# PROPOSED RULEMAKING

## ENVIRONMENTAL QUALITY BOARD

### [ 25 PA. CODE CH. 250 ]

### Administration of the Land Recycling Program

The Environmental Quality Board (Board) proposes to amend Chapter 250 (relating to administration of Land Recycling Program). The proposed rulemaking is intended to update the Statewide health standards based on current science, to correct errors and omissions, and to state how to provide to the Department of Environmental Protection (Department) information about notification that remediators are required to provide to municipalities and the public.

This proposed rulemaking was adopted by the Board at its meeting of February 18, 2014.

A. *Effective Date*

This proposed rulemaking will go into effect upon final-form publication in the *Pennsylvania Bulletin*.

B. *Contact Persons*

For further information contact Troy Conrad, Program Manager, Land Recycling Program, P. O. Box 8471, Rachel Carson State Office Building, Harrisburg, PA 17105-8471, (717) 783-7816; or Robert "Bo" Reiley, Assistant Counsel, Bureau of Regulatory Counsel, Rachel Carson State Office Building, P. O. Box 8464, Harrisburg, PA 17105-8464, (717) 787-7060. Information regarding submitting comments on this proposed rulemaking appears in Section J of this preamble. Persons with a disability may use the AT&T Relay Service by calling (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This proposed rulemaking is available electronically on the Department's web site at www.dep.state.pa.us (DEP Search/Keyword: Environmental Quality Board).

C. *Statutory Authority*

The proposed rulemaking is being made primarily under the authority of sections 104(a) and 303(a) of the Land Recycling and Environmental Remediation Standards Act (act) (35 P. S. §§ 6026.104(a) and 6026.303(a)). Section 303(a) of the act directs the Board to promulgate Statewide health standards for regulated substances for each environmental medium, and the methods used to calculate the standards. Section 104(a) of the act authorizes the Board to adopt and amend regulations that may be needed to implement the act.

D. *Background and Purpose*

Section 250.11 (relating to periodic review of MSCs) requires the Department to review new scientific information that is used to calculate Medium-Specific Concentrations (MSC) used to demonstrate the Statewide health standard, and propose appropriate changes at least every 36 months. These changes serve the public as they are based on the most up-to-date health and scientific information. In addition, the changes in requirements serve the public and regulated community as they provide clear information on what is required to clean up contaminated sites. The proposed rulemaking was reviewed by the Cleanup Standards Scientific Advisory Board (CSSAB). The proposed rulemaking was discussed and supported unanimously, with one exception and one comment, at the CSSAB meeting on October 23, 2013.

E. *Summary of Regulatory Requirements*

*§ 250.5. Public notice by applicant*

Proposed amendments to this section would add the requirement that documented proof of the mailing of municipal notices and the arranging for publication of newspaper notices that are required under the act be submitted at the time the Notice of Intent to Remediate (NIR), plan or report is submitted to the Department. This will assure that the municipality and the public are notified of the NIR, plan or report in a timely fashion.

*§ 250.7. Fees*

Proposed amendments to this section would clarify that the Department may waive the fee for resubmission of a plan or report if the resubmission is related to correcting minor administrative or technical deficiencies.

*§ 250.301. Scope*

Proposed amendments to this section would add certain regulated substances to the list of substances classified as mutagens based on recently published scientific information.

*§ 250.304. MSCs for groundwater*

Prior to the January 2011 edition of the Drinking Water Standards and Health Advisories, the United States Environmental Protection Agency (EPA) Office of Water Publication No. EPA 820-R-11-002 (January 2011), when the EPA published both a Lifetime Health Advisory Level (HAL) and a $10^{-4}$ Cancer Risk concentration for a chemical, the Lifetime HAL concentration included an adjustment for cancer risk. Starting with the January 2011 edition of the Drinking Water Standards and Health Advisories, the EPA changed its Cancer Classification system and started publishing Lifetime HALs that did not include adjustments for cancer risk, even when a $10^{-4}$ Cancer Risk concentration was also published.

Proposed amendments to § 250.304(c) (relating to MSCs for groundwater) would clarify that a published Lifetime HAL concentration may not always be used as the MSC for substances that are designated as likely to be carcinogenic, if the Lifetime HAL does not include an adjustment for cancer risk. For these substances, a numeric value would be calculated based on the equations in §§ 250.306 and 250.307 (relating to ingestion numeric values; and inhalation numeric values). In that situation, the MSC would be the lower of the Lifetime HAL and the calculated value.

Proposed amendments to § 250.304(g) would include additional references regarding the determination of solubility values.

*§ 250.306. Ingestion numeric values*

Due to new information about the toxicology of trichloroethylene (TCE), proposed amendments to this section would add values for oral cancer slope factors for TCE and revise the formula for calculating the MSC for TCE.

Due to new information published by the EPA in the *Exposure Factors Handbook 2011 Edition*, EPA/600/R-090/052F, the average body weight and the associated ingestion factors would change.

*§ 250.307. Inhalation numeric values*

Due to new information relating to the toxicology of TCE, proposed amendments to this section would add values for inhalation unit risk for TCE and make changes to the formula for calculating the MSC for TCE.

*Appendix A, Tables 1—6*

Proposed amendments to Tables 1—4 would update the MSC for certain regulated substances. Information also would be updated on the "Physical and Toxicological Properties" tables and the "Threshold of Regulation Compounds" table.

F. *Benefits, Costs and Compliance*

*Benefits*

Consistent with § 250.11, the Department needs to update MSCs on a timely basis to assure that environmental response actions at contaminated sites are remediated using current scientific research and principles. This will ensure the protection of public health and the environment where it has been determined that lower MSCs for regulated substances are protective. This will also avoid unnecessary expense for those remediating property where it has been determined that higher MSCs for regulated substances are protective.

*Compliance costs*

This proposed rulemaking will affect owners, operators and purchasers of properties and facilities who volunteer, or are required to perform, remediation of contaminated sites. The proposed amendments are not expected to add any significant costs to the cleanup of contaminated sites under the act. Some cleanup standard concentration values will be lower and some will be higher. The net cost should be negligible.

*Compliance Assistance Plan*

The Department will disseminate information concerning this rulemaking using the Department's web site and e-mails to environmental consultants.

*Paperwork requirements*

Forms or reports are not required beyond those established by the act.

G. *Pollution Prevention (if applicable)*

During remediation of a contaminated site, potential sources of pollution are often removed to attain the standards in the act, thus eliminating or minimizing the potential for continued migration.

H. *Sunset Review*

These regulations will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfill the goals for which they were intended.

I. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on April 28, 2014, the Department submitted a copy of this proposed rulemaking and a copy of a Regulatory Analysis Form to the Independent Regulatory Review Commission (IRRC) and to the Chairpersons of the House and Senate Environmental Resources and Energy Committees. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey any comments, recommendations or objections to the proposed rulemaking within 30 days of the close of the public comment period. The comments, recommendations or objections must specify the regulatory review criteria which have not been met. The Regulatory Review Act specifies detailed procedures for review, prior to final publication of the rulemaking, by the Department, the General Assembly and the Governor of comments, recommendations or objections raised.

J. *Public Comments*

Interested persons are invited to submit written comments, suggestions or objections regarding the proposed rulemaking to the Board. Comments, suggestions or objections must be received by the Board by June 17, 2014. In addition to the submission of comments, interested persons may also submit a summary of their comments to the Board. The summary may not exceed one page in length and must also be received by the Board by June 17, 2014. The one-page summary will be distributed to the Board and available publicly prior to the meeting when the final-form rulemaking will be considered.

Comments, including the submission of a one-page summary of comments, may be submitted to the Board online, by mail or express mail as follows. Comments may be submitted online to the Board by accessing the Board's Regulatory Comment System at http://www.ahs.dep.pa.gov/RegComments. If an acknowledgement of comments submitted online is not received by the sender within 2 business days, the comments should be retransmitted to the Board to ensure receipt. Written comments should be mailed to the Environmental Quality Board, P. O. Box 8477, Harrisburg, PA 17105-8477. Express mail should be sent to the Environmental Quality Board, Rachel Carson State Office Building, 16th Floor, 400 Market Street, Harrisburg, PA 17101-2301. Comments submitted by facsimile will not be accepted.

E. CHRISTOPHER ABRUZZO,
*Chairperson*

(*Editor's Note*: See 44 Pa.B. 2975 (May 17, 2014) for corrective amendments to §§ 250.306 and 250.307 and Appendix A, Tables 1, 3b, 5a and 5b).

**Fiscal Note:** 7-486. No fiscal impact; (8) recommends adoption.

## Annex A

## TITLE 25. ENVIRONMENTAL PROTECTION

## PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

## Subpart D. ENVIRONMENTAL HEALTH AND SAFETY

## ARTICLE VI. GENERAL HEALTH AND SAFETY

## CHAPTER 250. ADMINISTRATION OF LAND RECYCLING PROGRAM

## Subchapter A. GENERAL PROVISIONS

### § 250.5. Public notice by applicant.

* * * * *

(e) Upon receipt of notice of a request for a nonuse aquifer designation, the municipality and community water supplier shall have 45 days to indicate to the Department and the remediator any information relevant to the requirements of § 250.303.

**(f) Documented proof of the mailing of the municipal notices and arranging for the publication of newspaper notices, required under sections 302(e), 303(h), 304(n) and 305(c) of the act (35 P. S. §§ 6026.302(e), 6026.303(h), 6026.304(n) and 6026.305(c)), shall be submitted at the same time the NIR, plan or report is submitted to the Department. A copy of the letter to the municipality with a United States Postal Service certified mail receipt, PS Form No. 3800, will be accepted as proof of mailing. A copy of the published text of the newspaper notice and the publication date will be accepted as proof of arranging for publication.**

**§ 250.7. Fees.**

* * * * *

(b) The Department will disapprove a plan or report that is submitted without the appropriate fee.

**(c) The Department may waive the fee for resubmission of a plan or report if the resubmission is related to correcting minor administrative or technical deficiencies. The fee waiver is limited to the following:**

**(1) One time for each plan or report to correct administrative deficiencies if the corrections are made within 15 days of notice of the deficiencies by the Department.**

**(2) One time for each plan or report to correct technical deficiencies if the corrections are made within 60 days of notice of the deficiencies by the Department.**

**Subchapter C. STATEWIDE HEALTH STANDARDS**

**§ 250.301. Scope.**

* * * * *

(b) This subchapter sets forth generic Statewide health standards for regulated substances determined by the EPA to be mutagens. Tables 1—4 contain Statewide health standards based upon the methodology for mutagens in §§ 250.306 and 250.307 (relating to ingestion numeric values; and inhalation numeric values) for the following substances classified as mutagens:

| *Regulated Substance* | *CAS Number* |
|---|---|
| **Acrylamide** | **79-06-1** |
| Benzo[a]anthracene | 56-55-3 |
| Benzidine | 92-87-5 |
| Benzo[a]pyrene | 50-32-8 |
| Benzo[b]fluoranthene | 205-99-2 |
| Benzo[k]fluoranthene | 207-08-9 |
| **Chromium (VI)** | **18540-29-9** |
| Chrysene | 218-01-9 |
| Dibenzo[a,h]anthracene | 53-70-3 |
| Dibromo-3-chloropropane, 1,2- | 96-12-8 |
| **Dichloromethane** | **75-09-2** |
| Indeno[1,2,3-cd]pyrene | 193-39-5 |
| Methylene bis(2-chloroaniline), 4,4′- | 101-14-4 |
| Nitrosodiethylamine, N- | 55-18-5 |
| Nitrosodimethylamine, N- | 62-75-9 |
| Nitroso-N-ethylurea, N- | 759-73-9 |
| **Trichloroethylene (TCE)** | **79-01-6** |
| **Trichloropropane, 1,2,3-** | **96-18-4** |
| Vinyl chloride | 75-01-4 |

* * * * *

**§ 250.304. MSCs for groundwater.**

* * * * *

(c) The MSCs for regulated substances contained in groundwater in aquifers used or currently planned to be used for drinking water or for agricultural purposes **[ is the MCL ] are the MCLs** as established by the Department or the EPA **[ as established ]** in § 109.202 (relating to **[ state ] State** MCLs, MRDLs and treatment technique requirements) **[ and Health Advisory Levels (HALs) set forth in Drinking Water Standards and Health Advisories, EPA Office of Water Publication No. EPA 822-R-09-011 (October, 2009) ]**. For **[ a regulated substance ] regulated substances** where no MCL has been established, the **[ MSC is the lifetime HAL for that compound. ] MSCs are the Lifetime Health Advisory Levels (HALs) set forth in Drinking Water Standards and Health Advisories (DWSHA), EPA Office of Water Publication No. EPA 822-S-12-001 (April 2012 or as revised), except for substances designated in the DWSHA with cancer descriptor (L) "Likely to be carcinogenic to humans" or (L/N) "Likely to be carcinogenic above a specific dose but not likely to be carcinogenic below that dose because a key event in tumor formation does not occur below that dose." New or revised MCLs or HALs promulgated by the Department or the EPA shall become effective immediately for any demonstration of attainment completed after the date the new or revised MCLs or HALs become effective.**

**(1)** For **[ a regulated substance ] regulated substances** where neither an MCL nor a lifetime HAL has been established **and for substances designated in the DWSHA with cancer descriptor (L) or (L/N)**, the **[ MSC is ] MSCs are** the lowest concentration calculated using the appropriate residential and nonresidential exposure assumptions and the equations in §§ 250.306 and 250.307 (relating to ingestion numeric values; and inhalation numeric values). **[ New or revised MCLs or HALs promulgated by the Department or the EPA shall become effective immediately for any demonstration of attainment completed after the date the new or revised MCLs or HALs become effective. ]**

**(2) If the Lifetime HAL for a substance designated in the DWSHA with cancer descriptor (L) or (L/N) is less than the MSC calculated paragraph (1), then the Lifetime HAL shall be the MSC.**

(d) For regulated substances contained in aquifers not used or currently planned to be used, the MSCs in Appendix A, Tables 1 and 2 are calculated by the following:

* * * * *

(g) The references referred to in subsection (f) are:

* * * * *

(11) Mabey, et al. 1982, *Aquatic Fate Process Data for Organic Priority Pollutants*, SRI. EPA Contract Nos. 68-01-3867, 68-03-2981.

**(12) Yalkowsky, S.H. and R.M. Dannenfelser. 1992. *Aquasol Database of Aqueous Solubility*. Version 5. College of Pharmacy, University of Arizona—Tucson, AZ. PC Version.**

**(13) Estimate from Log $K_{ow}$.**

**(14) Bennett, S.R., J.M. Bane, P.J. Benford and R.L. Pyatt. 1984. *Environmental Hazards of Chemical Agent Simulants*. CRDC-TR-84055, Aberdeen Proving Ground, MD.**

**(15) Munro, N.B. et al. 1999. The Sources, Fate, and Toxicity of Chemical Warfare Agent Degradation Products. *Environ. Health Perspect*. 107(12): 933-4.**

**(16) Monteil-Rivera, F., C. Groom and J. Hawari. 2003. Sorption and Degradation of Octahydro-1,3,5,7-Tetranitro-1,3,5,7-Tetrazocine in Soil. *Environ. Sci. Technol*. 37:3878-3884.**

**(17) Seidell, A. 1941. *Solubilities of Organic Compounds*. New York, NY. D. Van Nostrand Co. Inc.**

---

**§ 250.306. Ingestion numeric values.**

* * * * *

(b) For a regulated substance which is a carcinogen, the ingestion numeric value for that substance was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equations:

(1) For regulated substances not identified as a mutagen in § 250.301(b) (relating to scope):

$$MSC = \frac{TR \times AT_c \times 365\ days/year}{CSF_o \times Abs \times EF \times IFadj \times CF}$$

(2) For regulated substances identified as a mutagen, except for vinyl chloride **and trichloroethylene**, in § 250.301(b):

$$MSC = \frac{TR \times AT_c \times 365\ days/year}{CSF_o \times Abs \times EF \times AIFadj \times CF}$$

(3) For vinyl chloride:

$$MSC = \frac{TR}{[CSF_o \times Abs \times EF \times IFadj \times CF / (AT_c \times 365\ days/year)] + (CSF_o \times Abs \times IR_c \times CF/BW_c)}$$

**(4) For trichloroethylene:**

$$\mathbf{MSC = \frac{TR \times AT_c \times 365\ days/yr}{(CSFo_k \times AIFadj + CSFo_l \times IFadj) \times Abs \times EF \times CF}}$$

(c) For a regulated substance that has both an oral reference dose and an oral cancer slope factor, the ingestion numeric value is the lower of the two numbers as calculated by the equations in subsections (a) and (b).

(d) The default exposure assumptions used to calculate the ingestion numeric values are as follows:

| *Term* | | *Residential* | | *Nonresidential* |
|---|---|---|---|---|
| | | *Systemic*[1] | *Carcinogens*[2,6] | *(Onsite Worker)* |
| THQ | Target Hazard Quotient | 1 | N/A | 1 |
| $RfD_o$ | Oral Reference Dose (mg/kg-day) | Chemical-specific | N/A | Chemical-specific |
| BW | Body Weight (kg)<br>Soil<br>Groundwater | <br>15<br>**[ 70 ] 80** | <br><br>N/A | <br>**[ 70 ] 80**<br>**[ 70 ] 80** |
| $AT_{nc}$ | Averaging Time for systemic toxicants (yr)<br>Soil<br>Groundwater | <br>6<br>30 | <br>N/A<br>N/A | <br>25<br>25 |
| Abs | Absorption (unitless)[3] | 1 | 1 | 1 |
| EF | Exposure Frequency (d/yr)<br>Soil<br>Groundwater | <br>250<br>350 | <br>250<br>350 | <br>180<br>250 |
| ED | Exposure Duration (yr)<br>Soil<br>Groundwater | <br>6<br>30 | <br>N/A<br>N/A | <br>25<br>25 |
| IngR | Ingestion Rate<br>Soil (mg/day)<br>GW (L/day) | <br>100<br>2 | <br>N/A<br>N/A | <br>50<br>1 |
| CF | Conversion Factor<br>Soil (kg/mg)<br>GW (unitless) | <br>$1 \times 10^{-6}$<br>1 | <br>$1 \times 10^{-6}$<br>1 | <br>$1 \times 10^{-6}$<br>1 |
| TR | Target Risk | N/A | $1 \times 10^{-5}$ | $1 \times 10^{-5}$ |
| $CSF_o$ | Oral Cancer Slope Factor $(mg/kg\text{-}day)^{-1}$ | N/A | Chemical-specific | Chemical-specific |

| Term | | Residential | | Nonresidential (Onsite Worker) |
|---|---|---|---|---|
| | | Systemic[1] | Carcinogens[2,6] | |
| $AT_c$ | Averaging Time for carcinogens (yr) | N/A | 70 | 70 |
| **[ Ifadj[4] ]** **IFadj[4]** | Ingestion Factor<br>Soil (mg-yr/kg-day)<br>GW (L-yr/kg day) | N/A | **[ 57.1 ] 55**<br>**[ 1.1 ] 1** | **[ 17.9 ] 15.6**<br>**[ 0.4 ] 0.3** |
| AIFadj[5] | Combined Age-Dependent Adjustment Factor and Ingestion Factor<br>Soil (mg-yr/kg-day)<br>GW (L-yr/kg-day) | N/A | **[ 245 ] 241**<br>**[ 3.39 ] 3.23** | N/A |
| **$CSFo_k$**<br>**$CSFo_l$** | **TCE oral cancer slope factor for kidney cancer (mg/kg/day)$^{-1}$**<br>**TCE oral cancer slope factor for non-Hodgkin lymphoma and liver cancer (mg/kg/day)$^{-1}$** | | **$9.3 \times 10^{-3}$**<br>**$3.7 \times 10^{-2}$** | |
| * * * * * | | | | |

**§ 250.307. Inhalation numeric values.**

* * * * *

(b) For a regulated substance which is a carcinogen, the following apply:

(1) For a volatile compound, the numeric value for inhalation from soil was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equation using TF for volatiles:

$$MSC = \frac{TR \times AT_c \times 365 \text{ days/year} \times 24 \text{ hr/day} \times TF}{IUR \times ET \times EF \times ED \times CF}$$

(2) For a regulated substance attached to particulates, the numeric value for inhalation from soil was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the equation in paragraph (1) using TF for particulates.

(3) For a regulated substance identified in § 250.301(b) (relating to scope) as a mutagen, except for vinyl chloride **and trichloroethylene**, the numeric value for inhalation from soil was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equation using the TF for volatiles **or particulates**:

$$MSC = \frac{TR \times AT_c \times 365 \text{ days/year} \times 24 \text{ hr/day} \times TF}{IUR \times ET \times EF \times AED \times CF}$$

(4) For vinyl chloride, the numeric value for inhalation from soil was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equation using the TF for volatiles:

$$MSC = \frac{TR}{[IUR \times ET \times EF \times ED \times CF / (AT_c \times 365 \text{ days/yr} \times 24 \text{ hr/d} \times TF)] + (IUR \times CF \times TF)}$$

**(5) For trichloroethylene, the numeric value for inhalation from soil was calculated using the appropriate residential or nonresidential exposure assumptions from subsection (d) according to the following equation using the TF for volatiles:**

$$\mathbf{MSC = \frac{TR \times AT_c \times 365 \text{ days/yr} \times 24 \text{ hr/day} \times TF}{(IUR_k \times AED + IUR_l \times ED) \times ET \times EF \times CF}}$$

(c) For a regulated substance which is both a systemic toxicant and a carcinogen, the inhalation numeric value is the lower of the two numbers as calculated by the equations in subsections (a) and (b).

