |  | 508 |  | 0.014f |  | 0.07g |
| malathion |  | 121-75-5 |  |  |  | 0.14f |  | 0.7g |
| methoxychlor |  | 72-43-5 |  | 508 |  | 0.04 |  | 0.2 |
| metolachlor |  | 51218-45-2 |  | 507 |  | 1.05f |  | 5.25g |
| metribuzin |  | 21087-64-9 |  | 507 |  | 0.175m |  | 0.875g |
| nitrate, as N |  | 7631-99-4 |  | 300.0 |  | 10.0c |  | 100.0d |
| parathion, ethyl |  | 56-38-2 |  | 8141h |  | 0.042f |  | 0.21g |
| parathion, methyl |  | 298-00-0 |  | 8141h |  | 0.00175f |  | 0.00875g |
| pendimethalin |  | 40487-42-1 |  |  |  | 0.28f |  | 1.4g |
| permethrin |  | 52645-53-1 |  |  |  | 0.35f |  | 1.75g |
| phorate |  | 298-02-2 |  | 8141h |  | 0.0014i |  | 0.007g |
| simazine |  | 122-34-9 |  | 505 |  | 0.004 |  | 0.04 |
| 2,4,5-TP |  | 93-72-1 |  | 515.1 |  | 0.05 |  | 0.25 |
| terbufos |  | 13071-79-9 |  | 507 |  | 0.00175i |  | 0.00875g |
| toxaphene |  | 8001-35-2 |  | 508 |  | 0.003 |  | 0.015 |
| trifluralin |  | 1582-09-8 |  | 508 |  | 0.0525f |  | 0.2625g |

Notes:

a Chemical Abstract Service (CAS)

b USEPA "Methods for the Determination of Organic Compounds in Drinking Water" Supplement III of 1995

c Groundwater Quality Standards for Class I: Potable Resource Groundwater (35 Ill. Adm. Code 620.410)

d Groundwater Quality Standards for Class II: General Resource Groundwater (35 Ill. Adm. Code 620.420)

e Tiered Approach to Corrective Action Objectives (TACO): Values Used to Calculate the Tier I Soil Remediation Objectives for the Migration to Groundwater Portion of the Groundwater Ingestion Route (35 Ill. Adm. Code 742.Appendix B:Table F)

f Human Threshold Toxicant Advisory Concentration (HTTAC) from "Procedures for Determining Human Threshold Toxicant Advisory Concentration for Class I: Potable Resource Groundwater" (35 Ill. Adm. Code 620.Appendix A) using values from Integrated Risk Information System (IRIS), USEPA

g Class II GWobj values based on Class I GWobjvalues times 5

h USEPA "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods (SW-846)", July 1992

i HTTAC using values from Health Effects Assessment Summary Tables (HEAST), 1997, USEPA

j Value from the Acetochlor Registration Agreement monitoring program, http://www.epa.gov/oppefed1/aceto/index.htm

k MCL value from Drinking Water Standards and Health Advisories (Summer 2000, EPA 822-B-00-001)

l HTTAC using RfD value from Drinking Water Standards and Health Advisories (Summer 2000, EPA 822-B-00-001)

m HTTAC using RfD value from Risk Assessment Information System (RAIS), http://risk.lsd.ornl.gov/rap\_hp.shtml

n In order to provide environmentally conservative default SCOs that take into account the potential for long-term nitrification, one-third of the USEPA's Lifetime Health Advisory Level for ammonia in drinking water (30 mg/L) is used as basis for the groundwater cleanup objectives for Class I and Class II groundwater (U.S. Environmental Protection Agency, 2004, 2004 Edition of the Drinking Water Standards and Health Advisories, Office of Water, Washington, D.C., EPA 822-R-04-005). Although the Lifetime Health Advisory Level was established for ammonia, most of the dissolved ammonia occurs as ammonium within the pH range (5.6-9.0) of Illinois groundwater.

(Source: Amended at 32 Ill. Reg. 1308, effective January 21, 2008)