(d) The default exposure assumptions used to calculate the inhalation numeric values for soil are as follows:

| Term | | Residential | | Nonresidential (Onsite Worker) |
|---|---|---|---|---|
| | | Systemic[1] | Carcinogens[2] | |
| THQ | Target Hazard Quotient | 1 | N/A | 1 |
| RfCi | Inhal. Reference Concentration ($mg/m^3$) | Chemical-specific | N/A | Chemical-specific |
| **[ ATnc ]** **$AT_{nc}$** | Averaging Time for systemic toxicants (yr) | 30 | N/A | 25 |
| TF | Transport Factor $(mg/kg)/(mg/m^3)$<br>Volatilization[3]<br>Particulate[4] | <br>Chemical-specific<br>$1 \times 10^{10}$ | <br>Chemical-specific<br>$1 \times 10^{10}$ | <br>Chemical-specific<br>$1 \times 10^{10}$ |
| ET | Exposure Time (hr/day) | 24 | 24 | 8 |

| Term | | Residential | | Nonresidential (Onsite Worker) |
|---|---|---|---|---|
| | | Systemic[1] | Carcinogens[2] | |
| EF | Exposure Frequency[5] (d/yr) | 250 | 250 | 180 |
| ED | Exposure Duration (yr) | 30 | **[ N/A ] 30** | 25 |
| CF | Conversion Factor | **[ 1,000 µg/mg ] N/A** | 1,000 µg/mg | 1,000 µg/mg |
| TR | Target Risk | N/A | $1 \times 10^{-5}$ | $1 \times 10^{-5}$ |
| IUR | Inhalation Unit Risk $(\mu g/m^3)^{-1}$ | N/A | Chemical-specific | Chemical-specific |
| **[ ATc ] $AT_c$** | Averaging Time for carcinogens (yr) | N/A | 70 | 70 |
| AED | Combined Age-Dependent Adjustment Factor and Exposure Duration (yr)[6] | N/A | 76 | N/A |
| **$IUR_k$** | **TCE inhalation unit risk for kidney cancer $(\mu g/m^3)^{-1}$** | | **$1 \times 10^{-6}$** | |
| **$IUR_l$** | **TCE inhalation unit risk for both non-Hodgkin lymphoma and liver cancer $(\mu g/m^3)^{-1}$** | | **$3 \times 10^{-6}$** | |
| * * * * * | | | | |

(g) For a regulated substance which is a carcinogen and is a volatile compound, the numeric value for the inhalation of volatiles from groundwater shall be calculated by using the appropriate residential or nonresidential exposure assumptions from subsection (h) according to the following equations:

(1) For regulated substances not identified as a mutagen in § 250.301(b):

$$MSC = \frac{TR \times AT_c \times 365 \text{ days/year } \mathbf{\times 24 \text{ hr/day}}}{IUR \times ET \times EF \times ED \times TF \times CF}$$

(2) For regulated substances identified as a mutagen, except for vinyl chloride **and trichloroethylene**, in § 250.301(b):

$$MSC = \frac{TR \times AT_c \times 365 \text{ days/year} \times 24 \text{ hr/day}}{IUR \times ET \times EF \times AED \times TF \times CF}$$

(3) For vinyl chloride:

$$MSC = \frac{TR}{[(IUR \times ET \times EF \times ED \times TF \times CF) / (AT_c \times 365 \text{ days/year} \times 24 \text{ hr/day})] + (IUR \times TF \times CF)}$$

**(4) For trichloroethylene:**

$$\mathbf{MSC = \frac{TR \times AT_c \times 365 \text{ days/yr} \times 24 \text{ hr/day}}{(IUR_k \times AED + IUR_l \times ED) \times ET \times EF \times TF \times CF}}$$

(h) The default exposure assumptions used to calculate the inhalation numeric values for the inhalation of volatiles from groundwater are as follows:

| Term | | Residential | | Nonresidential (Onsite Worker) |
|---|---|---|---|---|
| | | Systemic[1] | Carcinogens[2] | |
| THQ | Target Hazard Quotient | 1 | N/A | 1 |
| RfCi | Inhal. Reference Concentration $(mg/m^3)$ | Chemical-specific | N/A | Chemical-specific |
| **[ ATnc ] $AT_{nc}$** | Averaging Time for systemic toxicants (yr) | 30 | N/A | 25 |
| ET | Exposure Time (hr/day) | 24 | 24 | 8 |
| EF | Exposure Frequency (d/yr) | 350 | 350 | 250 |
| ED | Exposure Duration (yr) | 30 | 30 | 25 |
| TF | Transfer Factor $(L/m^3)^3$ | 0.5 | 0.5 | 0.5 |
| CF | Conversion Factor | N/A | 1,000 µg/mg | 1,000 µg/mg |
| TR | Target Risk | N/A | $1 \times 10^{-5}$ | $1 \times 10^{-5}$ |
| IUR | Inhalation Unit Risk $(\mu g/m^3)^{-1}$ | N/A | Chemical-specific | Chemical-specific |

| *Term* | | *Residential* | | *Nonresidential (Onsite Worker)* |
|---|---|---|---|---|
| | | *Systemic*[1] | *Carcinogens*[2] | |
| **[ ATc ] $AT_c$** | Averaging Time for carcinogens (yr) | N/A | 70 | 70 |
| AED | Combined Age-Dependent adjustment Factor and Exposure Duration (yr)[4] | N/A | 76 | N/A |
| **$IUR_k$** | **TCE inhalation unit risk for kidney cancer ($\mu g/m^3$)$^{-1}$** | | **$1 \times 10^{-6}$** | |
| **$IUR_l$** | **TCE inhalation unit risk for both non-Hodgkin lymphoma and liver cancer ($\mu g/m^3$)$^{-1}$** | | **$3 \times 10^{-6}$** | |
| * * * * * | | | | |

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| ACENAPHTHENE | 83-32-9 | **[2,200] 2,500** | G | 3,800 | S | 3,800 | S | 3,800 | S | 3,800 | S | 3,800 | S |
| ACENAPHTHYLENE | 208-96-8 | **[2,200] 2,500** | G | **[6,100] 7,000** | G | 16,000 | S | 16,000 | S | 16,000 | S | 16,000 | S |
| ACEPHATE | 30560-19-1 | **[76] 84** | G | **[300] 390** | G | **[7,600] 8,400** | G | **[30,000] 39,000** | G | **[76] 84** | G | **[300] 390** | G |
| ACETALDEHYDE | 75-07-0 | 19 | N | 79 | N | 1,900 | N | 7,900 | N | 19 | N | 79 | N |
| ACETONE | 67-64-1 | **[33,000] 38,000** | G | **[92,000] 110,000** | G | **[3,300,000] 3,800,000** | G | **[9,200,000] 11,000,000** | G | **[330,000] 380,000** | G | **[920,000] 1,100,000** | G |
| ACETONITRILE | 75-05-8 | 130 | N | 530 | N | 13,000 | N | 53,000 | N | 1,300 | N | 5,300 | N |
| ACETOPHENONE | 98-86-2 | **[3,700] 4,200** | G | **[10,000] 12,000** | G | **[370,000] 420,000** | G | **[1,000,000] 1,200,000** | G | **[3,700] 4,200** | G | **[10,000] 12,000** | G |
| ACETYLAMINOFLUORENE, 2- (2AAF) | 53-96-3 | **[0.17] 0.19** | G | **[0.68] 0.89** | G | **[17] 19** | G | **[68] 89** | G | **[170] 190** | G | **[680] 890** | G |
| ACROLEIN | 107-02-8 | 0.042 | N | 0.18 | N | 4.2 | N | 18 | N | 0.42 | N | 1.8 | N |
| ACRYLAMIDE | 79-06-1 | **[0.038] 0.19** | N | **[0.19] 2.5** | N | **[3.8] 19** | N | **[19] 250** | N | **[0.038] 0.19** | N | **[0.19] 2.5** | N |
| ACRYLIC ACID | 79-10-7 | 2.1 | N | 8.8 | N | 210 | N | 880 | N | 210 | N | 880 | N |
| ACRYLONITRILE | 107-13-1 | 0.72 | N | 3.7 | N | 72 | N | 370 | N | 72 | N | 370 | N |
| ALACHLOR | 15972-60-8 | 2 | M | 2 | M | 200 | M | 200 | M | 2 | M | 2 | M |
| ALDICARB | 116-06-3 | 3 | M | 3 | M | 300 | M | 300 | M | 3,000 | M | 3,000 | M |
| ALDICARB SULFONE | 1646-88-4 | 2 | M | 2 | M | 200 | M | 200 | M | 2 | M | 2 | M |
| ALDICARB SULFOXIDE | 1646-87-3 | 4 | M | 4 | M | 400 | M | 400 | M | 4 | M | 4 | M |
| ALDRIN | 309-00-2 | **[0.039] 0.43** | G | **[0.15] 0.2** | G | **[3.9] 4.3** | G | **[15] 20** | G | 20 | S | 20 | S |
| ALLYL ALCOHOL | 107-18-6 | **[0.63] 0.21** | N | **[2.6] 0.88** | N | **[63] 21** | N | **[260] 88** | N | **[63] 21** | N | **[260] 88** | N |
| AMETRYN | 834-12-8 | 60 | H | 60 | H | 6,000 | H | 6,000 | H | 60 | H | 60 | H |
| AMINOBIPHENYL, 4- | 92-67-1 | **[0.031] 0.035** | G | **[0.12] 0.16** | G | **[3.1] 3.5** | G | **[12] 16** | G | **[31] 35** | G | **[120] 160** | G |
| AMITROLE | 61-82-5 | **[0.7] 0.78** | G | **[2.8] 3.6** | G | **[70] 78** | G | **[280] 360** | G | **[700] 780** | G | **[2,800] 3,600** | G |
| AMMONIA | 7664-41-7 | 30,000 | H | 30,000 | H | 3,000,000 | H | 3,000,000 | H | 30,000 | H | 30,000 | H |
| AMMONIUM SULFAMATE | 7773-06-0 | 2,000 | H | 2,000 | H | 200,000 | H | 200,000 | H | 2,000 | H | 2,000 | H |
| ANILINE | 62-53-3 | 2.1 | N | 8.8 | N | 210 | N | 880 | N | 2.1 | N | 8.8 | N |
| ANTHRACENE | 120-12-7 | 66 | S | 66 | S | 66 | S | 66 | S | 66 | S | 66 | S |
| ATRAZINE | 1912-24-9 | 3 | M | 3 | M | 300 | M | 300 | M | 3 | M | 3 | M |
| AZINPHOS-METHYL (GUTHION) | 86-50-0 | **[110] 130** | G | **[310] 350** | G | **[11,000] 13,000** | G | **[31,000] 32,000** | **[G] S** | **[110] 130** | G | **[310] 350** | G |
| BAYGON (PROPOXUR) | 114-26-1 | 3 | H | 3 | H | 300 | H | 300 | H | 3,000 | H | 3,000 | H |
| BENOMYL | 17804-35-2 | **[1,800] 2,000** | **[G] S** | 2,000 | S | 2,000 | S | 2,000 | S | **[1,800] 2,000** | **[G] S** | 2,000 | S |

All concentrations in µg/L
M = Maximum Contaminant Level
N = Inhalation
R = Residential
H = Lifetime health advisory level
S = Aqueous solubility cap
NR = Non-Residential
G = Ingestion

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| BENTAZON | 25057-89-0 | 200 | H | 200 | H | 20,000 | H | 20,000 | H | 200 | H | 200 | H |
| BENZENE | 71-43-2 | 5 | M | 5 | M | 500 | M | 500 | M | 500 | M | 500 | M |
| BENZIDINE | 92-87-5 | **[0.00093] 0.00098** | G | **[0.011] 0.015** | G | **[0.093] 0.098** | G | **[1.1] 1.5** | G | **[0.93] 0.98** | G | **[11] 15** | G |
| BENZO[A]ANTHRACENE | 56-55-3 | **[0.29] 0.32** | G | **[3.6] 4.9** | G | 11 | S | 11 | S | 11 | S | 11 | S |
| BENZO[A]PYRENE | 50-32-8 | 0.2 | M | 0.2 | M | 3.8 | S | 3.8 | S | 3.8 | S | 3.8 | S |
| BENZO[B]FLUORANTHENE | 205-99-2 | **[0.29] 0.31** | G | 1.2 | S | 1.2 | S | 1.2 | S | 1.2 | S | 1.2 | S |
| BENZO[GHI]PERYLENE | 191-24-2 | 0.26 | S | 0.26 | S | 0.26 | S | 0.26 | S | 0.26 | S | 0.26 | S |
| BENZO[K]FLUORANTHENE | 207-08-9 | 0.55 | S | 0.55 | S | 0.55 | S | 0.55 | S | 0.55 | S | 0.55 | S |
| BENZOIC ACID | 65-85-0 | **[150,000] 170,000** | G | **[410,000] 470,000** | G | 2,700,000 | S | 2,700,000 | S | **[150,000] 170,000** | G | **[410,000] 470,000** | G |
| BENZOTRICHLORIDE | 98-07-7 | **[0.051] 0.056** | G | **[0.2] 0.26** | G | **[5.1] 5.6** | G | **[20] 26** | G | **[51] 56** | G | **[200] 260** | G |
| BENZYL ALCOHOL | 100-51-6 | **[18,000] 4,200** | G | **[51,000] 12,000** | G | **[1,800,000] 420,000** | G | **[5,100,000] 1,200,000** | G | **[18,000] 4,200** | G | **[51,000] 12,000** | G |
| BENZYL CHLORIDE | 100-44-7 | 1 | N | 5.1 | N | 100 | N | 510 | N | 100 | N | 510 | N |
| BETA PROPIOLACTONE | 57-57-8 | 0.012 | N | 0.063 | N | 1.2 | N | 6.3 | N | 0.12 | N | 0.63 | N |
| BHC, ALPHA- | 319-84-6 | **[0.1] 0.12** | G | **[0.41] 0.54** | G | **[10] 12** | G | **[41] 54** | G | **[100] 120** | G | **[410] 540** | G |
| BHC, BETA- | 319-85-7 | **[0.37] 0.41** | G | **[1.4] 1.9** | G | **[37] 41** | G | 100 | S | 100 | S | 100 | S |
| BHC, GAMMA (LINDANE) | 58-89-9 | 0.2 | M | 0.2 | M | 20 | M | 20 | M | 200 | M | 200 | M |
| BIPHENYL, 1,1- | 92-52-4 | **[1,800] 91** | G | **[5,100] 430** | G | 7,200 | S | 7,200 | S | 7,200 | S | 7,200 | S |
| BIS(2-CHLOROETHOXY)METHANE | 111-91-1 | **[110] 130** | G | **[310] 350** | G | **[11,000] 13,000** | G | **[31,000] 35,000** | G | **[110] 130** | G | **[310] 350** | G |
| BIS(2-CHLOROETHYL)ETHER | 111-44-4 | 0.15 | N | 0.76 | N | 15 | N | 76 | N | 15 | N | 76 | N |
| BIS(2-CHLORO-ISOPROPYL)ETHER | 108-60-1 | 300 | H | 300 | H | 30,000 | H | 30,000 | H | 30,000 | H | 30,000 | H |
| BIS(CHLOROMETHYL)ETHER | 542-88-1 | 0.00079 | N | 0.004 | N | 0.079 | N | 0.4 | N | 0.079 | N | 0.4 | N |
| BIS[2-ETHYLHEXYL] PHTHALATE | 117-81-7 | 6 | M | 6 | M | 290 | S | 290 | S | 290 | S | 290 | S |
| BISPHENOL A | 80-05-7 | **[1,800] 2,100** | G | **[5,100] 5,800** | G | 120,000 | S | 120,000 | S | 120,000 | S | 120,000 | S |
| BROMACIL | 314-40-9 | 70 | H | 70 | H | 7,000 | H | 7,000 | H | 70 | H | 70 | H |
| BROMOCHLOROMETHANE | 74-97-5 | 90 | H | 90 | H | 9,000 | H | 9,000 | H | 90 | H | 90 | H |
| BROMODICHLOROMETHANE **(THM)** | 75-27-4 | 80 | M | 80 | M | 8,000 | M | 8,000 | M | 80 | M | 80 | M |
| BROMOMETHANE | 74-83-9 | 10 | H | 10 | H | 1,000 | H | 1,000 | H | 1,000 | H | 1,000 | H |
| BROMOXYNIL | 1689-84-5 | **[730] 830** | G | **[2,000] 2,300** | G | **[73,000] 83,000** | G | 130,000 | S | **[730] 830** | G | **[2,000] 2,300** | G |
| BROMOXYNIL OCTANOATE | 1689-99-2 | 80 | S | 80 | S | 80 | S | 80 | S | 80 | S | 80 | S |

All concentrations in µg/L
R = Residential
NR = Non-Residential
M = Maximum Contaminant Level
H = Lifetime health advisory level
G = Ingestion
N = Inhalation
S = Aqueous solubility cap

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| BUTADIENE, 1,3- | 106-99-0 | **[0.19] 0.21** | G | **[0.76] 1** | G | **[19] 21** | G | **[76] 100** | G | **[19] 21** | G | **[76] 100** | G |
| BUTYL ALCOHOL, N- | 71-36-3 | **[3,700] 4,200** | G | **[10,000] 12,000** | G | **[370,000] 420,000** | G | **[1,000,000] 1,200,000** | G | **[37,000] 42,000** | G | **[100,000] 120,000** | G |
| BUTYLATE | 2008-41-5 | 400 | H | 400 | H | 40,000 | H | 40,000 | H | 400 | H | 400 | H |
| BUTYLBENZENE, N- | 104-51-8 | **[1,500] 2,100** | G | **[4,100] 5,800** | G | 15,000 | S | 15,000 | S | **[1,500] 2,100** | G | **[4,100] 5,800** | G |
| BUTYLBENZENE, SEC- | 135-98-8 | **[1,500] 4,200** | G | **[4,100] 12,000** | G | 17,000 | S | 17,000 | S | **[1,500] 4,200** | G | **[4,100] 12,000** | G |
| BUTYLBENZENE, TERT- | 98-06-6 | **[1,500] 4,200** | G | **[4,100] 12,000** | G | 30,000 | S | 30,000 | S | **[1,500] 4,200** | G | **[4,100] 12,000** | G |
| BUTYLBENZYL PHTHALATE | 85-68-7 | **[350] 380** | G | **[1,400] 1,800** | G | 2,700 | S | 2,700 | S | 2,700 | S | 2,700 | S |
| CAPTAN | 133-06-2 | **[290] 320** | G | 500 | S | 500 | S | 500 | S | 500 | S | 500 | S |
| CARBARYL | 63-25-2 | **[3,700] 4,200** | G | **[10,000] 12,000** | G | 120,000 | S | 120,000 | S | 120,000 | S | 120,000 | S |
| CARBAZOLE | 86-74-8 | **[33] 37** | G | **[130] 170** | G | 1,200 | S | 1,200 | S | **[1,200] 37** | S | **[1,200] 170** | S |
| CARBOFURAN | 1563-66-2 | 40 | M | 40 | M | 4,000 | M | 4,000 | M | 40 | M | 40 | M |
| CARBON DISULFIDE | 75-15-0 | 1,500 | N | 6,200 | N | 150,000 | N | 620,000 | N | 1,500 | N | 6,200 | N |
| CARBON TETRACHLORIDE | 56-23-5 | 5 | M | 5 | M | 500 | M | 500 | M | 50 | M | 50 | M |
| CARBOXIN | 5234-68-4 | 700 | H | 700 | H | 70,000 | H | 70,000 | H | 700 | H | 700 | H |
| CHLORAMBEN | 133-90-4 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 100 | H | 100 | H |
| CHLORDANE | 57-74-9 | 2 | M | 2 | M | 56 | S | 56 | S | 56 | S | 56 | S |
| CHLORO-1,1-DIFLUOROETHANE, 1- | 75-68-3 | 110,000 | N | 440,000 | N | 1,400,000 | S | 1,400,000 | S | 110,000 | N | 440,000 | N |
| CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE) | 107-05-1 | 2.1 | N | 8.8 | N | 210 | N | 880 | N | 210 | N | 880 | N |
| **CHLOROACETALDEHYDE** | **107-20-0** | **2.4** | **G** | **11** | **G** | **240** | **G** | **1,100** | **G** | **2.4** | **G** | **11** | **G** |
| CHLOROACETOPHENONE, 2- | 532-27-4 | **[1.1] 1.3** | G | **[3.1] 3.5** | G | **[110] 130** | G | **[310] 350** | G | **[1,100] 1,300** | G | **[3,100] 3,500** | G |
| CHLOROANILINE, P- | 106-47-8 | **[3.3] 3.7** | G | **[13] 17** | G | **[330] 370** | G | **[1,300] 1,700** | G | **[3.3] 3.7** | G | **[13] 17** | G |
| CHLOROBENZENE | 108-90-7 | 100 | M | 100 | M | 10,000 | M | 10,000 | M | 10,000 | M | 10,000 | M |
| CHLOROBENZILATE | 510-15-6 | **[6] 6.6** | G | **[24] 31** | G | **[600] 660** | G | **[2,400] 3,100** | G | **[6,000] 6,600** | G | 13,000 | S |
| CHLOROBUTANE, 1- | 109-69-3 | **[1,500] 1,700** | G | **[4,100] 4,700** | G | **[150,000] 170,000** | G | **[410,000] 470,000** | G | **[1,500] 1,700** | G | **[4,100] 4,700** | G |
| CHLORODIBROMOMETHANE **(THM)** | 124-48-1 | 80 | M | 80 | M | 8,000 | M | 8,000 | M | 8,000 | M | 8,000 | M |
| CHLORODIFLUOROMETHANE | 75-45-6 | 110,000 | N | 440,000 | N | 2,900,000 | S | 2,900,000 | S | 110,000 | N | 440,000 | N |

All concentrations in µg/L
R = Residential
NR = Non-Residential
M = Maximum Contaminant Level
H = Lifetime health advisory level
G = Ingestion
N = Inhalation
S = Aqueous solubility cap

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| CHLOROETHANE | 75-00-3 | **[230] 250** | G | **[900] 1,200** | G | **[23,000] 25,000** | G | **[90,000] 120,000** | G | **[23,000] 25,000** | G | **[90,000] 120,000** | G |
| CHLOROFORM **(THM)** | 67-66-3 | 80 | M | 80 | M | 8,000 | M | 8,000 | M | 800 | M | 800 | M |
| CHLORONAPHTHALENE, 2- | 91-58-7 | **[2,900] 3,300** | G | **[8,200] 9,300** | G | 12,000 | S | 12,000 | S | **[2,900] 3,300** | G | **[8,200] 9,300** | G |
| CHLORONITROBENZENE, P- | 100-00-5 | **[37] 42** | G | **[100] 120** | G | **[3,700] 4,200** | G | **[10,000] 12,000** | G | **[37] 42** | G | **[100] 120** | G |
| CHLOROPHENOL, 2- | 95-57-8 | 40 | H | 40 | H | 4,000 | H | 4,000 | H | 40 | H | 40 | H |
| CHLOROPRENE | 126-99-8 | **[15] 0.16** | N | **[62] 0.83** | N | **[1,500] 16** | N | **[6,200] 83** | N | **[1,500] 16** | N | **[6,200] 83** | N |
| CHLOROPROPANE, 2- | 75-29-6 | 210 | N | 880 | N | 21,000 | N | 88,000 | N | 210 | N | 880 | N |
| CHLOROTHALONIL | 1897-45-6 | **[210] 240** | G | 600 | S | 600 | S | 600 | S | **[210] 240** | G | 600 | S |
| CHLOROTOLUENE, O- | 95-49-8 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 100 | H | 100 | H |
| CHLOROTOLUENE, P- | 106-43-4 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 100 | H | 100 | H |
| CHLORPYRIFOS | 2921-88-2 | 2 | H | 2 | H | 200 | H | 200 | H | 2 | H | 2 | H |
| CHLORSULFURON | 64902-72-3 | **[1,800] 2,100** | G | **[5,100] 5,800** | G | **[180,000] 190,000** | **[G] S** | 190,000 | S | **[1,800] 2,100** | G | **[5,100] 5,800** | G |
| CHLORTHAL-DIMETHYL (DACTHAL) (DCPA) | 1861-32-1 | 70 | H | 70 | H | 500 | S | 500 | S | 500 | S | 500 | S |
| CHRYSENE | 218-01-9 | 1.9 | S | 1.9 | S | 1.9 | S | 1.9 | S | 1.9 | S | 1.9 | S |
| **[CRESOLS] CRESOL(S)** | 1319-77-3 | **[180] 210** | G | **[510] 580** | G | **[18,000] 21,000** | G | **[51,000] 58,000** | G | **[18,000] 21,000** | G | **[51,000] 58,000** | G |
| CRESOL, 4,6-DINITRO-O- | 534-52-1 | **[3.7] 3.3** | G | **[10] 9.3** | G | **[370] 330** | G | **[1,000] 930** | G | **[3,700] 3,300** | G | **[10,000] 9,300** | G |
| CRESOL, O- (METHYLPHENOL, 2-) | 95-48-7 | **[1,800] 2,100** | G | **[5,100] 5,800** | G | **[180,000] 210,000** | G | **[510,000] 580,000** | G | **[180,000] 210,000** | G | **[510,000] 580,000** | G |
| CRESOL, M (METHYLPHENOL, 3-) | 108-39-4 | **[1,800] 2,100** | G | **[5,100] 5,800** | G | **[180,000] 210,000** | G | **[510,000] 580,000** | G | **[1,800,000] 2,100,000** | G | 2,500,000 | S |
| CRESOL, P (METHYLPHENOL, 4-) | 106-44-5 | **[180] 210** | G | **[510] 580** | G | **[18,000] 21,000** | G | **[51,000] 58,000** | G | **[180,000] 210,000** | G | **[510,000] 580,000** | G |
| CRESOL, P-CHLORO-M- | 59-50-7 | **[180] 4,200** | G | **[510] 12,000** | G | **[18,000] 420,000** | G | **[51,000] 1,200,000** | G | **[180] 4,200** | G | **[510] 12,000** | G |
| CROTONALDEHYDE | 4170-30-3 | **[0.35] 0.38** | G | **[1.4] 1.8** | G | **[35] 38** | G | **[140] 180** | G | **[35] 38** | G | **[140] 180** | G |
| CROTONALDEHYDE, TRANS- | 123-73-9 | **[0.35] 0.38** | G | **[1.4] 1.8** | G | **[35] 38** | G | **[140] 180** | G | **[35] 38** | G | **[140] 180** | G |
| CUMENE (ISOPROPYL BENZENE) | 98-82-8 | 840 | N | 3,500 | N | 50,000 | S | 50,000 | S | 50,000 | S | 50,000 | S |
| CYANAZINE | 21725-46-2 | 1 | H | 1 | H | 100 | H | 100 | H | 1 | H | 1 | H |
| CYCLOHEXANE | 110-82-7 | 13,000 | N | 53,000 | N | 55,000 | S | 55,000 | S | 13,000 | N | 53,000 | N |

All concentrations in µg/L M = Maximum Contaminant Level N = Inhalation
R = Residential H = Lifetime health advisory level S = Aqueous solubility cap
NR = Non-Residential G = Ingestion

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| CYCLOHEXANONE | 108-94-1 | **[180,000] 1,500** | **[G] N** | **[510,000] 6,200** | **[G] N** | **[18,000,000] 150,000** | **[G] N** | **[37,000,000] 620,000** | **[S] N** | **[180,000] 1,500** | **[G] N** | **[510,000] 6,200** | **[G] N** |
| CYFLUTHRIN | 68359-37-5 | 1 | S | 1 | S | 1 | S | 1 | S | 1 | S | 1 | S |
| CYROMAZINE | 66215-27-8 | **[270] 310** | G | **[770] 880** | G | **[27,000] 31,000** | G | **[77,000] 88,000** | G | **[270] 310** | G | **[770] 880** | G |
| DDD, 4,4'- | 72-54-8 | **[2.8] 3** | G | **[11] 14** | G | 160 | S | 160 | S | 160 | S | 160 | S |
| DDE, 4,4'- | 72-55-9 | **[1.9] 2.1** | G | **[7.6] 10** | G | 40 | S | 40 | S | 40 | S | 40 | S |
| DDT, 4,4'- | 50-29-3 | **[1.9] 2.1** | G | 5.5 | S | 5.5 | S | 5.5 | S | 5.5 | S | 5.5 | S |
| DI(2-ETHYLHEXYL)ADIPATE | 103-23-1 | 400 | M | 400 | M | 40,000 | M | 40,000 | M | 200,000 | S | 200,000 | S |
| DIALLATE | 2303-16-4 | **[11] 12** | G | **[43] 56** | G | **[1,100] 1,200** | G | **[4,300] 5,600** | G | **[11,000] 12,000** | G | 40,000 | S |
| DIAMINOTOLUENE, 2,4- | 95-80-7 | **[0.17] 0.19** | G | **[0.68] 0.89** | G | **[17] 19** | G | **[68] 89** | G | **[170] 190** | G | **[680] 890** | G |
| DIAZINON | 333-41-5 | 1 | H | 1 | H | 100 | H | 100 | H | 1 | H | 1 | H |
| DIBENZO[A,H]ANTHRACENE | 53-70-3 | **[0.029] 0.031** | G | **[0.36] 0.47** | G | 0.6 | S | 0.6 | S | 0.6 | S | 0.6 | S |
| DIBENZOFURAN | 132-64-9 | **[37] 42** | G | **[100] 120** | G | **[3,700] 4,200** | G | 4,500 | S | 4,500 | S | 4,500 | S |
| DIBROMO-3-CHLOROPROPANE, 1,2- | 96-12-8 | 0.2 | M | 0.2 | M | 20 | M | 20 | M | 20 | M | 20 | M |
| DIBROMOBENZENE, 1,4- | 106-37-6 | **[370] 420** | G | **[1,000] 1,200** | G | 20,000 | S | 20,000 | S | **[370] 420** | G | **[1,000] 1,200** | G |
| DIBROMOETHANE, 1,2- (ETHYLENE DIBROMIDE) | 106-93-4 | 0.05 | M | 0.05 | M | 5 | M | 5 | M | 5 | M | 5 | M |
| DIBROMOMETHANE | 74-95-3 | **[370] 8.4** | **[G] N** | **[1,000] 35** | **[G] N** | **[37,000] 840** | **[G] N** | **[100,000] 3,500** | **[G] N** | **[37,000] 840** | **[G] N** | **[100,000] 3,500** | **[G] N** |
| DIBUTYL PHTHALATE, N- | 84-74-2 | **[3,700] 4,200** | G | **[10,000] 12,000** | G | **[370,000] 400,000** | **[G] S** | 400,000 | S | 400,000 | S | 400,000 | S |
| DICAMBA | 1918-00-9 | 4,000 | H | 4,000 | H | 400,000 | H | 400,000 | H | 4,000 | H | 4,000 | H |
| DICHLOROACETIC ACID **(HAA)** | 76-43-6 | 60 | M | 60 | M | 6,000 | M | 6,000 | M | 60 | M | 60 | M |
| DICHLORO-2-BUTENE, 1,4- | 764-41-0 | 0.012 | N | 0.06 | N | 1.2 | N | 6 | N | 0.012 | N | 0.06 | N |
| DICHLORO-2-BUTENE, TRANS-1,4- | 110-57-6 | 0.012 | N | 0.06 | N | 1.2 | N | 6 | N | 0.012 | N | 0.06 | N |
| DICHLOROBENZENE, 1,2- | 95-50-1 | 600 | M | 600 | M | 60,000 | M | 60,000 | M | 60,000 | M | 60,000 | M |
| DICHLOROBENZENE, 1,3- | 541-73-1 | 600 | H | 600 | H | 60,000 | H | 60,000 | H | 60,000 | H | 60,000 | H |
| DICHLOROBENZENE, P- | 106-46-7 | 75 | M | 75 | M | 7,500 | M | 7,500 | M | 7,500 | M | 7,500 | M |
| DICHLOROBENZIDINE, 3,3'- | 91-94-1 | **[1.5] 1.6** | G | **[5.8] 7.6** | G | **[150] 160** | G | **[580] 760** | G | **[1,500] 1,600** | G | 3,100 | S |
| DICHLORODIFLUOROMETHANE (FREON 12) | 75-71-8 | 1,000 | H | 1,000 | H | 100,000 | H | 100,000 | H | 100,000 | H | 100,000 | H |
| DICHLOROETHANE, 1,1- | 75-34-3 | 31 | N | 160 | N | 3,100 | N | 16,000 | N | 310 | N | 1,600 | N |

All concentrations in µg/L
R = Residential
NR = Non-Residential
M = Maximum Contaminant Level
H = Lifetime health advisory level
G = Ingestion
N = Inhalation
S = Aqueous solubility cap

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| DICHLOROETHANE, 1,2- | 107-06-2 | 5 | M | 5 | M | 500 | M | 500 | M | 50 | M | 50 | M |
| DICHLOROETHYLENE, 1,1- | 75-35-4 | 7 | M | 7 | M | 700 | M | 700 | M | 70 | M | 70 | M |
| DICHLOROETHYLENE, CIS-1,2- | 156-59-2 | 70 | M | 70 | M | 7,000 | M | 7,000 | M | 700 | M | 700 | M |
| DICHLOROETHYLENE, TRANS-1,2- | 156-60-5 | 100 | M | 100 | M | 10,000 | M | 10,000 | M | 1,000 | M | 1,000 | M |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | 75-09-2 | 5 | M | 5 | M | 500 | M | 500 | M | 500 | M | 500 | M |
| DICHLOROPHENOL, 2,4- | 120-83-2 | 20 | H | 20 | H | 2,000 | H | 2,000 | H | 20,000 | H | 20,000 | H |
| DICHLOROPHENOXYACETIC ACID, 2,4- (2,4-D) | 94-75-7 | 70 | M | 70 | M | 7,000 | M | 7,000 | M | 70,000 | M | 70,000 | M |
| DICHLOROPROPANE, 1,2- | 78-87-5 | 5 | M | 5 | M | 500 | M | 500 | M | 50 | M | 50 | M |
| DICHLOROPROPENE, 1,3- | 542-75-6 | **[6.6] 7.3** | G | **[26] 34** | G | **[660] 730** | G | **[2,600] 3,400** | G | **[660] 730** | G | **[2,600] 3,400** | G |
| DICHLOROPROPIONIC ACID, 2,2-(DALAPON) | 75-99-0 | 200 | M | 200 | M | 20,000 | M | 20,000 | M | 20,000 | M | 20,000 | M |
| DICHLORVOS | 62-73-7 | **[2.3] 2.5** | G | **[9] 12** | G | **[230] 250** | G | **[900] 1,200** | G | **[2.3] 2.5** | G | **[9] 12** | G |
| DICYCLOPENTADIENE | 77-73-6 | 15 | N | 62 | N | 1,500 | N | 6,200 | N | 15 | N | 62 | N |
| DIELDRIN | 60-57-1 | **[0.041] 0.046** | G | **[0.16] 0.21** | G | **[4.1] 4.6** | G | **[16] 21** | G | **[41] 46** | G | **[160] 170** | **[G] S** |
| DIETHYL PHTHALATE | 84-66-2 | **[29,000] 33,000** | G | **[82,000] 93,000** | G | 1,100,000 | S | 1,100,000 | S | 1,100,000 | S | 1,100,000 | S |
| DIFLUBENZURON | 35367-38-5 | 200 | S | 200 | S | 200 | S | 200 | S | 200 | S | 200 | S |
| DIISOPROPYL METHYLPHOSPHONATE | 1445-75-6 | 600 | H | 600 | H | 60,000 | H | 60,000 | H | 600 | H | 600 | H |
| DIMETHOATE | 60-51-5 | **[7.3] 8.3** | G | **[20] 23** | G | **[730] 830** | G | **[2,000] 2,300** | G | **[7,300] 8,300** | G | **[20,000] 23,000** | G |
| DIMETHOXYBENZIDINE, 3,3- | 119-90-4 | **[47] 52** | G | **[190] 240** | G | **[4,700] 5,200** | G | **[19,000] 24,000** | G | **[47,000] 52,000** | G | 60,000 | S |
| DIMETHRIN | 70-38-2 | 36 | S | 36 | S | 36 | S | 36 | S | 36 | S | 36 | S |
| DIMETHYLAMINOAZOBENZENE, P- | 60-11-7 | **[0.14] 0.16** | G | **[0.57] 0.74** | G | **[14] 16** | G | **[57] 74** | G | **[140] 160** | G | **[570] 740** | G |
| DIMETHYLANILINE, N,N- | 121-69-7 | **[73] 83** | G | **[200] 230** | G | **[7,300] 8,300** | G | **[20,000] 23,000** | G | **[7,300] 8,300** | G | **[20,000] 23,000** | G |
| DIMETHYLBENZIDINE, 3,3- | 119-93-7 | **[0.06] 0.46** | G | **[0.24] 2** | G | **[6] 46** | G | **[24] 210** | G | **[60] 460** | G | **[240] 2,100** | G |
| DIMETHYL METHYLPHOSPHONATE | 756-79-6 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 100 | H | 100 | H |
| DIMETHYLPHENOL, 2,4- | 105-67-9 | **[730] 830** | G | **[2,000] 2,300** | G | **[73,000] 83,000** | G | **[200,000] 230,000** | G | **[730,000] 830,000** | G | **[2,000,000] 2,300,000** | G |
| DINITROBENZENE, 1,3- | 99-65-0 | 1 | H | 1 | H | 100 | H | 100 | H | 1,000 | H | 1,000 | H |

All concentrations in µg/L
R = Residential
NR = Non-Residential
M = Maximum Contaminant Level
H = Lifetime health advisory level
G = Ingestion
N = Inhalation
S = Aqueous solubility cap

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| DINITROPHENOL, 2,4- | 51-28-5 | **[73] 83** | G | **[200] 230** | G | **[7,300] 8,300** | G | **[20,000] 23,000** | G | **[73,000] 83,000** | G | **[200,000] 230,000** | G |
| DINITROTOLUENE, 2,4- | 121-14-2 | **[2.1] 2.4** | G | **[8.4] 11** | G | **[210] 240** | G | **[840] 1,100** | G | **[2,100] 2,400** | G | **[8,400] 11,000** | G |
| DINITROTOLUENE, 2,6- (2,6-DNT) | 606-20-2 | **[37] 42** | G | **[100] 120** | G | **[3,700] 4,200** | G | **[10,000] 12,000** | G | **[37,000] 42,000** | G | **[100,000] 120,000** | G |
| DINOSEB | 88-85-7 | 7 | M | 7 | M | 700 | M | 700 | M | 7,000 | M | 7,000 | M |
| DIOXANE, 1,4- | 123-91-1 | **[6.4] 7.3** | **[N] G** | **[32] 34** | **[N] G** | **[640] 730** | **[N] G** | **[3,200] 3,400** | **[N] G** | **[64] 73** | **[N] G** | **[320] 340** | **[N] G** |
| DIPHENAMID | 957-51-7 | 200 | H | 200 | H | 20,000 | H | 20,000 | H | 200 | H | 200 | H |
| DIPHENYLAMINE | 122-39-4 | **[910] 1,000** | G | **[2,600] 2,900** | G | **[91,000] 100,000** | G | **[260,000] 290,000** | G | 300,000 | S | 300,000 | S |
| DIPHENYLHYDRAZINE, 1,2- | 122-66-7 | **[0.83] 0.91** | G | **[3.3] 4.3** | G | **[83] 91** | G | 250 | S | 250 | S | 250 | S |
| DIQUAT | 85-00-7 | 20 | M | 20 | M | 2,000 | M | 2,000 | M | 20 | M | 20 | M |
| DISULFOTON | 298-04-4 | 0.7 | H | 0.7 | H | 70 | H | 70 | H | 700 | H | 700 | H |
| DITHIANE, 1,4- | 505-29-3 | 80 | H | 80 | H | 8,000 | H | 8,000 | H | 80 | H | 80 | H |
| DIURON | 330-54-1 | **[73] 83** | G | **[200] 230** | G | **[7,300] 8,300** | G | **[20,000] 23,000** | G | **[73] 83** | G | **[200] 230** | G |
| ENDOSULFAN | 115-29-7 | **[220] 250** | G | 480 | S | 480 | S | 480 | S | 480 | S | 480 | S |
| ENDOSULFAN I (APLHA) | 959-98-8 | **[220] 250** | G | 500 | S | 500 | S | 500 | S | **[220] 250** | G | 500 | S |
| ENDOSULFAN II (BETA) | 33213-65-9 | **[220] 250** | G | 450 | S | 450 | S | 450 | S | **[220] 250** | G | 450 | S |
| ENDOSULFAN SULFATE | 1031-07-8 | 120 | S | 120 | S | 120 | S | 120 | S | 120 | S | 120 | S |
| ENDOTHALL | 145-73-3 | 100 | M | 100 | M | 10,000 | M | 10,000 | M | 100 | M | 100 | M |
| ENDRIN | 72-20-8 | 2 | M | 2 | M | 200 | M | 200 | M | 2 | M | 2 | M |
| EPICHLOROHYDRIN | 106-89-8 | 2.1 | N | 8.8 | N | 210 | N | 880 | N | 210 | N | 880 | N |
| ETHEPHON | 16672-87-0 | **[180] 210** | G | **[510] 580** | G | **[18,000] 21,000** | G | **[51,000] 58,000** | G | **[180] 210** | G | **[510] 580** | G |
| ETHION | 563-12-2 | **[18] 21** | G | **[51] 58** | G | 850 | S | 850 | S | **[18] 21** | G | **[51] 58** | G |
| ETHOXYETHANOL, 2- (EGEE) | 110-80-5 | 420 | N | 1,800 | N | 42,000 | N | 180,000 | N | 42,000 | N | 180,000 | N |
| ETHYL ACETATE | 141-78-6 | **[33,000] 38,000** | G | **[92,000] 110,000** | G | **[3,300,000] 3,800,000** | G | **[9,200,000] 11,000,000** | G | **[3,300,000] 3,800,000** | G | **[9,200,000] 11,000,000** | G |
| ETHYL ACRYLATE | 140-88-5 | **[14] 15** | G | **[54] 71** | G | **[1,400] 1,500** | G | **[5,400] 7,100** | G | **[1,400] 1,500** | G | **[5,400] 7,100** | G |
| ETHYL BENZENE | 100-41-4 | 700 | M | 700 | M | 70,000 | M | 70,000 | M | 70,000 | M | 70,000 | M |

All concentrations in µg/L
R = Residential
NR = Non-Residential
M = Maximum Contaminant Level
H = Lifetime health advisory level
G = Ingestion
N = Inhalation
S = Aqueous solubility cap

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| ETHYL DIPROPYLTHIOCARBAMATE, S- (EPTC) | 759-94-4 | **[910] 1,000** | G | **[2,600] 2,900** | G | **[91,000] 100,000** | G | **[260,000] 290,000** | G | **[910] 1,000** | G | **[2,600] 2,900** | G |
| ETHYL ETHER | 60-29-7 | **[7,300] 8,300** | G | **[20,000] 23,000** | G | **[730,000] 830,000** | G | **[2,000,000] 2,300,000** | G | **[7,300] 8,300** | G | **[20,000] 23,000** | G |
| ETHYL METHACRYLATE | 97-63-2 | **[3,300] 630** | **[G] N** | **[9,200] 2,600** | **[G] N** | **[330,000] 63,000** | **[G] N** | **[920,000] 260,000** | **[G] N** | **[3,300] 630** | **[G] N** | **[9,200] 2,600** | **[G] N** |
| **ETHYLENE CHLORHYDRIN** | **107-07-3** | **830** | **G** | **2,300** | **G** | **83,000** | **G** | **230,000** | **G** | **830** | **G** | **2,300** | **G** |
| ETHYLENE GLYCOL | 107-21-1 | 14,000 | H | 14,000 | H | 1,400,000 | H | 1,400,000 | H | 1,400,000 | H | 1,400,000 | H |
| ETHYLENE THIOUREA (ETU) | 96-45-7 | **[2.9] 3.3** | G | **[8.2] 9.3** | G | **[290] 330** | G | **[820] 930** | G | **[2,900] 3,300** | G | **[8,200] 9,300** | G |
| ETHYLP-NITROPHENYL PHENYLPHOSPHOROTHIOATE | 2104-64-5 | **[0.37] 0.42** | G | 1 | G | **[37] 42** | G | **[100] 120** | G | **[0.37] 0.42** | G | **[1] 1.2** | G |
| FENAMIPHOS | 22224-92-6 | 0.7 | H | 0.7 | H | 70 | H | 70 | H | 0.7 | H | 0.7 | H |
| FENVALERATE (PYDRIN) | 51630-58-1 | 85 | S | 85 | S | 85 | S | 85 | S | 85 | S | 85 | S |
| FLUOMETURON **[(FLUOMETRON IN EPA FEB 96)]** | 2164-17-2 | 90 | H | 90 | H | 9,000 | H | 9,000 | H | 90 | H | 90 | H |
| FLUORANTHENE | 206-44-0 | 260 | S | 260 | S | 260 | S | 260 | S | 260 | S | 260 | S |
| FLUORENE | 86-73-7 | **[1,500] 1,700** | G | 1,900 | S | 1,900 | S | 1,900 | S | 1,900 | S | 1,900 | S |
| FLUOROTRICHLOROMETHANE (FREON 11) | 75-69-4 | 2,000 | H | 2,000 | H | 200,000 | H | 200,000 | H | 200,000 | H | 200,000 | H |
| FONOFOS | 944-22-9 | 10 | H | 10 | H | 1,000 | H | 1,000 | H | 10 | H | 10 | H |
| FORMALDEHYDE | 50-00-0 | 1,000 | H | 1,000 | H | 100,000 | H | 100,000 | H | 100,000 | H | 100,000 | H |
| FORMIC ACID | 64-18-6 | **[6.3] 0.63** | N | **[26] 2.6** | N | **[630] 63** | N | **[2,600] 260** | N | **[63] 6.3** | N | **[260] 26** | N |
| FOSETYL-AL | 39148-24-8 | **[110,000] 130,000** | G | **[310,000] 350,000** | G | **[11,000,000] 13,000,000** | G | **[31,000,000] 35,000,000** | G | **[110,000] 130,000** | G | **[310,000] 350,000** | G |
| FURAN | 110-00-9 | **[37] 42** | G | **[100] 120** | G | **[3,700] 4,200** | G | **[10,000] 12,000** | G | **[3,700] 4,200** | G | **[10,000] 12,000** | G |
| FURFURAL | 98-01-1 | 110 | N | **[310] 350** | G | 11,000 | N | **[31,000] 35,000** | G | 110 | N | **[310] 350** | G |
| GLYPHOSATE | 1071-83-6 | 700 | M | 700 | M | 70,000 | M | 70,000 | M | 700 | M | 700 | M |
| HEPTACHLOR | 76-44-8 | 0.4 | M | 0.4 | M | 40 | M | 40 | M | 180 | S | 180 | S |
| HEPTACHLOR EPOXIDE | 1024-57-3 | 0.2 | M | 0.2 | M | 20 | M | 20 | M | 200 | M | 200 | M |
| HEXACHLOROBENZENE | 118-74-1 | 1 | M | 1 | M | 6 | S | 6 | S | 6 | S | 6 | S |
| HEXACHLOROBUTADIENE | 87-68-3 | **[8.5] 9.4** | G | **[33] 44** | G | **[850] 940** | G | 2,900 | S | 2,900 | S | 2,900 | S |
| HEXACHLOROCYCLOPENTADIENE | 77-47-4 | 50 | M | 50 | M | 1,800 | S | 1,800 | S | 1,800 | S | 1,800 | S |

All concentrations in µg/L
R = Residential
NR = Non-Residential
M = Maximum Contaminant Level
H = Lifetime health advisory level
G = Ingestion
N = Inhalation
S = Aqueous solubility cap

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| HEXACHLOROETHANE | 67-72-1 | 1 | H | 1 | H | 100 | H | 100 | H | 100 | H | 100 | H |
| HEXANE | 110-54-3 | 1,500 | N | **[6,100] 6,200** | **[G] N** | 9,500 | S | 9,500 | S | 1,500 | N | **[6,100] 6,200** | **[G] N** |
| HEXAZINONE | 51235-04-2 | 400 | H | 400 | H | 40,000 | H | 40,000 | H | 400 | H | 400 | H |
| HEXYTHIAZOX (SAVEY) | 78587-05-0 | 500 | S | 500 | S | 500 | S | 500 | S | 500 | S | 500 | S |
| HMX | 2691-41-0 | 400 | H | 400 | H | 5,000 | S | 5,000 | S | 400 | H | 400 | H |
| HYDRAZINE/HYDRAZINE SULFATE | 302-01-2 | 0.01 | N | 0.051 | N | 1 | N | 5.1 | N | 0.1 | N | 0.51 | N |
| HYDROQUINONE | 123-31-9 | 12 | G | **[46] 57** | G | 1,200 | G | **[4,600] 5,700** | G | 12,000 | G | **[46,000] 57,000** | G |
| INDENO[1,2,3-CD]PYRENE | 193-39-5 | **[0.29] 0.31** | G | **[3.6] 4.7** | G | **[29] 31** | G | 62 | S | 62 | S | 62 | S |
| IPRODIONE | 36734-19-7 | **[1,500] 1,700** | G | **[4,100] 4,700** | G | 13,000 | S | 13,000 | S | **[1,500] 1,700** | G | **[4,100] 4,700** | G |
| ISOBUTYL ALCOHOL | 78-83-1 | **[11,000] 13,000** | G | **[31,000] 35,000** | G | **[1,100,000] 1,300,000** | G | **[3,100,000] 3,500,000** | G | **[1,100,000] 1,300,000** | G | **[3,100,000] 3,500,000** | G |
| ISOPHORONE | 78-59-1 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 100,000 | H | 100,000 | H |
| ISOPROPYL METHYLPHOSPHONATE | 1832-54-8 | 700 | H | 700 | H | 70,000 | H | 70,000 | H | 700 | H | 700 | H |
| KEPONE | 143-50-0 | **[0.041] 0.073** | G | **[0.16] 0.34** | G | **[4.1] 7.3** | G | **[16] 34** | G | **[41] 73** | G | **[160] 340** | G |
| MALATHION | 121-75-5 | 500 | H | 500 | H | 50,000 | H | 50,000 | H | 140,000 | S | 140,000 | S |
| MALEIC HYDRAZIDE | 123-33-1 | 4,000 | H | 4,000 | H | 400,000 | H | 400,000 | H | 4,000 | H | 4,000 | H |
| MANEB | 12427-38-2 | **[180] 210** | G | **[510] 580** | G | **[18,000] 21,000** | G | 23,000 | S | **[180] 210** | G | **[510] 580** | G |
| MERPHOS OXIDE | 78-48-8 | **[1.1] 1.3** | G | **[3.1] 3.5** | G | **[110] 130** | G | **[310] 350** | G | **[1.1] 1.3** | G | **[3.1] 3.5** | G |
| METHACRYLONITRILE | 126-98-7 | **[1.5] 4.2** | **[N] G** | **[6.2] 12** | **[N] G** | **[150] 420** | **[N] G** | **[620] 1,200** | **[N] G** | **[1.5] 4.2** | **[N] G** | **[6.2] 12** | **[N] G** |
| METHAMIDOPHOS | 10265-92-6 | **[1.8] 2.1** | G | **[5.1] 5.8** | G | **[180] 210** | G | **[510] 580** | G | **[1.8] 2.1** | G | **[5.1] 5.8** | G |
| METHANOL | 67-56-1 | **[8,400] 42,000** | N | **[35,000] 180,000** | N | **[840,000] 4,200,000** | N | **[3,500,000] 18,000,000** | N | **[840,000] 4,200,000** | N | **[3,500,000] 18,000,000** | N |
| METHOMYL | 16752-77-5 | 200 | H | 200 | H | 20,000 | H | 20,000 | H | 200 | H | 200 | H |
| METHOXYCHLOR | 72-43-5 | 40 | M | 40 | M | 45 | S | 45 | S | 45 | S | 45 | S |
| METHOXYETHANOL, 2- | 109-86-4 | 42 | N | 180 | N | 4,200 | N | 18,000 | N | 42 | N | 180 | N |
| METHYL ACETATE | 79-20-9 | **[37,000] 42,000** | G | **[100,000] 120,000** | G | **[3,700,000] 4,200,000** | G | **[10,000,000] 12,000,000** | G | **[37,000] 42,000** | G | **[100,000] 120,000** | G |
| METHYL ACRYLATE | 96-33-3 | **[1,100] 42** | **[G] N** | **[3,100] 180** | **[G] N** | **[110,000] 4,200** | **[G] N** | **[310,000] 18,000** | **[G] N** | **[110,000] 4,200** | **[G] N** | **[310,000] 18,000** | **[G] N** |
| METHYL CHLORIDE | 74-87-3 | 30 | H | 30 | H | 3,000 | H | 3,000 | H | 3,000 | H | 3,000 | H |

All concentrations in µg/L
M = Maximum Contaminant Level
N = Inhalation
R = Residential
H = Lifetime health advisory level
S = Aqueous solubility cap
NR = Non-Residential
G = Ingestion

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| METHYL ETHYL KETONE | 78-93-3 | 4,000 | H | 4,000 | H | 400,000 | H | 400,000 | H | 400,000 | H | 400,000 | H |
| **METHYL HYDRAZINE** | **60-34-4** | **0.042** | **N** | **0.18** | **N** | **4.2** | **N** | **18** | **N** | **0.42** | **N** | **1.8** | **N** |
| METHYL ISOBUTYL KETONE | 108-10-1 | **[2,900] 3,300** | G | **[8,200] 9,300** | G | **[290,000] 330,000** | G | **[820,000] 930,000** | G | **[290,000] 330,000** | G | **[820,000] 930,000** | G |
| METHYL ISOCYANATE | 624-83-9 | 2.1 | N | 8.8 | N | 210 | N | 880 | N | 2.1 | N | 8.8 | N |
| METHYL N-BUTYL KETONE (2-HEXANONE) | 591-78-6 | **[11] 63** | N | **[44] 260** | N | **[1,100] 6,300** | N | **[4,400] 26,000** | N | **[11] 63** | N | **[44] 260** | N |
| METHYL METHACRYLATE | 80-62-6 | 1,500 | N | 6,200 | N | 150,000 | N | 620,000 | N | 150,000 | N | 620,000 | N |
| METHYL METHANESULFONATE | 66-27-3 | **[6.7] 7.4** | G | **[26] 34** | G | **[670] 740** | G | **[2,600] 3,400** | G | **[6.7] 7.4** | G | **[26] 34** | G |
| METHYL PARATHION | 298-00-0 | 1 | H | 1 | H | 100 | H | 100 | H | 1,000 | H | 1,000 | H |
| METHYL STYRENE (MIXED ISOMERS) | 25013-15-4 | 84 | N | 350 | N | 8,400 | N | 35,000 | N | 84 | N | 350 | N |
| METHYL TERT-BUTYL ETHER (MTBE) | 1634-04-4 | 20 | | 20 | | 2,000 | | 2,000 | | 200 | | 200 | |
| METHYLCHLOROPHENOXYACETIC ACID (MCPA) | 94-74-6 | 30 | H | 30 | H | 3,000 | H | 3,000 | H | 30,000 | H | 30,000 | H |
| METHYLENE BIS(2-CHLOROANILINE), 4,4'- | 101-14-4 | **[2.2] 2.3** | G | **[26] 34** | G | **[220] 230** | G | **[2,600] 3,400** | G | **[2.2] 2.3** | G | **[26] 34** | G |
| METHYLNAPHTHALENE, 2- | 91-57-6 | **[150] 170** | G | **[410] 470** | G | **[15,000] 17,000** | G | 25,000 | S | **[150] 170** | G | **[410] 470** | G |
| METHYLSTYRENE, ALPHA | 98-83-9 | **[2,600] 2,900** | G | **[7,200] 8,200** | G | **[260,000] 290,000** | G | 560,000 | S | **[2,600] 2,900** | G | **[7,200] 8,200** | G |
| METOLACHLOR | 51218-45-2 | 700 | H | 700 | H | 70,000 | H | 70,000 | H | 700 | H | 700 | H |
| METRIBUZIN | 21087-64-9 | 70 | H | 70 | H | 7,000 | H | 7,000 | H | 70 | H | 70 | H |
| MONOCHLOROACETIC ACID **(HAA)** | 79-11-8 | **[70] 60** | H | **[70] 60** | H | **[7,000] 6,000** | H | **[7,000] 6,000** | H | **[70] 60** | H | **[70] 60** | H |
| NAPHTHALENE | 91-20-3 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 30,000 | S | 30,000 | S |
| NAPHTHYLAMINE, 1- | 134-32-7 | **[0.37] 0.41** | G | **[1.4] 1.9** | G | **[37] 41** | G | **[140] 190** | G | **[370] 410** | G | **[1,400] 1,900** | G |
| NAPHTHYLAMINE, 2- | 91-59-8 | **[0.37] 0.41** | G | **[1.4] 1.9** | G | **[37] 41** | G | **[140] 190** | G | **[370] 410** | G | **[1,400] 1,900** | G |
| NAPROPAMIDE | 15299-99-7 | **[3,700] 4,200** | G | **[10,000] 12,000** | G | 70,000 | S | 70,000 | S | **[3,700] 4,200** | G | **[10,000] 12,000** | G |
| NITROANILINE, M- | 99-09-2 | **[11] 13** | G | **[31] 35** | G | **[1,100] 1,300** | G | **[3,100] 3,500** | G | **[11] 13** | G | **[31] 35** | G |
| NITROANILINE, O- | 88-74-4 | **[110] 420** | G | **[310] 1,200** | G | **[11,000] 42,000** | G | **[31,000] 120,000** | G | **[110] 420** | G | **[310] 1,200** | G |
| NITROANILINE, P- | 100-01-6 | **[33] 37** | G | **[130] 170** | G | **[3,300] 3,700** | G | **[13,000] 17,000** | G | **[33] 37** | G | **[130] 170** | G |
| NITROBENZENE | 98-95-3 | **[73] 83** | G | **[200] 230** | G | **[7,300] 8,300** | G | **[20,000] 23,000** | G | **[73,000] 83,000** | G | **[200,000] 230,000** | G |

All concentrations in µg/L
R = Residential
NR = Non-Residential
M = Maximum Contaminant Level
H = Lifetime health advisory level
G = Ingestion
N = Inhalation
S = Aqueous solubility cap

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| NITROGUANIDINE | 556-88-7 | 700 | H | 700 | H | 70,000 | H | 70,000 | H | 700 | H | 700 | H |
| NITROPHENOL, 2- | 88-75-5 | **[290] 330** | G | **[820] 930** | G | **[29,000] 33,000** | G | **[82,000] 93,000** | G | **[290,000] 330,000** | G | **[820,000] 930,000** | G |
| NITROPHENOL, 4- | 100-02-7 | 60 | H | 60 | H | 6,000 | H | 6,000 | H | 60,000 | H | 60,000 | H |
| NITROPROPANE, 2- | 79-46-9 | 0.018 | N | 0.093 | N | 1.8 | N | 9.3 | N | 0.18 | N | 0.93 | N |
| NITROSODIETHYLAMINE, N- | 55-18-5 | 0.00045 | N | 0.0058 | N | 0.045 | N | 0.58 | N | 0.0045 | N | 0.058 | N |
| NITROSODIMETHYLAMINE, N- | 62-75-9 | 0.0014 | N | 0.018 | N | 0.14 | N | 1.8 | N | 0.014 | N | 0.18 | N |
| NITROSO-DI-N-BUTYLAMINE, N- | 924-16-3 | **[0.12] 0.14** | G | **[0.48] 0.63** | G | **[12] 14** | G | **[48] 63** | G | **[120] 140** | G | **[480] 630** | G |
| NITROSODI-N-PROPYLAMINE, N- | 621-64-7 | **[0.094] 0.1** | G | **[0.37] 0.49** | G | **[9.4] 10** | G | **[37] 49** | G | **[94] 100** | G | **[370] 490** | G |
| NITROSODIPHENYLAMINE, N- | 86-30-6 | **[130] 150** | G | **[530] 690** | G | **[13,000] 15,000** | G | 35,000 | S | 35,000 | S | 35,000 | S |
| NITROSO-N-ETHYLUREA, N- | 759-73-9 | **[0.008] 0.0084** | G | **[0.096] 0.13** | G | **[0.8] 0.84** | G | **[9.6] 13** | G | **[8] 8.4** | G | **[96] 130** | G |
| OCTYL PHTHALATE, DI-N- | 117-84-0 | **[1,500] 420** | G | **[3,000] 1,200** | **[S] G** | 3,000 | S | 3,000 | S | 3,000 | S | 3,000 | S |
| OXAMYL (VYDATE) | 23135-22-0 | 200 | M | 200 | M | 20,000 | M | 20,000 | M | 200 | M | 200 | M |
| PARAQUAT | 1910-42-5 | 30 | H | 30 | H | 3,000 | H | 3,000 | H | 30 | H | 30 | H |
| PARATHION | 56-38-2 | **[220] 250** | G | **[610] 700** | G | 20,000 | S | 20,000 | S | **[220] 250** | G | **[610] 700** | G |
| PCB-1016 (AROCLOR) | 12674-11-2 | **[2.6] 2.9** | G | **[7.2] 8.2** | G | 250 | S | 250 | S | **[2.6] 2.9** | G | **[7.2] 8.2** | G |
| PCB-1221 (AROCLOR) | 11104-28-2 | **[0.33] 0.37** | G | **[1.3] 1.7** | G | **[33] 37** | G | **[130] 170** | G | **[0.33] 0.37** | G | **[1.3] 1.7** | G |
| PCB-1232 (AROCLOR) | 11141-16-5 | **[0.33] 0.37** | G | **[1.3] 1.7** | G | **[33] 37** | G | **[130] 170** | G | **[0.33] 0.37** | G | **[1.3] 1.7** | G |
| PCB-1242 (AROCLOR) | 53469-21-9 | **[0.33] 0.37** | G | **[1.3] 1.7** | G | **[33] 37** | G | 100 | S | **[0.33] 0.37** | G | **[1.3] 1.7** | G |
| PCB-1248 (AROCLOR) | 12672-29-6 | **[0.33] 0.37** | G | **[1.3] 1.7** | G | **[33] 37** | G | 54 | S | **[0.33] 0.37** | G | **[1.3] 1.7** | G |
| PCB-1254 (AROCLOR) | 11097-69-1 | **[0.33] 0.37** | G | **[1.3] 1.7** | G | **[33] 37** | G | 57 | S | **[0.33] 0.37** | G | **[1.3] 1.7** | G |
| PCB-1260 (AROCLOR) | 11096-82-5 | **[0.33] 0.37** | G | **[1.3] 1.7** | G | **[33] 37** | G | 80 | S | **[0.33] 0.37** | G | **[1.3] 1.7** | G |
| PEBULATE | 1114-71-2 | **[1,800] 2,100** | G | **[5,100] 5,800** | G | 92,000 | S | 92,000 | S | **[1,800] 2,100** | G | **[5,100] 5,800** | G |
| PENTACHLOROBENZENE | 608-93-5 | **[29] 33** | G | **[82] 93** | G | 740 | S | 740 | S | 740 | S | 740 | S |
| PENTACHLOROETHANE | 76-01-7 | **[7.3] 8.1** | G | **[29] 38** | G | **[730] 810** | G | **[2,900] 3,800** | G | **[7.3] 8.1** | G | **[29] 38** | G |
| PENTACHLORONITROBENZENE | 82-68-8 | **[2.5] 2.8** | G | **[10] 13** | G | **[250] 280** | G | 440 | S | 440 | S | 440 | S |
| PENTACHLOROPHENOL | 87-86-5 | 1 | M | 1 | M | 100 | M | 100 | M | 1,000 | M | 1,000 | M |
| PHENACETIN | 62-44-2 | **[300] 330** | G | **[1,200] 1,500** | G | **[30,000] 33,000** | G | **[120,000] 150,000** | G | **[300,000] 330,000** | G | 760,000 | S |
| PHENANTHRENE | 85-01-8 | 1,100 | S | 1,100 | S | 1,100 | S | 1,100 | S | 1,100 | S | 1,100 | S |

All concentrations in µg/L
R = Residential
NR = Non-Residential
M = Maximum Contaminant Level
H = Lifetime health advisory level
G = Ingestion
N = Inhalation
S = Aqueous solubility cap

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| PHENOL | 108-95-2 | 2,000 | H | 2,000 | H | 200,000 | H | 200,000 | H | 200,000 | H | 200,000 | H |
| PHENYL MERCAPTAN | 108-98-5 | **[0.37] 42** | G | **[1] 120** | G | **[37] 4,200** | G | **[100] 12,000** | G | **[0.37] 42** | G | **[1] 120** | G |
| PHENYLENEDIAMINE, M- | 108-45-2 | **[220] 250** | G | **[610] 700** | G | **[22,000] 25,000** | G | **[61,000] 70,000** | G | **[220,000] 250,000** | G | **[610,000] 700,000** | G |
| PHENYLPHENOL, 2- | 90-43-7 | **[350] 380** | G | **[1,400] 1,800** | G | **[35,000] 38,000** | G | **[140,000] 180,000** | G | **[350,000] 380,000** | G | 700,000 | S |
| PHORATE | 298-02-2 | **[7.3] 8.3** | G | **[20] 23** | G | **[730] 830** | G | **[2,000] 2,300** | G | **[7.3] 8.3** | G | **[20] 23** | G |
| PHTHALIC ANHYDRIDE | 85-44-9 | **[73,000] 83,000** | G | **[200,000] 230,000** | G | 6,200,000 | S | 6,200,000 | S | 6,200,000 | S | 6,200,000 | S |
| PICLORAM | 1918-02-1 | 500 | M | 500 | M | 50,000 | M | 50,000 | M | 500 | M | 500 | M |
| POLYCHLORINATED BIPHENYLS (PCBS) | 1336-36-3 | 0.5 | M | 0.5 | M | 50 | M | 50 | M | 0.5 | M | 0.5 | M |
| PROMETON | 1610-18-0 | 400 | H | 400 | H | 40,000 | H | 40,000 | H | 400 | H | 400 | H |
| PRONAMIDE | 23950-58-5 | **[2,700] 3,100** | G | **[7,700] 8,800** | G | 15,000 | S | 15,000 | S | **[2,700] 3,100** | G | **[7,700] 8,800** | G |
| PROPANIL | 709-98-8 | **[180] 210** | G | **[510] 580** | G | **[18,000] 21,000** | G | **[51,000] 58,000** | G | **[180] 210** | G | **[510] 580** | G |
| PROPANOL, 2- (ISOPROPYL ALCOHOL) | 67-63-0 | 15,000 | N | 62,000 | N | 1,500,000 | N | 6,200,000 | N | 15,000 | N | 62,000 | N |
| PROPAZINE | 139-40-2 | 10 | H | 10 | H | 1,000 | H | 1,000 | H | 10 | H | 10 | H |
| PROPHAM | 122-42-9 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 100 | H | 100 | H |
| PROPYLBENZENE, N- | 103-65-1 | **[1,500] 2,100** | **[G] N** | **[4,100] 8,800** | **[G] N** | 52,000 | S | 52,000 | S | **[1,500] 2,100** | **[G] N** | **[4,100] 8,800** | **[G] N** |
| PROPYLENE OXIDE | 75-56-9 | **[2.8] 3** | G | **[11] 14** | G | **[280] 300** | G | **[1,100] 1,400** | G | **[2.8] 3** | G | **[11] 14** | G |
| PYRENE | 129-00-0 | 130 | S | 130 | S | 130 | S | 130 | S | 130 | S | 130 | S |
| PYRIDINE | 110-86-1 | **[37] 42** | G | **[100] 120** | G | **[3,700] 4,200** | G | **[10,000] 12,000** | G | **[370] 420** | G | **[1,000] 1,200** | G |
| QUINOLINE | 91-22-5 | **[0.22] 0.24** | G | **[0.87] 1.1** | G | **[22] 24** | G | **[87] 110** | G | **[220] 240** | G | **[870] 1,100** | G |
| QUIZALOFOP (ASSURE) | 76578-14-8 | 300 | S | 300 | S | 300 | S | 300 | S | 300 | S | 300 | S |
| RDX | 121-82-4 | 2 | H | 2 | H | 200 | H | 200 | H | 2 | H | 2 | H |
| RESORCINOL | 108-46-3 | **[73,000] 83,000** | G | **[200,000] 230,000** | G | **[7,300,000] 8,300,000** | G | **[20,000,000] 23,000,000** | G | **[73,000] 83,000** | G | **[200,000] 230,000** | G |
| RONNEL | 299-84-3 | **[1,800] 2,100** | G | **[5,100] 5,800** | G | 40,000 | S | 40,000 | S | **[1,800] 2,100** | G | **[5,100] 5,800** | G |
| SIMAZINE | 122-34-9 | 4 | M | 4 | M | 400 | M | 400 | M | 4 | M | 4 | M |
| STRYCHNINE | 57-24-9 | **[11] 13** | G | **[31] 35** | G | **[1,100] 1,300** | G | **[3,100] 3,500** | G | **[11,000] 13,000** | G | **[31,000] 35,000** | G |

All concentrations in µg/L
R = Residential
NR = Non-Residential
M = Maximum Contaminant Level
H = Lifetime health advisory level
G = Ingestion
N = Inhalation
S = Aqueous solubility cap

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| STYRENE | 100-42-5 | 100 | M | 100 | M | 10,000 | M | 10,000 | M | 10,000 | M | 10,000 | M |
| TEBUTHIURON | 34014-18-1 | 500 | H | 500 | H | 50,000 | H | 50,000 | H | 500 | H | 500 | H |
| TERBACIL | 5902-51-2 | 90 | H | 90 | H | 9,000 | H | 9,000 | H | 90 | H | 90 | H |
| TERBUFOS | 13071-79-9 | 0.4 | H | 0.4 | H | 40 | H | 40 | H | 0.4 | H | 0.4 | H |
| TETRACHLOROBENZENE, 1,2,4,5- | 95-94-3 | **[11] 13** | G | **[31] 35** | G | 580 | S | 580 | S | 580 | S | 580 | S |
| TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8- (TCDD) | 1746-01-6 | 0.00003 | M | 0.00003 | M | 0.003 | M | 0.003 | M | 0.019 | S | 0.019 | S |
| TETRACHLOROETHANE, 1,1,1,2- | 630-20-6 | 70 | H | 70 | H | 7,000 | H | 7,000 | H | 7,000 | H | 7,000 | H |
| TETRACHLOROETHANE, 1,1,2,2- | 79-34-5 | 0.84 | N | 4.3 | N | 84 | N | 430 | N | 84 | N | 430 | N |
| TETRACHLOROETHYLENE (PCE) | 127-18-4 | 5 | M | 5 | M | 500 | M | 500 | M | 50 | M | 50 | M |
| TETRACHLOROPHENOL, 2,3,4,6- | 58-90-2 | **[1,100] 1,300** | G | **[3,100] 3,500** | G | **[110,000] 130,000** | G | 180,000 | S | 180,000 | S | 180,000 | S |
| TETRAETHYL LEAD | 78-00-2 | **[0.0037] 0.0042** | G | **[0.01] 0.012** | G | **[0.37] 0.42** | G | 1 | G | **[3.7] 4.2** | G | **[10] 12** | G |
| TETRAETHYLDITHIOPYROPHOSPHATE | 3689-24-5 | **[18] 21** | G | **[51] 58** | G | **[1,800] 2,100** | G | **[5,100] 5,800** | G | **[18] 21** | G | **[51] 58** | G |
| TETRAHYDROFURAN | 109-99-9 | **[25] 26** | N | 130 | N | **[2,500] 2,600** | N | 13,000 | N | **[25] 26** | N | 130 | N |
| THIOFANOX | 39196-18-4 | **[11] 13** | G | **[31] 35** | G | **[1,100] 1,300** | G | **[3,100] 3,500** | G | **[11] 13** | G | **[31] 35** | G |
| THIRAM | 137-26-8 | **[180] 210** | G | **[510] 580** | G | **[18,000] 21,000** | G | 30,000 | S | **[180] 210** | G | **[510] 580** | G |
| TOLUENE | 108-88-3 | 1,000 | M | 1,000 | M | 100,000 | M | 100,000 | M | 100,000 | M | 100,000 | M |
| TOLUIDINE, M- | 108-44-1 | **[3.7] 4.1** | G | **[14] 19** | G | **[370] 410** | G | **[1,400] 1,900** | G | **[3.7] 4.1** | G | **[14] 19** | G |
| TOLUIDINE, O | 95-53-4 | **[3.7] 46** | G | **[14] 210** | G | **[370] 4,600** | G | **[1,400] 21,000** | G | **[3,700] 46,000** | G | **[14,000] 210,000** | G |
| TOLUIDINE, P- | 106-49-0 | **[3.5] 24** | G | **[14] 110** | G | **[350] 2,400** | G | **[1,400] 11,000** | G | **[3.5] 24** | G | **[14] 110** | G |
| TOXAPHENE | 8001-35-2 | 3 | M | 3 | M | 300 | M | 300 | M | 3 | M | 3 | M |
| TRIALLATE | 2303-17-5 | **[470] 540** | G | **[1,300] 1,500** | G | 4,000 | S | 4,000 | S | **[470] 540** | G | **[1,300] 1,500** | G |
| TRIBROMOMETHANE (BROMOFORM) **(THM)** | 75-25-2 | 80 | M | 80 | M | 8,000 | M | 8,000 | M | 8,000 | M | 8,000 | M |
| TRICHLORO-1,2,2-TRIFLUOROETHANE, 1,1,2- | 76-13-1 | 63,000 | N | 170,000 | S | 170,000 | S | 170,000 | S | 170,000 | S | 170,000 | S |
| **TRICHLOROACETIC ACID (HAA)** | **76-03-9** | **60** | **H** | **60** | **H** | **6,000** | **H** | **6,000** | **H** | **60** | **H** | **60** | **H** |
| TRICHLOROBENZENE, 1,2,4- | 120-82-1 | 70 | M | 70 | M | 7,000 | M | 7,000 | M | 44,000 | S | 44,000 | S |
| TRICHLOROBENZENE, 1,3,5- | 108-70-3 | 40 | H | 40 | H | 4,000 | H | 4,000 | H | 40 | H | 40 | H |
| TRICHLOROETHANE, 1,1,1- | 71-55-6 | 200 | M | 200 | M | 20,000 | M | 20,000 | M | 2,000 | M | 2,000 | M |

All concentrations in µg/L M = Maximum Contaminant Level N = Inhalation
R = Residential H = Lifetime health advisory level S = Aqueous solubility cap
NR = Non-Residential G = Ingestion

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 1—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| TRICHLOROETHANE, 1,1,2- | 79-00-5 | 5 | M | 5 | M | 500 | M | 500 | M | 50 | M | 50 | M |
| TRICHLOROETHYLENE (TCE) | 79-01-6 | 5 | M | 5 | M | 500 | M | 500 | M | 50 | M | 50 | M |
| TRICHLOROPHENOL, 2,4,5- | 95-95-4 | **[3,700] 4,200** | G | **[10,000] 12,000** | G | **[370,000] 420,000** | G | 1,000,000 | **[G] S** | 1,000,000 | S | 1,000,000 | S |
| TRICHLOROPHENOL, 2,4,6- | 88-06-2 | **[37] 42** | G | **[100] 120** | G | **[3,700] 4,200** | G | **[10,000] 12,000** | G | **[37,000] 42,000** | G | **[100,000] 120,000** | G |
| TRICHLOROPHENOXYACETIC ACID, 2,4,5- (2,4,5-T) | 93-76-5 | 70 | H | 70 | H | 7,000 | H | 7,000 | H | 70,000 | H | 70,000 | H |
| TRICHLOROPHENOXYPROPIONIC ACID, 2,4,5- (2,4,5-TP) | 93-72-1 | 50 | M | 50 | M | 5,000 | M | 5,000 | M | 50 | M | 50 | M |
| TRICHLOROPROPANE, 1,1,2- | 598-77-6 | **[180] 210** | G | **[510] 580** | G | **[18,000] 21,000** | G | **[51,000] 58,000** | G | **[180] 210** | G | **[510] 580** | G |
| TRICHLOROPROPANE, 1,2,3- | 96-18-4 | 40 | H | 40 | H | 4,000 | H | 4,000 | H | 4,000 | H | 4,000 | H |
| TRICHLOROPROPENE, 1,2,3- | 96-19-5 | **[2.1] 0.63** | N | **[8.8] 2.6** | N | **[210] 63** | N | **[880] 260** | N | **[2.1] 0.63** | N | **[8.8] 2.6** | N |
| TRIETHYLAMINE | 121-44-8 | 15 | N | 62 | N | 1,500 | N | 6,200 | N | 15 | N | 62 | N |
| TRIFLURALIN | 1582-09-8 | 10 | H | 10 | H | 1,000 | H | 1,000 | H | 10 | H | 10 | H |
| TRIMETHYLBENZENE, 1,3,4- (TRIMETHYLBENZENE, 1,2,4-) | 95-63-6 | 15 | N | 62 | N | 1,500 | N | 6,200 | N | 1,500 | N | 6,200 | N |
| TRIMETHYLBENZENE, 1,3,5- | 108-67-8 | **[13] 420** | **[N] G** | **[53] 1,200** | **[N] G** | **[1,300] 42,000** | **[N] G** | **[5,300] 49,000** | **[N] S** | **[13] 420** | **[N] G** | **[53] 1,200** | **[N] G** |
| TRINITROGLYCEROL (NITROGLYCERIN) | 55-63-0 | 5 | H | 5 | H | 500 | H | 500 | H | 5 | H | 5 | H |
| TRINITROTOLUENE, 2,4,6- | 118-96-7 | 2 | H | 2 | H | 200 | H | 200 | H | 2 | H | 2 | H |
| VINYL ACETATE | 108-05-4 | 420 | N | 1,800 | N | 42,000 | N | 180,000 | N | 420 | N | 1,800 | N |
| VINYL BROMIDE (BROMOETHENE) | 593-60-2 | 1.5 | N | 7.8 | N | 150 | N | 780 | N | 15 | N | 78 | N |
| VINYL CHLORIDE | 75-01-4 | 2 | M | 2 | M | 200 | M | 200 | M | 20 | M | 20 | M |
| WARFARIN | 81-81-2 | **[11] 13** | G | **[31] 35** | G | **[1,100] 1,300** | G | **[3,100] 3,500** | G | **[11,000] 13,000** | G | 17,000 | S |
| XYLENES (TOTAL) | 1330-20-7 | 10,000 | M | 10,000 | M | 180,000 | S | 180,000 | S | 180,000 | S | 180,000 | S |
| ZINEB | 12122-67-7 | **[1,800] 2,100** | G | **[5,100] 5,800** | G | 10,000 | S | 10,000 | S | **[1,800] 2,100** | G | **[5,100] 5,800** | G |

All concentrations in µg/L
R = Residential
NR = Non-Residential
M = Maximum Contaminant Level
H = Lifetime health advisory level
G = Ingestion
N = Inhalation
S = Aqueous solubility cap

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 2—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR INORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| ANTIMONY | 7440-36-0 | 6 | M | 6 | M | 600 | M | 600 | M | 6,000 | M | 6,000 | M |
| ARSENIC | 7440-38-2 | 10 | M | 10 | M | 1,000 | M | 1,000 | M | 10,000 | M | 10,000 | M |
| ASBESTOS (fibers/L) | 12001-29-5 | 7,000,000 | M | 7,000,000 | M | 7,000,000 | M | 7,000,000 | M | 7,000,000 | M | 7,000,000 | M |
| BARIUM AND COMPOUNDS | 7440-39-3 | 2,000 | M | 2,000 | M | 200,000 | M | 200,000 | M | 2,000,000 | M | 2,000,000 | M |
| BERYLLIUM | 7440-41-7 | 4 | M | 4 | M | 400 | M | 400 | M | 4,000 | M | 4,000 | M |
| BORON AND COMPOUNDS | 7440-42-8 | 6,000 | H | 6,000 | H | 600,000 | H | 600,000 | H | 6,000,000 | H | 6,000,000 | H |
| CADMIUM | 7440-43-9 | 5 | M | 5 | M | 500 | M | 500 | M | 5,000 | M | 5,000 | M |
| CHROMIUM, TOTAL | 7440-47-3 | 100 | M | 100 | M | 10,000 | M | 10,000 | M | 100,000 | M | 100,000 | M |
| COBALT | 7440-48-4 | **[11] 13** | G | **[31] 35** | G | **[1,100] 1,300** | G | **[3,100] 3,500** | G | **[11,000] 13,000** | G | **[31,000] 35,000** | G |
| COPPER | 7440-50-8 | 1,000 | M | 1,000 | M | 100,000 | M | 100,000 | M | 1,000,000 | M | 1,000,000 | M |
| CYANIDE, FREE | 57-12-5 | 200 | M | 200 | M | 20,000 | M | 20,000 | M | 200,000 | M | 200,000 | M |
| FLUORIDE | 16984-48-8 | 4,000 | M | 4,000 | M | 400,000 | M | 400,000 | M | 4,000,000 | M | 4,000,000 | M |
| LEAD | 7439-92-1 | 5 | M | 5 | M | 500 | M | 500 | M | 5,000 | M | 5,000 | M |
| LITHIUM | 7439-93-2 | **[73] 83** | G | **[200] 230** | G | **[7,300] 8,300** | G | **[20,000] 23,000** | G | **[73,000] 83,000** | G | **[200,000] 230,000** | G |
| MANGANESE | 7439-96-5 | 300 | H | 300 | H | 30,000 | H | 30,000 | H | 300,000 | H | 300,000 | H |
| MERCURY | 7439-97-6 | 2 | M | 2 | M | 200 | M | 200 | M | 2,000 | M | 2,000 | M |
| MOLYBDENUM | 7439-98-7 | 40 | H | 40 | H | 4,000 | H | 4,000 | H | 40,000 | H | 40,000 | H |
| NICKEL | 7440-02-0 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 100,000 | H | 100,000 | H |
| NITRATE NITROGEN | 14797-55-8 | 10,000 | M | 10,000 | M | 1,000,000 | M | 1,000,000 | M | 10,000,000 | M | 10,000,000 | M |
| NITRITE NITROGEN | 14797-65-0 | 1,000 | M | 1,000 | M | 100,000 | M | 100,000 | M | 1,000,000 | M | 1,000,000 | M |
| PERCHLORATE | 7790-98-9 | 15 | H | 15 | H | 1,500 | H | 1,500 | H | 15,000 | H | 15,000 | H |
| SELENIUM | 7782-49-2 | 50 | M | 50 | M | 5,000 | M | 5,000 | M | 50,000 | M | 50,000 | M |
| SILVER | 7440-22-4 | 100 | H | 100 | H | 10,000 | H | 10,000 | H | 100,000 | H | 100,000 | H |
| **STRONTIUM** | **7440-24-6** | **4,000** | **H** | **4,000** | **H** | **400,000** | **H** | **400,000** | **H** | **4,000,000** | **H** | **4,000,000** | **H** |
| THALLIUM | 7440-28-0 | 2 | M | 2 | M | 200 | M | 200 | M | 2,000 | M | 2,000 | M |
| TIN | 7440-31-5 | **[22,000] 25,000** | G | **[61,000] 70,000** | G | **[2,200,000] 2,500,000** | G | **[6,100,000] 7,000,000** | G | **[22,000,000] 25,000,000** | G | **[61,000,000] 70,000,000** | G |

All concentrations in µg/L (except asbestos)
M = Maximum Contaminant Level
H = Lifetime Health Advisory Level
SMCL = Secondary Maximum Contaminant Level
G = Ingestion
N = Inhalation

R = Residential
NR = Non Residential

**APPENDIX A**

**TABLE 2—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR INORGANIC REGULATED SUBSTANCES IN GROUNDWATER**

| *REGULATED SUBSTANCE* | *CASRN* | *USED AQUIFERS* | | | | | | | | *NON-USE AQUIFERS* | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | *TDS > 2500* | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | |
| VANADIUM | 7440-62-2 | **[260] 2.9** | G | **[720] 8.2** | G | **[26,000] 290** | G | **[72,000] 820** | G | **[260,000] 2,900** | G | **[720,000] 8,200** | G |
| ZINC AND COMPOUNDS | 7440-66-6 | 2,000 | H | 2,000 | H | 200,000 | H | 200,000 | H | 2,000,000 | H | 2,000,000 | H |

| *SECONDARY CONTAMINANTS* | | | |
|---|---|---|---|
| *REGULATED SUBSTANCE* | *CASRN* | *SMCL* | *UNITS* |
| ALUMINUM | 7429-90-5 | 200 | µg/L |
| CHLORIDE | 7647-14-5 | 250,000 | µg/L |
| FLUORIDE | 7681-49-4 | 2,000 | µg/L |
| IRON | 7439-89-6 | 300 | µg/L |
| MANGANESE | 7439-96-5 | 50 | µg/L |
| SULFATE | 7757-82-6 | 250,000 | µg/L |

All concentrations in µg/L (except asbestos)
M = Maximum Contaminant Level
H = Lifetime Health Advisory Level
SMCL = Secondary Maximum Contaminant Level
G = Ingestion
N = Inhalation

R = Residential
NR = Non Residential

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**A. Direct Contact Numeric Values**

| *REGULATED SUBSTANCE* | *CASRN* | *Residential 0-15 feet* | | *Non-Residential* | | | |
|---|---|---|---|---|---|---|---|
| | | | | *Surface Soil 0-2 feet* | | *Subsurface Soil 2-15 feet* | |
| ACENAPHTHENE | 83-32-9 | 13,000 | G | **[170,000] 190,000** | **[G] C** | 190,000 | C |
| ACENAPHTHYLENE | 208-96-8 | 13,000 | G | **[170,000] 190,000** | **[G] C** | 190,000 | C |
| ACEPHATE | 30560-19-1 | 880 | G | **[9,100] 10,000** | G | 190,000 | C |
| ACETALDEHYDE | 75-07-0 | 170 | N | 720 | N | 830 | N |
| ACETONE | 67-64-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| ACETONITRILE | 75-05-8 | 1,100 | N | 4,800 | N | 5,500 | N |
| ACETOPHENONE | 98-86-2 | 10,000 | C | 10,000 | C | 10,000 | C |
| ACETYLAMINOFLUORENE, 2- (2AAF) | 53-96-3 | **[4.7] 4.9** | G | **[21] 24** | G | 190,000 | C |
| ACROLEIN | 107-02-8 | 0.38 | N | 1.6 | N | 1.8 | N |
| ACRYLAMIDE | 79-06-1 | **[0.34] 1.7** | N | **[1.7] 22** | N | **[2] 26** | N |
| ACRYLIC ACID | 79-10-7 | 19 | N | 79 | N | 91 | N |
| ACRYLONITRILE | 107-13-1 | 6.6 | N | 33 | N | 38 | N |
| ALACHLOR | 15972-60-8 | **[320] 330** | G | **[1,400] 1,600** | G | 190,000 | C |
| ALDICARB | 116-06-3 | 220 | G | **[2,800] 3,200** | G | 190,000 | C |
| ALDICARB SULFONE | 1646-88-4 | 220 | G | **[2,800] 3,200** | G | 190,000 | C |
| ALDICARB SULFOXIDE | 1646-87-3 | 220 | G | **[2,800] 3,200** | G | 190,000 | C |
| ALDRIN | 309-00-2 | 1.1 | G | **[4.7] 5.4** | G | 190,000 | C |
| ALLYL ALCOHOL | 107-18-6 | **[5.7] 1.9** | N | **[24] 8** | N | **[27] 9.1** | N |
| AMETRYN | 834-12-8 | 2,000 | G | **[25,000] 29,000** | G | 190,000 | C |
| AMINOBIPHENYL, 4- | 92-67-1 | **[0.85] 0.89** | G | **[3.8] 4.3** | G | 190,000 | C |
| AMITROLE | 61-82-5 | **[19] 20** | G | **[84] 97** | G | 190,000 | C |
| AMMONIA | 7664-41-7 | 1,900 | N | 8,000 | N | 9,100 | N |
| AMMONIUM SULFAMATE | 7773-06-0 | 44,000 | G | 190,000 | C | 190,000 | C |
| ANILINE | 62-53-3 | 19 | N | 79 | N | 91 | N |
| ANTHRACENE | 120-12-7 | 66,000 | G | 190,000 | C | 190,000 | C |
| ATRAZINE | 1912-24-9 | **[78] 81** | G | **[340] 400** | G | 190,000 | C |
| AZINPHOS-METHYL (GUTHION) | 86-50-0 | 660 | G | **[8,400] 9,600** | G | 190,000 | **[G] C** |
| BAYGON (PROPOXUR) | 114-26-1 | 880 | G | **[11,000] 13,000** | G | 190,000 | C |
| BENOMYL | 17804-35-2 | 11,000 | G | **[140,000] 160,000** | G | 190,000 | C |
| BENTAZON | 25057-89-0 | 6,600 | G | **[84,000] 96,000** | G | 190,000 | C |
| BENZENE | 71-43-2 | 57 | N | 290 | N | 330 | N |
| BENZIDINE | 92-87-5 | 0.018 | G | **[0.34] 0.4** | G | 190,000 | C |
| BENZO[A]ANTHRACENE | 56-55-3 | **[5.7] 6** | G | **[110] 130** | G | 190,000 | C |
| BENZO[A]PYRENE | 50-32-8 | **[0.57] 0.58** | G | **[11] 12** | G | 190,000 | C |
| BENZO[B]FLUORANTHENE | 205-99-2 | **[5.7] 5.8** | G | **[110] 120** | G | 190,000 | C |
| BENZO[GHI]PERYLENE | 191-24-2 | 13,000 | G | **[170,000] 190,000** | **[G] C** | 190,000 | C |
| BENZO[K]FLUORANTHENE | 207-08-9 | **[57] 58** | G | **[1,100] 1,200** | G | 190,000 | C |
| BENZOIC ACID | 65-85-0 | 190,000 | C | 190,000 | C | 190,000 | C |
| BENZOTRICHLORIDE | 98-07-7 | 1.4 | G | **[6.1] 7** | G | 10,000 | C |
| BENZYL ALCOHOL | 100-51-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| BENZYL CHLORIDE | 100-44-7 | 9 | N | 45 | N | 52 | N |
| BETA PROPIOLACTONE | 57-57-8 | 0.11 | N | 0.56 | N | 0.64 | N |
| BHC, ALPHA | 319-84-6 | **[2.8] 3** | G | **[13] 14** | G | 190,000 | C |
| BHC, BETA- | 319-85-7 | **[9.9] 10** | G | **[44] 51** | G | 190,000 | C |
| BHC, GAMMA (LINDANE) | 58-89-9 | **[16] 17** | G | **[72] 83** | G | 190,000 | C |
| BIPHENYL, 1,1- | 92-52-4 | **[11,000] 2,300** | G | **[140,000] 11,000** | G | 190,000 | C |
| BIS(2-CHLOROETHOXY)METHANE | 111-91-1 | 660 | G | **[8,400] 9,600** | G | 10,000 | C |
| BIS(2-CHLOROETHYL)ETHER | 111-44-4 | 1.3 | N | 6.7 | N | 7.7 | N |
| BIS(2-CHLORO-ISOPROPYL)ETHER | 108-60-1 | 44 | N | 220 | N | 250 | N |

All concentrations in mg/kg
G – Ingestion
N – Inhalation
C – Cap

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**A. Direct Contact Numeric Values**

| *REGULATED SUBSTANCE* | *CASRN* | *Residential 0-15 feet* | | *Non-Residential* | | | |
|---|---|---|---|---|---|---|---|
| | | | | *Surface Soil 0-2 feet* | | *Subsurface Soil 2-15 feet* | |
| BIS(CHLOROMETHYL)ETHER | 542-88-1 | 0.0072 | N | 0.036 | N | 0.041 | N |
| BIS[2-ETHYLHEXYL] PHTHALATE | 117-81-7 | 1,300 | G | **[5,700] 6,500** | G | 10,000 | C |
| BISPHENOL A | 80-05-7 | 11,000 | G | **[140,000] 160,000** | G | 190,000 | C |
| BROMACIL | 314-40-9 | 22,000 | G | 190,000 | C | 190,000 | C |
| BROMOCHLOROMETHANE | 74-97-5 | **[2,200] 770** | **[G] N** | **[10,000] 3,200** | **[C] N** | **[10,000] 3,600** | **[C] N** |
| BROMODICHLOROMETHANE | 75-27-4 | 12 | N | 60 | N | 69 | N |
| BROMOMETHANE | 74-83-9 | 96 | N | 400 | N | 460 | N |
| BROMOXYNIL | 1689-84-5 | 4,400 | G | **[56,000] 64,000** | G | 190,000 | C |
| BROMOXYNIL OCTANOATE | 1689-99-2 | 4,400 | G | **[56,000] 64,000** | G | 190,000 | C |
| BUTADIENE, 1,3- | 106-99-0 | **[5.3] 5.5** | G | **[23] 27** | G | 85 | N |
| BUTYL ALCOHOL, N- | 71-36-3 | 10,000 | C | 10,000 | C | 10,000 | C |
| BUTYLATE | 2008-41-5 | 10,000 | C | 10,000 | C | 10,000 | C |
| BUTYLBENZENE, N- | 104-51-8 | **[8,800] 10,000** | **[G] C** | 10,000 | C | 10,000 | C |
| BUTYLBENZENE, SEC- | 135-98-8 | **[8,800] 10,000** | **[G] C** | 10,000 | C | 10,000 | C |
| BUTYLBENZENE, TERT- | 98-06-6 | **[8,800] 10,000** | **[G] C** | 10,000 | C | 10,000 | C |
| BUTYLBENZYL PHTHALATE | 85-68-7 | **[9,400] 9,800** | G | 10,000 | C | 10,000 | C |
| CAPTAN | 133-06-2 | **[7,800] 8,100** | G | **[34,000] 40,000** | G | 190,000 | C |
| CARBARYL | 63-25-2 | 22,000 | G | 190,000 | C | 190,000 | C |
| CARBAZOLE | 86-74-8 | **[900] 930** | G | **[4,000] 4,600** | G | 190,000 | C |
| CARBOFURAN | 1563-66-2 | 1,100 | G | **[14,000] 16,000** | G | 190,000 | C |
| CARBON DISULFIDE | 75-15-0 | 10,000 | C | 10,000 | C | 10,000 | C |
| CARBON TETRACHLORIDE | 56-23-5 | **[30] 74** | N | **[150] 370** | N | **[170] 430** | N |
| CARBOXIN | 5234-68-4 | 22,000 | G | 190,000 | C | 190,000 | C |
| CHLORAMBEN | 133-90-4 | 3,300 | G | **[42,000] 48,000** | G | 190,000 | C |
| CHLORDANE | 57-74-9 | **[51] 53** | G | **[230] 260** | G | 190,000 | C |
| CHLORO-1,1-DIFLUOROETHANE, 1- | 75-68-3 | 10,000 | C | 10,000 | C | 10,000 | C |
| CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE) | 107-05-1 | 19 | N | 80 | N | 91 | N |
| **CHLOROACETALDEHYDE** | **107-20-0** | **62** | **G** | **300** | **G** | **10,000** | **C** |
| CHLOROACETOPHENONE, 2- | 532-27-4 | 190,000 | C | 190,000 | C | 190,000 | C |
| CHLOROANILINE, P- | 106-47-8 | **[90] 93** | G | **[400] 460** | G | 190,000 | C |
| CHLOROBENZENE | 108-90-7 | 960 | N | 4,000 | N | 4,600 | N |
| CHLOROBENZILATE | 510-15-6 | **[160] 170** | G | **[720] 830** | G | 190,000 | C |
| CHLOROBUTANE, 1- | 109-69-3 | 8,800 | G | 10,000 | C | 10,000 | C |
| CHLORODIBROMOMETHANE | 124-48-1 | 17 | N | 82 | N | 95 | N |
| CHLORODIFLUOROMETHANE | 75-45-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| CHLOROETHANE | 75-00-3 | **[6,200] 6,400** | G | 10,000 | C | 10,000 | C |
| CHLOROFORM | 67-66-3 | 19 | N | 97 | N | 110 | N |
| CHLORONAPHTHALENE, 2- | 91-58-7 | 18,000 | G | 190,000 | C | 190,000 | C |
| CHLORONITROBENZENE, P- | 100-00-5 | 220 | G | **[2,800] 3,200** | G | 190,000 | C |
| CHLOROPHENOL, 2- | 95-57-8 | 1,100 | G | 10,000 | C | 10,000 | C |
| CHLOROPRENE | 126-99-8 | **[130] 1.5** | N | **[560] 7.4** | N | **[640] 8.5** | N |
| CHLOROPROPANE, 2- | 75-29-6 | 1,900 | N | 8,000 | N | 9,100 | N |
| CHLOROTHALONIL | 1897-45-6 | 3,300 | G | **[26,000] 29,000** | G | 190,000 | C |
| CHLOROTOLUENE, O- | 95-49-8 | 4,400 | G | 10,000 | C | 10,000 | C |
| CHLOROTOLUENE, P- | 106-43-4 | **[10,000] 4,400** | C | 10,000 | C | 10,000 | C |
| CHLORPYRIFOS | 2921-88-2 | **[660] 220** | G | **[8,400] 3,200** | G | 190,000 | C |
| CHLORSULFURON | 64902-72-3 | 11,000 | G | **[140,000] 160,000** | G | 190,000 | C |

All concentrations in mg/kg
G – Ingestion
N – Inhalation
C – Cap

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**A. Direct Contact Numeric Values**

| *REGULATED SUBSTANCE* | *CASRN* | *Residential 0-15 feet* | | *Non-Residential* | | | |
|---|---|---|---|---|---|---|---|
| | | | | *Surface Soil 0-2 feet* | | *Subsurface Soil 2-15 feet* | |
| CHLORTHAL-DIMETHYL (DACTHAL) (DCPA) | 1861-32-1 | 2,200 | G | **[28,000] 32,000** | G | 190,000 | C |
| CHRYSENE | 218-01-9 | **[570] 580** | G | **[11,000] 12,000** | G | 190,000 | C |
| CRESOL(S) | 1319-77-3 | 1,100 | G | 10,000 | C | 10,000 | C |
| CRESOL, 4,6-DINITRO-O- | 534-52-1 | **[22] 18** | G | **[280] 260** | G | 190,000 | C |
| CRESOL, O- (2-METHYLPHENOL) | 95-48-7 | 11,000 | G | **[140,000] 160,000** | G | 190,000 | C |
| CRESOL, M- (3-METHYLPHENOL) | 108-39-4 | 10,000 | C | 10,000 | C | 10,000 | C |
| CRESOL, P- (4-METHYLPHENOL) | 106-44-5 | 1,100 | G | **[14,000] 16,000** | G | 190,000 | C |
| CRESOL, P-CHLORO-M- | 59-50-7 | **[1,100] 22,000** | G | **[14,000] 190,000** | G | 190,000 | C |
| CROTONALDEHYDE | 4170-30-3 | **[9.4] 9.8** | G | **[42] 48** | G | 10,000 | C |
| CROTONALDEHYDE, TRANS- | 123-73-9 | **[9.4] 9.8** | G | **[42] 48** | G | 10,000 | C |
| CUMENE (ISOPROPYL BENZENE) | 98-82-8 | 7,700 | N | 10,000 | C | 10,000 | C |
| CYANAZINE | 21725-46-2 | **[21] 22** | G | **[94] 110** | G | 190,000 | C |
| CYCLOHEXANE | 110-82-7 | 10,000 | C | 10,000 | C | 10,000 | C |
| CYCLOHEXANONE | 108-94-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| CYFLUTHRIN | 68359-37-5 | 5,500 | G | **[70,000] 80,000** | G | 190,000 | C |
| CYROMAZINE | 66215-27-8 | 1,700 | G | **[21,000] 24,000** | G | 190,000 | C |
| DDD, 4,4'- | 72-54-8 | **[75] 78** | G | **[330] 380** | G | 190,000 | C |
| DDE, 4,4'- | 72-55-9 | **[53] 55** | G | **[230] 270** | G | 190,000 | C |
| DDT, 4,4'- | 50-29-3 | **[53] 55** | G | **[230] 270** | G | 190,000 | C |
| DI(2-ETHYLHEXYL)ADIPATE | 103-23-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| DIALLATE | 2303-16-4 | **[290] 300** | G | **[1,300] 1,500** | G | 10,000 | C |
| DIAMINOTOLUENE, 2,4- | 95-80-7 | **[4.7] 4.9** | G | **[21] 24** | G | 190,000 | C |
| DIAZINON | 333-41-5 | 150 | G | **[2,000] 2,200** | G | 10,000 | C |
| DIBENZO[A,H]ANTHRACENE | 53-70-3 | **[0.57] 0.58** | G | **[11] 12** | G | 190,000 | C |
| DIBENZOFURAN | 132-64-9 | 220 | G | **[2,800] 3,200** | G | 190,000 | C |
| DIBROMO-3-CHLOROPROPANE, 1,2- | 96-12-8 | 0.029 | N | 0.37 | N | 0.43 | N |
| DIBROMOBENZENE, 1,4- | 106-37-6 | 2,200 | G | **[28,000] 32,000** | G | 190,000 | C |
| DIBROMOETHANE, 1,2- (ETHYLENE DIBROMIDE) | 106-93-4 | 0.74 | N | 3.7 | N | 4.3 | N |
| DIBROMOMETHANE | 74-95-3 | **[2,200] 77** | **[G] N** | **[10,000] 320** | **[C] N** | **[10,000] 370** | **[C] N** |
| DIBUTYL PHTHALATE, N- | 84-74-2 | 10,000 | C | 10,000 | C | 10,000 | C |
| DICAMBA | 1918-00-9 | 6,600 | G | **[84,000] 96,000** | G | 190,000 | C |
| DICHLOROACETIC ACID | 76-43-6 | **[880] 370** | G | **[10,000] 1,800** | **[C] G** | 10,000 | C |
| DICHLORO-2-BUTENE, 1,4- | 764-41-0 | 0.11 | N | 0.53 | N | 0.61 | N |
| DICHLORO-2-BUTENE, TRANS-1,4- | 110-57-6 | 0.1 | N | **[1] 0.52** | N | **[1] 0.6** | N |
| DICHLOROBENZENE, 1,2- | 95-50-1 | 3,800 | N | 10,000 | C | 10,000 | C |
| DICHLOROBENZENE, 1,3- | 541-73-1 | 660 | G | **[8,400] 9,600** | G | 10,000 | C |
| DICHLOROBENZENE, P- | 106-46-7 | 40 | N | 200 | N | 230 | N |
| DICHLOROBENZIDINE, 3,3'- | 91-94-1 | **[40] 41** | G | **[180] 200** | G | 190,000 | C |
| DICHLORODIFLUOROMETHANE (FREON 12) | 75-71-8 | **[3,900] 1,900** | N | **[10,000] 8,000** | **[C] N** | **[10,000] 9,100** | **[C] N** |
| DICHLOROETHANE, 1,1- | 75-34-3 | 280 | N | 1,400 | N | 1,600 | N |
| DICHLOROETHANE, 1,2- | 107-06-2 | 17 | N | 86 | N | 98 | N |
| DICHLOROETHYLENE, 1,1- | 75-35-4 | 3,800 | N | 10,000 | C | 10,000 | C |
| DICHLOROETHYLENE, CIS-1,2- | 156-59-2 | **[2,200] 440** | G | **[10,000] 6,400** | **[C] G** | 10,000 | C |
| DICHLOROETHYLENE, TRANS-1,2- | 156-60-5 | 1,100 | N | 4,800 | N | 5,500 | N |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | 75-09-2 | **[950] 1,300** | **[N] G** | **[4,700] 10,000** | **[N] C** | **[5,400] 10,000** | **[N] C** |
| DICHLOROPHENOL, 2,4- | 120-83-2 | 660 | G | **[8,400] 9,600** | G | 190,000 | C |

All concentrations in mg/kg
G – Ingestion
N – Inhalation
C – Cap

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**A. Direct Contact Numeric Values**

| *REGULATED SUBSTANCE* | *CASRN* | *Residential 0-15 feet* | | *Non-Residential* | | | |
|---|---|---|---|---|---|---|---|
| | | | | *Surface Soil 0-2 feet* | | *Subsurface Soil 2-15 feet* | |
| DICHLOROPHENOXYACETIC ACID, 2,4-(2,4-D) | 94-75-7 | 2,200 | G | **[28,000] 32,000** | G | 190,000 | C |
| DICHLOROPROPANE, 1,2- | 78-87-5 | 45 | N | 220 | N | 260 | N |
| DICHLOROPROPENE, 1,3- | 542-75-6 | 110 | N | 560 | N | 640 | N |
| DICHLOROPROPIONIC ACID, 2,2-(DALAPON) | 75-99-0 | 6,600 | G | 10,000 | C | 10,000 | C |
| DICHLORVOS | 62-73-7 | **[62] 64** | G | **[270] 310** | G | 10,000 | C |
| DICYCLOPENTADIENE | 77-73-6 | 130 | N | 550 | N | 630 | N |
| DIELDRIN | 60-57-1 | **[1.1] 1.2** | G | **[5] 6** | G | 190,000 | C |
| DIETHANOLAMINE | 111-42-2 | 10,000 | C | 10,000 | C | 10,000 | C |
| DIETHYL PHTHALATE | 84-66-2 | 10,000 | C | 10,000 | C | 10,000 | C |
| DIFLUBENZURON | 35367-38-5 | 4,400 | G | **[56,000] 64,000** | G | 190,000 | C |
| DIISOPROPYL METHYLPHOSPHONATE | 1445-75-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| DIMETHOATE | 60-51-5 | 44 | G | **[560] 640** | G | 190,000 | C |
| DIMETHOXYBENZIDINE, 3,3- | 119-90-4 | 1,300 | G | **[5,700] 6,500** | G | 190,000 | C |
| DIMETHRIN | 70-38-2 | 66,000 | G | 190,000 | C | 190,000 | C |
| DIMETHYLAMINOAZOBENZENE, P- | 60-11-7 | **[3.9] 4** | G | **[17] 20** | G | 190,000 | C |
| DIMETHYLANILINE, N,N- | 121-69-7 | 440 | G | **[5,600] 6,400** | G | 10,000 | C |
| DIMETHYLBENZIDINE, 3,3- | 119-93-7 | **[1.6] 1.7** | G | **[7.2] 8.3** | G | 190,000 | C |
| DIMETHYL METHYLPHOSPHONATE | 756-79-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| DIMETHYLPHENOL, 2,4- | 105-67-9 | 4,400 | G | 10,000 | C | 10,000 | C |
| DINITROBENZENE, 1,3- | 99-65-0 | 22 | G | **[280] 320** | G | 190,000 | C |
| DINITROPHENOL, 2,4- | 51-28-5 | 440 | G | **[5,600] 6,400** | G | 190,000 | C |
| DINITROTOLUENE, 2,4- | 121-14-2 | **[58] 60** | G | **[260] 290** | G | 190,000 | C |
| DINITROTOLUENE, 2,6- (2,6-DNT) | 606-20-2 | 220 | G | **[2,800] 3,200** | G | 190,000 | C |
| DINOSEB | 88-85-7 | 220 | G | **[2,800] 3,200** | G | 190,000 | C |
| DIOXANE, 1,4- | 123-91-1 | **[58] 89** | N | **[290] 440** | N | **[330] 510** | N |
| DIPHENAMID | 957-51-7 | 6,600 | G | **[84,000] 96,000** | G | 190,000 | C |
| DIPHENYLAMINE | 122-39-4 | 5,500 | G | **[70,000] 80,000** | G | 190,000 | C |
| DIPHENYLHYDRAZINE, 1,2- | 122-66-7 | **[22] 23** | G | **[99] 110** | G | 190,000 | C |
| DIQUAT | 85-00-7 | 480 | G | **[6,200] 7,000** | G | 190,000 | C |
| DISULFOTON | 298-04-4 | 8.8 | G | **[110] 130** | G | 10,000 | C |
| DITHIANE, 1,4- | 505-29-3 | 2,200 | G | **[28,000] 32,000** | G | 190,000 | C |
| DIURON | 330-54-1 | 440 | G | **[5,600] 6,400** | G | 190,000 | C |
| ENDOSULFAN | 115-29-7 | 1,300 | G | **[17,000] 19,000** | G | 190,000 | C |
| ENDOSULFAN I (ALPHA) | 959-98-8 | 1,300 | G | **[17,000] 19,000** | G | 190,000 | C |
| ENDOSULFAN II (BETA) | 33213-65-9 | 1,300 | G | **[17,000] 19,000** | G | 190,000 | C |
| ENDOSULFAN SULFATE | 1031-07-8 | 1,300 | G | **[17,000] 19,000** | G | 190,000 | C |
| ENDOTHALL | 145-73-3 | 4,400 | G | **[56,000] 64,000** | G | 190,000 | C |
| ENDRIN | 72-20-8 | 66 | G | **[840] 960** | G | 190,000 | C |
| EPICHLOROHYDRIN | 106-89-8 | 19 | N | 79 | N | 91 | N |
| ETHEPHON | 16672-87-0 | 1,100 | G | **[14,000] 16,000** | G | 190,000 | C |
| ETHION | 563-12-2 | 110 | G | **[1,400] 1,600** | G | 10,000 | C |
| ETHOXYETHANOL, 2- (EGEE) | 110-80-5 | 3,900 | N | 10,000 | C | 10,000 | C |
| ETHYL ACETATE | 141-78-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| ETHYL ACRYLATE | 140-88-5 | **[370] 390** | G | **[1,700] 1,900** | G | 10,000 | C |
| ETHYL BENZENE | 100-41-4 | 10,000 | C | 10,000 | C | 10,000 | C |
| ETHYL DIPROPYLTHIOCARBAMATE, S-(EPTC) | 759-94-4 | 5,500 | G | 10,000 | C | 10,000 | C |
| ETHYL ETHER | 60-29-7 | 10,000 | C | 10,000 | C | 10,000 | C |
| ETHYL METHACRYLATE | 97-63-2 | **[10,000] 5,700** | **[C] N** | 10,000 | C | 10,000 | C |
| **ETHYLENE CHLORHYDRIN** | **107-07-3** | **4,400** | **G** | **10,000** | **C** | **10,000** | **C** |

All concentrations in mg/kg
G – Ingestion
N – Inhalation
C – Cap

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**A. Direct Contact Numeric Values**

| *REGULATED SUBSTANCE* | *CASRN* | *Residential 0-15 feet* | | *Non-Residential* | | | |
|---|---|---|---|---|---|---|---|
| | | | | *Surface Soil 0-2 feet* | | *Subsurface Soil 2-15 feet* | |
| ETHYLENE GLYCOL | 107-21-1 | 7,700 | N | 10,000 | C | 10,000 | C |
| ETHYLENE THIOUREA (ETU) | 96-45-7 | 18 | G | **[220] 260** | G | 190,000 | C |
| ETHYLP-NITROPHENYL PHENYLPHOSPHOROTHIOATE | 2104-64-5 | 2.2 | G | **[28] 32** | G | 190,000 | C |
| FENAMIPHOS | 22224-92-6 | 55 | G | **[700] 800** | G | 190,000 | C |
| FENVALERATE (PYDRIN) | 51630-58-1 | 5,500 | G | 10,000 | C | 10,000 | C |
| FLUOMETURON | 2164-17-2 | 2,900 | G | **[36,000] 42,000** | G | 190,000 | C |
| FLUORANTHENE | 206-44-0 | 8,800 | G | **[110,000] 130,000** | G | 190,000 | C |
| FLUORENE | 86-73-7 | 8,800 | G | **[110,000] 130,000** | G | 190,000 | C |
| FLUOROTRICHLOROMETHANE (FREON 11) | 75-69-4 | 10,000 | C | 10,000 | C | 10,000 | C |
| FONOFOS | 944-22-9 | 440 | G | **[5,600] 6,400** | G | 10,000 | C |
| FORMALDEHYDE | 50-00-0 | 34 | N | 170 | N | 200 | N |
| FORMIC ACID | 64-18-6 | **[57] 6** | N | **[240] 24** | N | **[270] 27** | N |
| FOSETYL-AL | 39148-24-8 | 190,000 | C | 190,000 | C | 190,000 | C |
| FURAN | 110-00-9 | 220 | G | **[2,800] 3,200** | G | 10,000 | C |
| FURFURAL | 98-01-1 | 660 | G | 4,000 | N | 4,500 | N |
| GLYPHOSATE | 1071-83-6 | 22,000 | G | 190,000 | C | 190,000 | C |
| HEPTACHLOR | 76-44-8 | 4 | G | **[18] 20** | G | 190,000 | C |
| HEPTACHLOR EPOXIDE | 1024-57-3 | 2 | G | **[8.7] 10** | G | 190,000 | C |
| HEXACHLOROBENZENE | 118-74-1 | **[11] 12** | G | **[50] 57** | G | 190,000 | C |
| HEXACHLOROBUTADIENE | 87-68-3 | 220 | G | **[1,000] 1,200** | G | 10,000 | C |
| HEXACHLOROCYCLOPENTADIENE | 77-47-4 | 1,300 | G | 10,000 | C | 10,000 | C |
| HEXACHLOROETHANE | 67-72-1 | **[110] 44** | N | **[550] 220** | N | **[640] 260** | N |
| HEXANE | 110-54-3 | 10,000 | C | 10,000 | C | 10,000 | C |
| HEXAZINONE | 51235-04-2 | 7,300 | G | **[92,000] 110,000** | G | 190,000 | C |
| HEXYTHIAZOX (SAVEY) | 78587-05-0 | 5,500 | G | **[70,000] 80,000** | G | 190,000 | C |
| HMX | 2691-41-0 | 11,000 | G | **[140,000] 160,000** | G | 190,000 | C |
| HYDRAZINE/HYDRAZINE SULFATE | 302-01-2 | 0.09 | N | 0.45 | N | 0.52 | N |
| HYDROQUINONE | 123-31-9 | **[320] 310** | G | **[1,400] 1,500** | G | 190,000 | C |
| INDENO[1,2,3-CD]PYRENE | 193-39-5 | **[5.7] 5.8** | G | **[110] 120** | G | 190,000 | C |
| IPRODIONE | 36734-19-7 | 8,800 | G | **[110,000] 130,000** | G | 190,000 | C |
| ISOBUTYL ALCOHOL | 78-83-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| ISOPHORONE | 78-59-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| ISOPROPYL METHYLPHOSPHONATE | 1832-54-8 | 10,000 | C | 10,000 | C | 10,000 | C |
| KEPONE | 143-50-0 | **[1.1] 1.9** | G | **[5] 9.1** | G | 190,000 | C |
| MALATHION | 121-75-5 | 4,400 | G | 10,000 | C | 10,000 | C |
| MALEIC HYDRAZIDE | 123-33-1 | 110,000 | G | 190,000 | C | 190,000 | C |
| MANEB | 12427-38-2 | 1,100 | G | **[14,000] 16,000** | G | 190,000 | C |
| MERPHOS OXIDE | 78-48-8 | 6.6 | G | **[84] 96** | G | 10,000 | C |
| METHACRYLONITRILE | 126-98-7 | **[13] 22** | **[N] G** | **[56] 320** | **[N] G** | **[64] 2,800** | N |
| METHAMIDOPHOS | 10265-92-6 | 11 | G | **[140] 160** | G | 190,000 | C |
| METHANOL | 67-56-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| METHOMYL | 16752-77-5 | 5,500 | G | **[70,000] 80,000** | G | 190,000 | C |
| METHOXYCHLOR | 72-43-5 | 1,100 | G | **[14,000] 16,000** | G | 190,000 | C |
| METHOXYETHANOL, 2- | 109-86-4 | 380 | N | 1,600 | N | 1,800 | N |
| METHYL ACETATE | 79-20-9 | 10,000 | C | 10,000 | C | 10,000 | C |
| METHYL ACRYLATE | 96-33-3 | **[6,600] 380** | **[G] N** | **[10,000] 1,600** | **[C] N** | **[10,000] 1,800** | **[C] N** |
| METHYL CHLORIDE | 74-87-3 | 250 | N | 1,200 | N | 1,400 | N |
| METHYL ETHYL KETONE | 78-93-3 | 10,000 | C | 10,000 | C | 10,000 | C |
| **METHYL HYDRAZINE** | **60-34-4** | **0.38** | **N** | **1.6** | **N** | **1.8** | **N** |

All concentrations in mg/kg
G – Ingestion
N – Inhalation
C – Cap

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**A. Direct Contact Numeric Values**

| *REGULATED SUBSTANCE* | *CASRN* | *Residential 0-15 feet* | | *Non-Residential* | | | |
|---|---|---|---|---|---|---|---|
| | | | | *Surface Soil 0-2 feet* | | *Subsurface Soil 2-15 feet* | |
| METHYL ISOBUTYL KETONE | 108-10-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| METHYL ISOCYANATE | 624-83-9 | 19 | N | 79 | N | 91 | N |
| METHYL N-BUTYL KETONE (2-HEXANONE) | 591-78-6 | **[96] 570** | N | **[400] 2,400** | N | **[460] 2,800** | N |
| METHYL METHACRYLATE | 80-62-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| METHYL METHANESULFONATE | 66-27-3 | **[180] 190** | G | **[800] 920** | G | 10,000 | C |
| METHYL PARATHION | 298-00-0 | 55 | G | **[700] 800** | G | 190,000 | C |
| METHYL STYRENE (MIXED ISOMERS) | 25013-15-4 | 770 | N | 3,200 | N | 3,600 | N |
| METHYL TERT-BUTYL ETHER (MTBE) | 1634-04-4 | **[620] 1,700** | **[G] N** | **[3,200] 8,600** | N | **[3,700] 9,900** | N |
| METHYLCHLOROPHENOXYACETIC ACD (MCPA) | 94-74-6 | 110 | G | **[1,400] 1,600** | C | 190,000 | C |
| METHYLENE BIS(2-CHLOROANILINE), 4,4'- | 101-14-4 | 42 | G | **[790] 910** | G | 190,000 | C |
| METHYLNAPHTHALENE, 2- | 91-57-6 | 880 | G | **[11,000] 13,000** | G | 190,000 | C |
| METHYLSTYRENE, ALPHA | 98-83-9 | 10,000 | C | 10,000 | C | 10,000 | C |
| METOLACHLOR | 51218-45-2 | 10,000 | C | 10,000 | C | 10,000 | C |
| METRIBUZIN | 21087-64-9 | 5,500 | G | **[70,000] 80,000** | G | 190,000 | C |
| MONOCHLOROACETIC ACID | 79-11-8 | **[2,200] 440** | G | **[28,000] 6,400** | G | 190,000 | C |
| NAPHTHALENE | 91-20-3 | 4,400 | G | **[56,000] 64,000** | G | 190,000 | C |
| NAPHTHYLAMINE, 1- | 134-32-7 | **[9.9] 10** | G | **[44] 51** | G | 190,000 | C |
| NAPHTHYLAMINE, 2- | 91-59-8 | **[9.9] 10** | G | **[44] 51** | G | 190,000 | C |
| NAPROPAMIDE | 15299-99-7 | 22,000 | G | 190,000 | C | 190,000 | C |
| NITROANILINE, M- | 99-09-2 | 66 | G | **[840] 960** | G | 190,000 | C |
| NITROANILINE, O- | 88-74-4 | **[660] 2,200** | G | **[8,400] 32,000** | G | 190,000 | C |
| NITROANILINE, P- | 100-01-6 | 880 | G | **[4,000] 4,600** | G | 190,000 | C |
| NITROBENZENE | 98-95-3 | 440 | G | **[5,600] 6,400** | G | 10,000 | C |
| NITROGUANIDINE | 556-88-7 | 22,000 | G | 190,000 | C | 190,000 | C |
| NITROPHENOL, 2- | 88-75-5 | 1,800 | G | **[22,000] 26,000** | G | 190,000 | C |
| NITROPHENOL, 4- | 100-02-7 | 1,800 | G | **[22,000] 26,000** | G | 190,000 | C |
| NITROPROPANE, 2- | 79-46-9 | 0.16 | N | 0.82 | N | 0.94 | N |
| NITROSODIETHYLAMINE, N- | 55-18-5 | 0.0041 | N | 0.051 | N | 0.059 | N |
| NITROSODIMETHYLAMINE, N- | 62-75-9 | 0.012 | N | 0.16 | N | 0.18 | N |
| NITROSO-DI-N-BUTYLAMINE, N- | 924-16-3 | **[3.3] 3.4** | G | **[15] 17** | G | 10,000 | C |
| NITROSODI-N-PROPYLAMINE, N- | 621-64-7 | **[2.6] 2.7** | G | **[11] 13** | G | 10,000 | C |
| NITROSODIPHENYLAMINE, N- | 86-30-6 | **[3,700] 3,800** | G | **[16,000] 19,000** | G | 190,000 | C |
| NITROSO-N-ETHYLUREA, N- | 759-73-9 | **[0.15] 0.16** | G | **[2.9] 3.4** | G | 190,000 | C |
| OCTYL PHTHALATE, DI-N- | 117-84-0 | **[8,800] 2,200** | G | 10,000 | C | 10,000 | C |
| OXAMYL (VYDATE) | 23135-22-0 | 5,500 | G | **[70,000] 80,000** | G | 190,000 | C |
| PARAQUAT | 1910-42-5 | 990 | G | **[13,000] 14,000** | G | 190,000 | C |
| PARATHION | 56-38-2 | 1,300 | G | 10,000 | C | 10,000 | C |
| PCB-1016 (AROCLOR) | 12674-11-2 | 15 | G | **[200] 220** | G | 10,000 | C |
| PCB-1221 (AROCLOR) | 11104-28-2 | 9 | G | **[40] 46** | G | 10,000 | C |
| PCB-1232 (AROCLOR) | 11141-16-5 | 9 | G | **[40] 46** | G | 10,000 | C |
| PCB-1242 (AROCLOR) | 53469-21-9 | 9 | G | **[40] 46** | G | 10,000 | C |
| PCB-1248 (AROCLOR) | 12672-29-6 | **[9] 9.3** | G | **[40] 46** | G | 10,000 | C |
| PCB-1254 (AROCLOR) | 11097-69-1 | 4.4 | G | **[40] 46** | G | 10,000 | C |
| PCB-1260 (AROCLOR) | 11096-82-5 | 9 | G | **[40] 46** | G | 190,000 | C |
| PEBULATE | 1114-71-2 | 10,000 | C | 10,000 | C | 10,000 | C |
| PENTACHLOROBENZENE | 608-93-5 | 180 | G | **[2,200] 2,600** | G | 190,000 | C |
| PENTACHLOROETHANE | 76-01-7 | **[200] 210** | G | **[880] 1,000** | G | 10,000 | C |
| PENTACHLORONITROBENZENE | 82-68-8 | **[69] 72** | G | **[310] 350** | G | 190,000 | C |

All concentrations in mg/kg
G – Ingestion
N – Inhalation
C – Cap

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**A. Direct Contact Numeric Values**

| *REGULATED SUBSTANCE* | *CASRN* | *Residential 0-15 feet* | | *Non-Residential* | | | |
|---|---|---|---|---|---|---|---|
| | | | | *Surface Soil 0-2 feet* | | *Subsurface Soil 2-15 feet* | |
| PENTACHLOROPHENOL | 87-86-5 | **[150] 47** | G | **[660] 230** | G | 190,000 | C |
| PHENACETIN | 62-44-2 | **[8,100] 8,500** | G | **[36,000] 41,000** | G | 190,000 | C |
| PHENANTHRENE | 85-01-8 | 66,000 | G | 190,000 | C | 190,000 | C |
| PHENOL | 108-95-2 | **[66,000] 3,800** | **[G] N** | **[190,000] 16,000** | **[C] N** | **[190,000] 18,000** | **[C] N** |
| PHENYL MERCAPTAN | 108-98-5 | **[2.2] 220** | G | **[28] 3,200** | **[N] G** | 10,000 | **[N] C** |
| PHENYLENEDIAMINE, M- | 108-45-2 | 1,300 | G | **[17,000] 19,000** | G | 190,000 | C |
| PHENYLPHENOL, 2- | 90-43-7 | **[9,400] 9,800** | G | **[42,000] 48,000** | G | 190,000 | C |
| PHORATE | 298-02-2 | 44 | G | **[560] 640** | G | 10,000 | C |
| PHTHALIC ANHYDRIDE | 85-44-9 | 190,000 | C | 190,000 | C | 190,000 | C |
| PICLORAM | 1918-02-1 | 15,000 | G | 190,000 | C | 190,000 | C |
| PROMETON | 1610-18-0 | 3,300 | G | **[42,000] 48,000** | G | 190,000 | C |
| PRONAMIDE | 23950-58-5 | 17,000 | G | 190,000 | C | 190,000 | C |
| PROPANIL | 709-98-8 | 1,100 | G | **[14,000] 16,000** | G | 190,000 | C |
| PROPANOL, 2- (ISOPROPYL ALCOHOL) | 67-63-0 | 10,000 | C | 10,000 | C | 10,000 | C |
| PROPAZINE | 139-40-2 | 4,400 | G | 10,000 | C | 10,000 | C |
| PROPHAM | 122-42-9 | 4,400 | G | **[56,000] 64,000** | G | 190,000 | C |
| PROPYLBENZENE, N- | 103-65-1 | **[8,800] 10,000** | **[G] C** | 10,000 | C | 10,000 | C |
| PROPYLENE OXIDE | 75-56-9 | **[75] 78** | G | **[330] 380** | G | 690 | N |
| PYRENE | 129-00-0 | 6,600 | G | **[84,000] 96,000** | G | 190,000 | C |
| PYRIDINE | 110-86-1 | 220 | G | **[2,800] 3,200** | G | 10,000 | C |
| QUINOLINE | 91-22-5 | 6 | G | **[26] 30** | G | 10,000 | C |
| QUIZALOFOP (ASSURE) | 76578-14-8 | 2,000 | G | **[25,000] 29,000** | G | 190,000 | C |
| RDX | 121-82-4 | **[160] 170** | G | **[720] 830** | G | 190,000 | C |
| RESORCINOL | 108-46-3 | 190,000 | C | 190,000 | C | 190,000 | C |
| RONNEL | 299-84-3 | 11,000 | G | **[140,000] 160,000** | G | 190,000 | C |
| SIMAZINE | 122-34-9 | **[150] 160** | G | **[660] 760** | G | 190,000 | C |
| STRYCHNINE | 57-24-9 | 66 | G | **[840] 960** | G | 190,000 | C |
| STYRENE | 100-42-5 | 10,000 | C | 10,000 | C | 10,000 | C |
| TEBUTHIURON | 34014-18-1 | 15,000 | G | 190,000 | C | 190,000 | C |
| TERBACIL | 5902-51-2 | 2,900 | G | **[36,000] 42,000** | G | 190,000 | C |
| TERBUFOS | 13071-79-9 | 5.5 | G | **[70] 80** | G | 10,000 | C |
| TETRACHLOROBENZENE, 1,2,4,5- | 95-94-3 | 66 | G | **[840] 960** | G | 190,000 | C |
| TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8- (TCDD) | 1746-01-6 | 0.00014 | G | **[0.00061] 0.0007** | G | 190,000 | C |
| TETRACHLOROETHANE, 1,1,1,2- | 630-20-6 | 60 | N | 300 | N | 340 | N |
| TETRACHLOROETHANE, 1,1,2,2- | 79-34-5 | 7.7 | N | 38 | N | 44 | N |
| TETRACHLOROETHYLENE (PCE) | 127-18-4 | **[340] 770** | **[G] N** | **[1,500] 3,200** | **[G] N** | **[4,400] 3,600** | N |
| TETRACHLOROPHENOL, 2,3,4,6- | 58-90-2 | 6,600 | G | **[84,000] 96,000** | G | 190,000 | C |
| TETRAETHYL LEAD | 78-00-2 | 0.022 | G | **[0.28] 0.32** | G | 10,000 | C |
| TETRAETHYLDITHIOPYROPHOSPHATE | 3689-24-5 | 110 | G | **[1,400] 1,600** | G | 10,000 | C |
| TETRAHYDROFURAN | 109-99-9 | **[230] 240** | N | **[1,100] 1,200** | N | **[1,300] 1,400** | N |
| THIOFANOX | 39196-18-4 | 66 | G | **[840] 960** | G | 190,000 | C |
| THIRAM | 137-26-8 | 1,100 | G | **[14,000] 16,000** | G | 190,000 | C |
| TOLUENE | 108-88-3 | 10,000 | C | 10,000 | C | 10,000 | C |
| TOLUIDINE, M- | 108-44-1 | **[99] 100** | G | **[440] 510** | G | 10,000 | C |
| TOLUIDINE, O- | 95-53-4 | **[99] 1,200** | G | **[440] 5,700** | G | 10,000 | C |
| TOLUIDINE, P- | 106-49-0 | **[94] 620** | G | **[420] 3,000** | G | 190,000 | C |
| TOXAPHENE | 8001-35-2 | **[16] 17** | G | **[72] 83** | G | 190,000 | C |

All concentrations in mg/kg
G – Ingestion
N – Inhalation
C – Cap

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**A. Direct Contact Numeric Values**

| *REGULATED SUBSTANCE* | *CASRN* | *Residential 0-15 feet* | | *Non-Residential* | | | |
|---|---|---|---|---|---|---|---|
| | | | | *Surface Soil 0-2 feet* | | *Subsurface Soil 2-15 feet* | |
| TRIALLATE | 2303-17-5 | 2,900 | G | 10,000 | C | 10,000 | C |
| TRIBROMOMETHANE (BROMOFORM) | 75-25-2 | 410 | N | 2,000 | N | 2,300 | N |
| TRICHLORO-1,2,2-TRIFLUOROETHANE, 1,1,2- | 76-13-1 | 10,000 | C | 10,000 | C | 10,000 | C |
| **TRICHLOROACETIC ACID** | **76-03-9** | **270** | **G** | **1,300** | **G** | **190,000** | **C** |
| TRICHLOROBENZENE, 1,2,4- | 120-82-1 | **[2,200] 640** | G | **[10,000] 3,100** | **[C] G** | 10,000 | C |
| TRICHLOROBENZENE, 1,3,5- | 108-70-3 | 1,300 | G | **[17,000] 19,000** | G | 190,000 | C |
| TRICHLOROETHANE, 1,1,1- | 71-55-6 | 10,000 | C | 10,000 | C | 10,000 | C |
| TRICHLOROETHANE, 1,1,2- | 79-00-5 | **[28] 4** | N | **[140] 16** | N | **[160] 18** | N |
| TRICHLOROETHYLENE (TCE) | 79-01-6 | **[260] 38** | N | **[1,300] 160** | N | **[1,500] 180** | N |
| TRICHLOROPHENOL, 2,4,5- | 95-95-4 | 22,000 | G | 190,000 | C | 190,000 | C |
| TRICHLOROPHENOL, 2,4,6- | 88-06-2 | 220 | G | **[2,800] 3,200** | G | 190,000 | C |
| TRICHLOROPHENOXYACETIC ACID, 2,4,5- (2,4,5-T) | 93-76-5 | 2,200 | G | **[28,000] 32,000** | G | 190,000 | C |
| TRICHLOROPHENOXYPROPIONIC ACID, 2,4,5- (2,4,5-TP)(SILVEX) | 93-72-1 | 1,800 | G | **[22,000] 26,000** | G | 190,000 | C |
| TRICHLOROPROPANE, 1,1,2- | 598-77-6 | 1,100 | G | 10,000 | C | 10,000 | C |
| TRICHLOROPROPANE, 1,2,3- | 96-18-4 | **[2.6] 0.027** | G | **[11] 0.6** | G | **[460] 28** | N |
| TRICHLOROPROPENE, 1,2,3- | 96-19-5 | **[19] 5.7** | N | **[80] 24** | N | **[91] 27** | N |
| TRIETHYLAMINE | 121-44-8 | 130 | N | 560 | N | 640 | N |
| TRIFLURALIN | 1582-09-8 | 1,700 | G | **[10,000] 12,000** | G | 190,000 | C |
| TRIMETHYLBENZENE, 1,3,4- (TRIMETHYLBENZENE, 1,2,4-) | 95-63-6 | 130 | N | 560 | N | 640 | N |
| TRIMETHYLBENZENE, 1,3,5- | 108-67-8 | **[110] 2,200** | **[N] G** | **[480] 10,000** | **[N] C** | **[550] 10,000** | **[N] C** |
| TRINITROGLYCEROL (NITROGLYCERIN) | 55-63-0 | 22 | G | **[280] 320** | G | 10,000 | C |
| TRINITROTOLUENE, 2,4,6- | 118-96-7 | 110 | G | **[1,400] 1,600** | G | 190,000 | C |
| VINYL ACETATE | 108-05-4 | 3,900 | N | 10,000 | C | 10,000 | C |
| VINYL BROMIDE (BROMOETHENE) | 593-60-2 | 14 | N | 70 | N | 80 | N |
| VINYL CHLORIDE | 75-01-4 | **[1.9] 0.9** | G | **[110] 61** | G | **[580] 280** | N |
| WARFARIN | 81-81-2 | 66 | G | **[840] 960** | G | 190,000 | C |
| XYLENES (TOTAL) | 1330-20-7 | 1,900 | N | 8,000 | N | 9,100 | N |
| ZINEB | 12122-67-7 | 11,000 | G | **[140,000] 160,000** | G | 190,000 | C |

All concentrations in mg/kg
G – Ingestion
N – Inhalation
C – Cap

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| ACENAPHTHENE | 83-32-9 | **[220] 250** | **[2,700] 3,100** | E | 380 | 4,700 | E | 380 | 4,700 | E | 380 | 4,700 | E | 380 | 4,700 | E | 380 | 4,700 | E | 15 |
| ACENAPHTHYLENE | 208-96-8 | **[220] 250** | **[2,500] 2,800** | E | **[610] 700** | **[6,900] 8,000** | E | 1,600 | 18,000 | E | 1,600 | 18,000 | E | 1,600 | 18,000 | E | 1,600 | 18,000 | E | 15 |
| ACEPHATE | 30560-19-1 | **[7.6] 8.4** | **[0.9] 1.0** | E | **[30] 39** | **[3.6] 4.6** | E | **[760] 840** | **[90] 100** | E | **[3,000] 3,900** | **[360] 460** | E | **[7.6] 8.4** | **[0.9] 1.0** | E | **[30] 39** | **[3.6] 4.6** | E | NA |
| ACETALDEHYDE | 75-07-0 | 1.9 | 0.23 | E | 7.9 | 0.96 | E | 190 | 23 | E | 790 | 96 | E | 1.9 | 0.23 | E | 7.9 | 0.96 | E | NA |
| ACETONE | 67-64-1 | **[3,300] 3,800** | **[370] 430** | E | **[9,200] 10,000** | **[1,000] 1,200** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | **[3,700] 4,300** | E | 10,000 | 10,000 | C | NA |
| ACETONITRILE | 75-05-8 | 13 | 1.5 | E | 53 | 6 | E | 1,300 | 150 | E | 5,300 | 600 | E | 130 | 15 | E | 530 | 60 | E | NA |
| ACETOPHENONE | 98-86-2 | **[370] 420** | **[200] 230** | E | **[1,000] 1,200** | **[540] 640** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | **[370] 420** | **[200] 230** | E | **[1,000] 1,200** | **[540] 640** | E | NA |
| ACETYLAMINOFLUORENE, 2- (2AAF) | 53-96-3 | **[0.017] 0.019** | **[0.07] 0.08** | E | **[0.068] 0.089** | **[0.28] 0.37** | E | **[1.7] 1.9** | **[7] 8** | E | **[6.8] 8.9** | **[28] 37** | E | **[17] 19** | **[70] 78** | E | **[68] 89** | **[280] 370** | E | 20 |
| ACROLEIN | 107-02-8 | 0.0042 | 0.00047 | E | 0.018 | 0.002 | E | 0.42 | 0.047 | E | 1.8 | 0.2 | E | 0.042 | 0.0047 | E | 0.18 | 0.02 | E | NA |
| ACRYLAMIDE | 79-06-1 | **[0.0038] 0.019** | **[0.0006] 0.0033** | E | **[0.019] 0.25** | **[0.0033] 0.043** | E | **[0.4] 1.9** | **[0.07] 0.33** | E | **[1.9] 25** | **[0.33] 4.3** | E | **[0.004] 0.019** | **[0.0007] 0.0033** | E | **[0.019] 0.25** | **[0.0033] 0.043** | E | NA |
| ACRYLIC ACID | 79-10-7 | 0.21 | 0.039 | E | 0.88 | 0.16 | E | 21 | 3.9 | E | 88 | 16 | E | 21 | 3.9 | E | 88 | 16 | E | NA |
| ACRYLONITRILE | 107-13-1 | 0.072 | 0.01 | E | 0.37 | 0.051 | E | 7.2 | 1 | E | 37 | 5.1 | E | 7.2 | 1 | E | 37 | 5.1 | E | NA |
| ALACHLOR | 15972-60-8 | 0.2 | 0.077 | E | 0.2 | 0.077 | E | 20 | 7.7 | E | 20 | 7.7 | E | 0.2 | 0.077 | E | 0.2 | 0.077 | E | NA |
| ALDICARB | 116-06-3 | 0.3 | 0.05 | E | 0.3 | 0.05 | E | 30 | 5 | E | 30 | 5 | E | 300 | 50 | E | 300 | 50 | E | NA |
| ALDICARB SULFONE | 1646-88-4 | 0.2 | 0.027 | E | 0.2 | 0.027 | E | 20 | 2.7 | E | 20 | 2.7 | E | 0.2 | 0.027 | E | 0.2 | 0.027 | E | NA |
| ALDICARB SULFOXIDE | 1646-87-3 | 0.4 | 0.045 | E | 0.4 | 0.045 | E | 40 | 4.5 | E | 40 | 4.5 | E | 0.4 | 0.045 | E | 0.4 | 0.045 | E | NA |
| ALDRIN | 309-00-2 | **[0.0039] 0.0043** | **[0.47] 0.52** | E | **[0.015] 0.02** | **[1.8] 2.4** | E | **[0.39] 0.43** | **[47] 52** | E | **[1.5] 2.0** | **[180] 240** | E | 2 | 240 | E | 2 | 240 | E | 10 |
| ALLYL ALCOHOL | 107-18-6 | **[0.063] 0.021** | **[0.0075] 0.0025** | E | **[0.26] 0.088** | **[0.031] 0.01** | E | **[6.3] 2.1** | **[0.75] 0.25** | E | **[26] 9** | **[3.1] 1** | E | **[6.3] 2.1** | **[0.75] 0.25** | E | **[26] 9** | **[3.1] 1** | E | NA |
| AMETRYN | 834-12-8 | 6 | 6.5 | E | 6 | 6.5 | E | 600 | 650 | E | 600 | 650 | E | 6 | 6.5 | E | 6 | 6.5 | E | NA |
| AMINOBIPHENYL, 4- | 92-67-1 | **[0.0031] 0.0035** | **[0.0012] 0.0014** | E | **[0.012] 0.016** | **[0.0046] 0.0062** | E | **[0.31] 0.35** | **[0.12] 0.14** | E | **[1.2] 1.6** | **[0.46] 0.62** | E | **[3.1] 3.5** | **[1.2] 1.4** | E | **[12] 16** | **[4.6] 6.2** | E | NA |
| AMITROLE | 61-82-5 | **[0.07] 0.078** | **[0.029] 0.032** | E | **[0.28] 0.36** | **[0.12] 0.15** | E | **[7] 8** | **[2.9] 3.2** | E | **[28] 36** | **[12] 15** | E | **[70] 78** | **[29] 32** | E | **[280] 360** | **[120] 150** | E | NA |
| AMMONIA | 7664-41-7 | 3,000 | 360 | E | 3,000 | 360 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 3,000 | 360 | E | 3,000 | 360 | E | NA |
| AMMONIUM SULFAMATE | 7773-06-0 | 200 | 24 | E | 200 | 24 | E | 20,000 | 2,400 | E | 20,000 | 2,400 | E | 200 | 24 | E | 200 | 24 | E | NA |
| ANILINE | 62-53-3 | 0.21 | 0.12 | E | 0.88 | 0.52 | E | 21 | 12 | E | 88 | 52 | E | 0.21 | 0.12 | E | 0.88 | 0.52 | E | NA |
| ANTHRACENE | 120-12-7 | 6.6 | 350 | E | 6.6 | 350 | E | 6.6 | 350 | E | 6.6 | 350 | E | 6.6 | 350 | E | 6.6 | 350 | E | 10 |
| ATRAZINE | 1912-24-9 | 0.3 | 0.13 | E | 0.3 | 0.13 | E | 30 | 13 | E | 30 | 13 | E | 0.3 | 0.13 | E | 0.3 | 0.13 | E | NA |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| AZINPHOS-METHYL (GUTHION) | 86-50-0 | **[11] 13** | **[12] 15** | E | **[31] 35** | **[35] 40** | E | **[1,100] 1,300** | **[1,200] 1,500** | E | **[3,100] 3,200** | **[3,500] 3,600** | E | **[11] 13** | **[12] 15** | E | **[31] 35** | **[35] 40** | E | NA |
| BAYGON (PROPOXUR) | 114-26-1 | 0.3 | 0.057 | E | 0.3 | 0.057 | E | 30 | 5.7 | E | 30 | 5.7 | E | 300 | 57 | E | 300 | 57 | E | NA |
| BENOMYL | 17804-35-2 | **[180] 200** | **[880] 970** | E | 200 | 970 | E | 200 | 970 | E | 200 | 970 | E | **[180] 200** | **[880] 970** | E | 200 | 970 | E | 20 |
| BENTAZON | 25057-89-0 | 20 | 2.9 | E | 20 | 2.9 | E | 2,000 | 290 | E | 2,000 | 290 | E | 20 | 2.9 | E | 20 | 2.9 | E | NA |
| BENZENE | 71-43-2 | 0.5 | 0.13 | E | 0.5 | 0.13 | E | 50 | 13 | E | 50 | 13 | E | 50 | 13 | E | 50 | 13 | E | NA |
| BENZIDINE | 92-87-5 | **[0.000093] 0.000098** | **[0.12] 0.13** | E | **[0.0011] 0.0015** | **[1.5] 2** | E | **[0.0093] 0.0098** | **[12] 13** | E | **[0.11] 0.15** | **[150] 200** | E | **[0.093] 0.098** | **[120] 130** | E | **[1.1] 1.5** | **[1,500] 2,000** | E | 5 |
| BENZO[A]ANTHRACENE | 56-55-3 | **[0.029] 0.032** | **[25] 28** | E | **[0.36] 0.49** | **[320] 430** | E | 1.1 | 960 | E | 1.1 | 960 | E | 1.1 | 960 | E | 1.1 | 960 | E | 5 |
| BENZO[A]PYRENE | 50-32-8 | 0.02 | 46 | E | 0.02 | 46 | E | 0.38 | 860 | E | 0.38 | 860 | E | 0.38 | 860 | E | 0.38 | 860 | E | 5 |
| BENZO[B]FLUORANTHENE | 205-99-2 | **[0.029] 0.031** | **[40] 43** | E | 0.12 | 170 | E | 0.12 | 170 | E | 0.12 | 170 | E | 0.12 | 170 | E | 0.12 | 170 | E | 5 |
| BENZO[GHI]PERYLENE | 191-24-2 | 0.026 | 180 | E | 0.026 | 180 | E | 0.026 | 180 | E | 0.026 | 180 | E | 0.026 | 180 | E | 0.026 | 180 | E | 5 |
| BENZO[K]FLUORANTHENE | 207-08-9 | 0.055 | 610 | E | 0.055 | 610 | E | 0.055 | 610 | E | 0.055 | 610 | E | 0.055 | 610 | E | 0.055 | 610 | E | 5 |
| BENZOIC ACID | 65-85-0 | **[15,000] 17,000** | **[2,900] 3,200** | E | **[41,000] 47,000** | **[7,800] 9,000** | E | 190,000 | 52,000 | E | 190,000 | 52,000 | E | **[15,000] 17,000** | **[2,900] 3,200** | E | **[41,000] 47,000** | **[7,800] 9,000** | E | NA |
| BENZOTRICHLORIDE | 98-07-7 | **[0.0051] 0.0056** | **[0.012] 0.014** | E | **[0.02] 0.026** | **[0.048] 0.063** | E | **[0.51] 0.56** | **[1.2] 1.4** | E | **[2] 3** | **[4.8] 6.3** | E | **[5.1] 5.6** | **[12] 14** | E | **[20] 26** | **[48] 63** | E | 30 |
| BENZYL ALCOHOL | 100-51-6 | **[1,800] 420** | **[650] 150** | E | **[5,100] 1,200** | **[1,800] 430** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | **[1,800] 420** | **[650] 150** | E | **[5,100] 1,200** | **[1,800] 430** | E | NA |
| BENZYL CHLORIDE | 100-44-7 | 0.1 | 0.059 | E | 0.51 | 0.3 | E | 10 | 5.9 | E | 51 | 30 | E | 10 | 5.9 | E | 51 | 30 | E | NA |
| BETA PROPIOLACTONE | 57-57-8 | 0.0012 | 0.00015 | E | 0.0063 | 0.00076 | E | 0.1 | 0.015 | E | 0.63 | 0.076 | E | 0.012 | 0.0015 | E | 0.063 | 0.0076 | E | NA |
| BHC, ALPHA | 319-84-6 | **[0.01] 0.012** | **[0.046] 0.055** | E | **[0.041] 0.054** | **[0.19] 0.25** | E | 1 | **[4.6] 5.5** | E | **[4.1] 5.4** | **[19] 25** | E | **[10] 12** | **[46] 55** | E | **[41] 54** | **[190] 250** | E | 20 |
| BHC, BETA- | 319-85-7 | **[0.037] 0.041** | **[0.22] 0.24** | E | **[0.14] 0.19** | **[0.82] 1.1** | E | **[3.7] 4.1** | **[22] 24** | E | 10 | 59 | E | 10 | 59 | E | 10 | 59 | E | 15 |
| BHC, GAMMA (LINDANE) | 58-89-9 | 0.02 | 0.072 | E | 0.02 | 0.072 | E | 2 | 7.2 | E | 2 | 7.2 | E | 20 | 72 | E | 20 | 72 | E | 20 |
| BIPHENYL, 1,1- | 92-52-4 | **[180] 9.1** | **[790] 40** | E | **[510] 43** | **[2,200] 190** | E | 720 | 3,100 | E | 720 | 3,100 | E | 720 | 3,100 | E | 720 | 3,100 | E | 20 |
| BIS(2-CHLOROETHOXY) METHANE | 111-91-1 | **[11] 13** | **[2.9] 3.4** | E | **[31] 35** | **[8.2] 9.2** | E | **[1,100] 1,300** | **[290] 340** | E | **[3,100] 3,500** | **[820] 920** | E | **[11] 13** | **[2.9] 3.4** | E | **[31] 35** | **[8.2] 9.2** | E | NA |
| BIS(2-CHLOROETHYL)ETHER | 111-44-4 | 0.015 | 0.0045 | E | 0.076 | 0.023 | E | 1.5 | 0.45 | E | 7.6 | 2.3 | E | 1.5 | 0.45 | E | 7.6 | 2.3 | E | NA |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| BIS(2-CHLORO-ISOPROPYL)ETHER | 108-60-1 | 30 | 8 | E | 30 | 8 | E | 3,000 | 800 | E | 3,000 | 800 | E | 3,000 | 800 | E | 3,000 | 800 | E | NA |
| BIS(CHLOROMETHYL)ETHER | 542-88-1 | 0.000079 | 0.000012 | E | 0.0004 | 0.00006 | E | 0.0079 | 0.001 | E | 0.04 | 0.006 | E | 0.0079 | 0.001 | E | 0.04 | 0.006 | E | NA |
| BIS[2-ETHYLHEXYL] PHTHALATE | 117-81-7 | 0.6 | 130 | E | 0.6 | 130 | E | 29 | 6,300 | E | 29 | 6,300 | E | 29 | 6,300 | E | 29 | 6,300 | E | 10 |
| BISPHENOL A | 80-05-7 | **[180] 210** | **[700] 810** | E | **[510] 580** | **[2,000] 2,200** | E | 12,000 | 46,000 | E | 12,000 | 46,000 | E | 12,000 | 46,000 | E | 12,000 | 46,000 | E | 20 |
| BROMACIL | 314-40-9 | 7 | 1.8 | E | 7 | 1.8 | E | 700 | 180 | E | 700 | 180 | E | 7 | 1.8 | E | 7 | 1.8 | E | NA |
| BROMOCHLOROMETHANE | 74-97-5 | 9 | 1.6 | E | 9 | 1.6 | E | 900 | 160 | E | 900 | 160 | E | 9 | 1.6 | E | 9 | 1.6 | E | NA |
| BROMODICHLORO METHANE **(THM)** | 75-27-4 | 8 | 2.7 | E | 8 | 2.7 | E | 800 | 270 | E | 800 | 270 | E | 8 | 2.7 | E | 8 | 2.7 | E | NA |
| BROMOMETHANE | 74-83-9 | 1 | 0.54 | E | 1 | 0.54 | E | 100 | 54 | E | 100 | 54 | E | 100 | 54 | E | 100 | 54 | E | NA |
| BROMOXYNIL | 1689-84-5 | **[73] 83** | **[63] 71** | E | **[200] 230** | **[170] 200** | E | **[7,300] 8,300** | **[6,300] 7,100** | E | 13,000 | 11,000 | E | **[73] 83** | **[63] 71** | E | **[200] 230** | **[170] 200** | E | NA |
| BROMOXYNIL OCTANOATE | 1689-99-2 | 8 | 360 | E | 8 | 360 | E | 8 | 360 | E | 8 | 360 | E | 8 | 360 | E | 8 | 360 | E | 15 |
| BUTADIENE, 1,3- | 106-99-0 | **[0.019] 0.021** | **[0.0078] 0.0086** | E | **[0.076] 0.1** | **[0.031] 0.041** | E | **[1.9] 2.1** | **[0.78] 0.86** | E | **[7.6] 10** | **[3.1] 4.1** | E | **[1.9] 2.1** | **[0.78] 0.86** | E | **[7.6] 10** | **[3.1] 4.1** | E | NA |
| BUTYL ALCOHOL, N- | 71-36-3 | **[370] 420** | **[44] 50** | E | **[1,000] 1,200** | **[120] 140** | E | 10,000 | **[4,400] 5,000** | E | 10,000 | 10,000 | C | **[3,700] 4,200** | **[440] 500** | E | 10,000 | **[1,200] 1,400** | E | NA |
| BUTYLATE | 2008-41-5 | 40 | 58 | E | 40 | 58 | E | 4,000 | 5,800 | E | 4,000 | 5,800 | E | 40 | 58 | E | 40 | 58 | E | 30 |
| BUTYLBENZENE, N- | 104-51-8 | **[150] 210** | **[950] 1,300** | **E** | **[410] 580** | **[2,600] 3,700** | E | 1,500 | 9,500 | E | 1,500 | 9,500 | E | **[150] 210** | **[950] 1,300** | **E** | **[410] 580** | **[2,600] 3,700** | E | 15 |
| BUTYLBENZENE, SEC- | 135-98-8 | **[150] 420** | **[350] 980** | E | **[410] 1,200** | **[960] 2,800** | E | 1,700 | 4,000 | E | 1,700 | 4,000 | E | **[150] 420** | **[350] 980** | E | **[410] 1,200** | **[960] 2,800** | E | 30 |
| BUTYLBENZENE, TERT- | 98-06-6 | **[150] 420** | **[270] 760** | E | **[410] 1,200** | **[740] 2,200** | E | 3,000 | 5,400 | E | 3,000 | 5,400 | E | **[150] 420** | **[270] 760** | E | **[410] 1,200** | **[740] 2,200** | E | 30 |
| BUTYLBENZYL PHTHALATE | 85-68-7 | **[35] 38** | **[3,000] 3,200** | E | **[140] 180** | 10,000 | C | 270 | 10,000 | C | 270 | 10,000 | C | 270 | 10,000 | C | 270 | 10,000 | C | 10 |
| CAPTAN | 133-06-2 | **[29] 32** | **[18] 20** | E | 50 | 31 | E | 50 | 31 | E | 50 | 31 | E | 50 | 31 | E | 50 | 31 | E | NA |
| CARBARYL | 63-25-2 | **[370] 420** | **[220] 250** | E | **[1,000] 1,200** | **[590] 700** | E | 12,000 | 7,000 | E | 12,000 | 7,000 | E | 12,000 | 7,000 | E | 12,000 | 7,000 | E | NA |
| CARBAZOLE | 86-74-8 | **[3.3] 3.7** | **[21] 24** | E | **[13] 17** | **[83] 110** | E | 120 | 760 | E | 120 | 760 | E | **[120] 4** | **[760] 24** | E | **[120] 17** | **[760] 110** | E | 15 |
| CARBOFURAN | 1563-66-2 | 4 | 0.87 | E | 4 | 0.87 | E | 400 | 87 | E | 400 | 87 | E | 4 | 0.87 | E | 4 | 0.87 | E | NA |
| CARBON DISULFIDE | 75-15-0 | 150 | 130 | E | 620 | 530 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 150 | 130 | E | 620 | 530 | E | NA |
| CARBON TETRACHLORIDE | 56-23-5 | 0.5 | 0.26 | E | 0.5 | 0.26 | E | 50 | 26 | E | 50 | 26 | E | 5 | 2.6 | E | 5 | 2.6 | E | NA |
| CARBOXIN | 5234-68-4 | 70 | 53 | E | 70 | 53 | E | 7,000 | 5,300 | E | 7,000 | 5,300 | E | 70 | 53 | E | 70 | 53 | E | NA |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| CHLORAMBEN | 133-90-4 | 10 | 1.6 | E | 10 | 1.6 | E | 1,000 | 160 | E | 1,000 | 160 | E | 10 | 1.6 | E | 10 | 1.6 | E | NA |
| CHLORDANE | 57-74-9 | 0.2 | 49 | E | 0.2 | 49 | E | 5.6 | 1,400 | E | 5.6 | 1,400 | E | 5.6 | 1,400 | E | 5.6 | 1,400 | E | 10 |
| CHLORO-1,1-DIFLUOROETHANE, 1- | 75-68-3 | 10,000 | 1,800 | E | 10,000 | 7,300 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 1,800 | E | 10,000 | 7,300 | E | NA |
| CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE) | 107-05-1 | 0.21 | 0.049 | E | 0.88 | 0.2 | E | 21 | 4.9 | E | 88 | 20 | E | 21 | 4.9 | E | 88 | 20 | E | NA |
| **CHLOROACETALDEHYDE** | **107-20-0** | **0.24** | **0.029** | **E** | **1.1** | **0.13** | **E** | **24** | **2.9** | **E** | **110** | **13** | **E** | **0.24** | **0.029** | **E** | **1.1** | **0.1** | **E** | **NA** |
| CHLOROACETOPHENONE, 2- | 532-27-4 | **[0.11] 0.13** | **[0.033] 0.039** | E | **[0.31] 0.35** | **[0.093] 0.11** | E | **[11] 13** | **[3.3] 3.9** | E | **[31] 35** | **[9.3] 11.0** | E | **[110] 130** | **[33] 39** | E | **[310] 350** | **[93] 110** | E | NA |
| CHLOROANILINE, P- | 106-47-8 | **[0.33] 0.37** | **[0.42] 0.47** | E | **[1.3] 1.7** | **[1.6] 2.1** | E | **[33] 37** | **[42] 47** | E | **[130] 170** | **[160] 210** | E | **[0.33] 0.37** | **[0.42] 0.47** | E | **[1.3] 1.7** | **[1.6] 2.1** | E | NA |
| CHLOROBENZENE | 108-90-7 | 10 | 6.1 | E | 10 | 6.1 | E | 1,000 | 610 | E | 1,000 | 610 | E | 1,000 | 610 | E | 1,000 | 610 | E | NA |
| CHLOROBENZILATE | 510-15-6 | **[0.6] 0.66** | **[4] 4.4** | E | **[2.4] 3.1** | **[16] 20** | E | **[60] 66** | **[400] 440** | E | **[240] 310** | **[1,600] 2,000** | E | **[600] 660** | **[4,000] 4,400** | E | 1,300 | 8,600 | E | 15 |
| CHLOROBUTANE, 1- | 109-69-3 | **[150] 170** | **[230] 270** | E | **[410] 470** | **[640] 730** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | **[150] 170** | **[230] 270** | E | **[410] 470** | **[640] 730** | E | 30 |
| CHLORODIBROMO METHANE **(THM)** | 124-48-1 | 8 | 2.5 | E | 8 | 2.5 | E | 800 | 250 | E | 800 | 250 | E | 800 | 250 | E | 800 | 250 | E | NA |
| CHLORODIFLUORO METHANE **(THM)** | 75-45-6 | 10,000 | 2,800 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 2,800 | E | 10,000 | 10,000 | E | NA |
| CHLOROETHANE | 75-00-3 | **[23] 25** | **[5] 5.4** | E | **[90] 120** | **[19] 26** | E | **[2,300] 2,500** | **[500] 540** | E | **[9,000] 10,000** | **[1,900] 2,600** | E | **[2,300] 2,500** | **[500] 540** | E | **[9,000] 10,000** | **[1,900] 2,600** | E | NA |
| CHLOROFORM **(THM)** | 67-66-3 | 8 | 2 | E | 8 | 2 | E | 800 | 200 | E | 800 | 200 | E | 80 | 20 | E | 80 | 20 | E | NA |
| CHLORONAPHTHALENE, 2- | 91-58-7 | **[290] 330** | **[6,200] 7,000** | E | **[820] 930** | **[18,000] 20,000** | E | 1,200 | 26,000 | E | 1,200 | 26,000 | E | **[290] 330** | **[6,200] 7,000** | E | **[820] 930** | **[18,000] 20,000** | E | 15 |
| CHLORONITROBENZENE, P- | 100-00-5 | **[3.7] 4.2** | **[4.9] 5.5** | E | **[10] 12** | **[13] 16** | E | **[370] 420** | **[490] 550** | E | **[1,000] 1,200** | **[1,300] 1,600** | E | **[3.7] 4.2** | **[4.9] 5.5** | E | **[10] 12** | **[13] 16** | E | NA |
| CHLOROPHENOL, 2- | 95-57-8 | 4 | 4.4 | E | 4 | 4.4 | E | 400 | 440 | E | 400 | 440 | E | 4 | 4.4 | E | 4 | 4.4 | E | NA |
| CHLOROPRENE | 126-99-8 | **[1.5] 0.016** | **[0.35] 0.0038** | E | **[6.2] 0.083** | **[1.5] 0.02** | E | **[150] 1.6** | **[35] 0.38** | E | **[620] 8.3** | **[150] 2** | E | **[150] 1.6** | **[35] 0.38** | E | **[620] 8.3** | **[150] 2** | E | NA |
| CHLOROPROPANE, 2- | 75-29-6 | 21 | 16 | E | 88 | 67 | E | 2,100 | 1,600 | E | 8,800 | 6,700 | E | 21 | 16 | E | 88 | 67 | E | NA |
| CHLOROTHALONIL | 1897-45-6 | **[21] 24** | **[54] 61** | E | 60 | 150 | E | 60 | 150 | E | 60 | 150 | E | **[21] 24** | **[54] 61** | E | 60 | 150 | E | 30 |
| CHLOROTOLUENE, O- | 95-49-8 | 10 | 20 | E | 10 | 20 | E | 1,000 | 2,000 | E | 1,000 | 2,000 | E | 10 | 20 | E | 10 | 20 | E | 30 |
| CHLOROTOLUENE, P- | 106-43-4 | 10 | 10 | E | 10 | 10 | E | 1,000 | 1,000 | E | 1,000 | 1,000 | E | 10 | 10 | E | 10 | 10 | E | NA |
| CHLORPYRIFOS | 2921-88-2 | 0.2 | 2.3 | E | 0.2 | 2.3 | E | 20 | 230 | E | 20 | 230 | E | 0.2 | 2.3 | E | 0.2 | 2.3 | E | 15 |
| CHLORSULFURON | 64902-72-3 | **[180] 210** | **[25] 29** | E | **[510] 580** | **[71] 80** | E | **[18,000] 19,000** | **[2,500] 2,600** | E | 19,000 | 2,600 | E | **[180] 210** | **[25] 29** | E | **[510] 580** | **[71] 80** | E | NA |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| CHLORTHAL-DIMETHYL (DACTHAL) (DCPA) | 1861-32-1 | 7 | 110 | E | 7 | 110 | E | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 15 |
| CHRYSENE | 218-01-9 | 0.19 | 230 | E | 0.19 | 230 | E | 0.19 | 230 | E | 0.19 | 230 | E | 0.19 | 230 | E | 0.19 | 230 | E | 5 |
| CRESOL(S) | 1319-77-3 | **[18] 21** | **[3.1] 3.6** | E | **[51] 58** | **[8.9] 10** | E | **[1,800] 2,100** | **[310] 360** | E | **[5,100] 5,800** | **[890] 1,000** | E | **[1,800] 2,100** | **[310] 360** | E | **[5,100] 5,800** | **[890] 1,000** | E | NA |
| CRESOL, 4,6-DINITRO-O- | 534-52-1 | **[0.37] 0.33** | **[0.28] 0.25** | E | **[1] 0.93** | **[0.75] 0.7** | E | **[37] 33** | **[28] 25** | E | **[100] 93** | **[75] 70** | E | **[370] 330** | **[280] 250** | E | **[1,000] 930** | **[750] 700** | E | NA |
| CRESOL, O- (2-METHYLPHENOL) | 95-48-7 | **[180] 210** | **[30] 35** | E | **[510] 580** | **[85] 96** | E | **[18,000] 21,000** | **[3,000] 3,500** | E | **[51,000] 58,000** | **[8,500] 9,600** | E | **[18,000] 21,000** | **[3,000] 3,500** | E | **[51,000] 58,000** | **[8,500] 9,600** | E | NA |
| CRESOL, M- (3-METHYLPHENOL) | 108-39-4 | **[180] 210** | **[36] 41** | E | **[510] 580** | **[100] 110** | E | 10,000 | **[3,600] 4,100** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| CRESOL, P- (4-METHYLPHENOL) | 106-44-5 | **[18] 21** | **[4.2] 4.9** | E | **[51] 58** | **[12] 14** | E | **[1,800] 2,100** | **[420] 490** | E | **[5,100] 5,800** | **[1,200] 1,400** | E | **[18,000] 21,000** | **[4,200] 4,900** | E | **[51,000] 58,000** | **[12,000] 14,000** | E | NA |
| CRESOL, P-CHLORO-M- | 59-50-7 | **[18] 420** | **[37] 870** | E | **[51] 1,200** | **[110] 2,500** | E | **[1,800] 42,000** | **[3,700] 87,000** | E | **[5,100] 120,000** | **[11,000] 190,000** | **[E] C** | **[18] 420** | **[37] 870** | E | **[51] 1,200** | **[110] 2,500** | E | 30 |
| CROTONALDEHYDE | 4170-30-3 | **[0.035] 0.038** | **[0.0044] 0.0048** | E | **[0.14] 0.18** | **[0.018] 0.023** | E | **[3.5] 3.8** | **[0.44] 0.48** | E | **[14] 18** | **[1.8] 2.3** | E | **[3.5] 3.8** | **[0.44] 0.48** | E | **[14] 18** | **[1.8] 2.3** | E | NA |
| CROTONALDEHYDE, TRANS- | 123-73-9 | **[0.035] 0.038** | **[0.0044] 0.0048** | E | **[0.14] 0.18** | **[0.018] 0.023** | E | **[3.5] 3.8** | **[0.44] 0.48** | E | **[14] 18** | **[1.8] 2.3** | E | **[3.5] 3.8** | **[0.44] 0.48** | E | **[14] 18** | **[1.8] 2.3** | E | NA |
| CUMENE (ISOPROPYL BENZENE) | 98-82-8 | 84 | 600 | E | 350 | 2,500 | E | 5,000 | 10,000 | C | 5,000 | 10,000 | C | 5,000 | 10,000 | C | 5,000 | 10,000 | C | 15 |
| CYANAZINE | 21725-46-2 | 0.1 | 0.061 | E | 0.1 | 0.061 | E | 10 | 6.1 | E | 10 | 6.1 | E | 0.1 | 0.061 | E | 0.1 | 0.061 | E | NA |
| CYCLOHEXANE | 110-82-7 | 1,300 | 1,700 | E | 5,300 | 6,900 | E | 5,500 | 7,200 | E | 5,500 | 7,200 | E | 1,300 | 1,700 | E | 5,300 | 6,900 | E | NA |
| CYCLOHEXANONE | 108-94-1 | **[10,000] 150** | **[5,000] 41** | E | **[10,000] 620** | **[10,000] 170** | **[C] E** | 10,000 | **[10,000] 4,100** | **[C] E** | 10,000 | 10,000 | C | **[10,000] 150** | **[5,000] 41** | E | **[10,000] 620** | **[10,000] 170** | **[C] E** | NA |
| CYFLUTHRIN | 68359-37-5 | 0.1 | 33 | E | 0.1 | 33 | E | 0.1 | 33 | E | 0.1 | 33 | E | 0.1 | 33 | E | 0.1 | 33 | E | 10 |
| CYROMAZINE | 66215-27-8 | **[27] 31** | **[84] 96** | E | **[77] 88** | **[240] 270** | E | **[2,700] 3,100** | **[8,400] 9,600** | E | **[7,700] 8,800** | **[24,000] 27,000** | E | **[27] 31** | **[84] 96** | E | **[77] 88** | **[240] 270** | E | 20 |
| DDD, 4,4'- | 72-54-8 | **[0.28] 0.3** | **[31] 33** | E | **[1.1] 1.4** | **[120] 150** | E | 16 | 1,800 | E | 16 | 1,800 | E | 16 | 1,800 | E | 16 | 1,800 | E | 10 |
| DDE, 4,4'- | 72-55-9 | **[0.19] 0.21** | **[41] 46** | E | **[0.76] 1** | **[170] 220** | E | 4 | 870 | E | 4 | 870 | E | 4 | 870 | E | 4 | 870 | E | 10 |
| DDT, 4,4'- | 50-29-3 | **[0.19] 0.21** | **[110] 130** | E | 0.55 | 330 | E | 0.55 | 330 | E | 0.55 | 330 | E | 0.55 | 330 | E | 0.55 | 330 | E | 5 |
| DI(2-ETHYLHEXYL)ADIPATE | 103-23-1 | 40 | 10,000 | C | 40 | 10,000 | C | 4,000 | 10,000 | C | 4,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 5 |
| DIALLATE | 2303-16-4 | **[1.1] 1.2** | **[0.64] 0.7** | E | **[4.3] 5.6** | **[2.5] 3.3** | E | **[110] 120** | **[64] 70** | E | **[430] 560** | **[250] 330** | E | **[1,100] 1,200** | **[640] 700** | E | 4,000 | 2,300 | E | NA |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| DIAMINOTOLUENE, 2,4- | 95-80-7 | **[0.017] 0.019** | **[0.0034] 0.0038** | E | **[0.068] 0.089** | **[0.014] 0.018** | E | **[1.7] 1.9** | **[0.34] 0.38** | E | **[6.8] 8.9** | **[1.4] 1.8** | E | **[17] 19** | **[3.4] 3.8** | E | **[68] 89** | **[14] 18** | E | NA |
| DIAZINON | 333-41-5 | 0.1 | 0.14 | E | 0.1 | 0.14 | E | 10 | 14 | E | 10 | 14 | E | 0.1 | 0.14 | E | 0.1 | 0.14 | E | 30 |
| DIBENZO[A,H] ANTHRACENE | 53-70-3 | **[0.0029] 0.0031** | **[13] 14** | E | **[0.036] 0.047** | **[160] 210** | E | 0.06 | 270 | E | 0.06 | 270 | E | 0.06 | 270 | E | 0.06 | 270 | E | 5 |
| DIBENZOFURAN | 132-64-9 | **[3.7] 4.2** | **[95] 110** | E | **[10] 12** | **[260] 310** | E | **[370] 420** | **[9,500] 11,000** | E | 450 | 12,000 | E | 450 | 12,000 | E | 450 | 12,000 | E | 15 |
| DIBROMO-3-CHLOROPROPANE, 1,2- | 96-12-8 | 0.02 | 0.0092 | E | 0.02 | 0.0092 | E | 2 | 0.92 | E | 2 | 0.92 | E | 2 | 0.92 | E | 2 | 0.92 | E | NA |
| DIBROMOBENZENE, 1,4- | 106-37-6 | **[37] 42** | **[150] 170** | E | **[100] 120** | **[410] 490** | E | 2,000 | 8,200 | E | 2,000 | 8,200 | E | **[37] 42** | **[150] 170** | E | **[100] 120** | **[410] 490** | E | 20 |
| DIBROMOETHANE, 1,2- (ETHYLENE DIBROMIDE) | 106-93-4 | 0.005 | 0.0012 | E | 0.005 | 0.0012 | E | 0.5 | 0.12 | E | 0.5 | 0.12 | E | 0.5 | 0.12 | E | 0.5 | 0.12 | E | NA |
| DIBROMOMETHANE | 74-95-3 | **[37] 0.84** | **[14] 0.32** | E | **[100] 3.5** | **[39] 1.4** | E | **[3,700] 84** | **[1,400] 32** | E | **[10,000] 350** | **[3,900] 140** | E | **[3,700] 84** | **[1,400] 32** | E | **[10,000] 350** | **[3,900] 140** | E | NA |
| DIBUTYL PHTHALATE, N- | 84-74-2 | **[370] 420** | **[1,500] 1,700** | E | **[1,000] 1,200** | **[4,100] 4,900** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 20 |
| DICAMBA | 1918-00-9 | 400 | 45 | E | 400 | 45 | E | 40,000 | 4,500 | E | 40,000 | 4,500 | E | 400 | 45 | E | 400 | 45 | E | NA |
| DICHLOROACETIC ACID **(HAA)** | 76-43-6 | 6 | 0.79 | E | 6 | 0.79 | E | 600 | 79 | E | 600 | 79 | E | 6 | 0.79 | E | 6 | 0.79 | E | NA |
| DICHLORO-2-BUTENE, 1,4- | 764-41-0 | 0.0012 | 0.00067 | E | 0.006 | 0.0034 | E | 0.12 | 0.07 | E | 0.6 | 0.34 | E | 0.0012 | 0.0007 | E | 0.006 | 0.0034 | E | NA |
| DICHLORO-2-BUTENE, TRANS-1,4- | 110-57-6 | 0.0012 | 0.00078 | E | 0.006 | 0.0039 | E | 0.12 | 0.078 | E | 0.6 | 0.39 | E | 0.0012 | 0.00078 | E | 0.006 | 0.0039 | E | NA |
| DICHLOROBENZENE, 1,2- | 95-50-1 | 60 | 59 | E | 60 | 59 | E | 6,000 | 5,900 | E | 6,000 | 5,900 | E | 6,000 | 5,900 | E | 6,000 | 5,900 | E | NA |
| DICHLOROBENZENE, 1,3- | 541-73-1 | 60 | 61 | E | 60 | 61 | E | 6,000 | 6,100 | E | 6,000 | 6,100 | E | 6,000 | 6,100 | E | 6,000 | 6,100 | E | NA |
| DICHLOROBENZENE, P- | 106-46-7 | 7.5 | 10 | E | 7.5 | 10 | E | 750 | 1,000 | E | 750 | 1,000 | E | 750 | 1,000 | E | 750 | 1,000 | E | 30 |
| DICHLOROBENZIDINE, 3,3'- | 91-94-1 | **[0.15] 0.16** | **[8.3] 8.8** | E | **[0.58] 0.76** | **[32] 42** | E | **[15] 16** | **[830] 880** | E | **[58] 76** | **[3,200] 4,200** | E | **[150] 160** | **[8,300] 8,800** | E | 310 | 17,000 | E | 10 |
| DICHLORODIFLUORO-METHANE (FREON 12) | 75-71-8 | 100 | 100 | E | 100 | 100 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| DICHLOROETHANE, 1,1- | 75-34-3 | 3.1 | 0.75 | E | 16 | 3.9 | E | 310 | 75 | E | 1,600 | 390 | E | 31 | 7.5 | E | 160 | 39 | E | NA |
| DICHLOROETHANE, 1,2- | 107-06-2 | 0.5 | 0.1 | E | 0.5 | 0.1 | E | 50 | 10 | E | 50 | 10 | E | 5 | 1 | E | 5 | 1 | E | NA |
| DICHLOROETHYLENE, 1,1- | 75-35-4 | 0.7 | 0.19 | E | 0.7 | 0.19 | E | 70 | 19 | E | 70 | 19 | E | 7 | 1.9 | E | 7 | 1.9 | E | NA |
| DICHLOROETHYLENE, CIS-1,2- | 156-59-2 | 7 | 1.6 | E | 7 | 1.6 | E | 700 | 160 | E | 700 | 160 | E | 70 | 16 | E | 70 | 16 | E | NA |
| DICHLOROETHYLENE, TRANS-1,2- | 156-60-5 | 10 | 2.3 | E | 10 | 2.3 | E | 1,000 | 230 | E | 1,000 | 230 | E | 100 | 23 | E | 100 | 23 | E | NA |
| DICHLOROMETHANE (METHYLENE CHLORIDE) | 75-09-2 | 0.5 | 0.076 | E | 0.5 | 0.076 | E | 50 | 7.6 | E | 50 | 7.6 | E | 50 | 7.6 | E | 50 | 7.6 | E | NA |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**

**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| DICHLOROPHENOL, 2,4- | 120-83-2 | 2 | 1 | E | 2 | 1 | E | 200 | 100 | E | 200 | 100 | E | 2,000 | 1,000 | E | 2,000 | 1,000 | E | NA |
| DICHLOROPHENOXY ACETIC ACID, 2,4- (2,4-D) | 94-75-7 | 7 | 1.8 | E | 7 | 1.8 | E | 700 | 180 | E | 700 | 180 | E | 7,000 | 1,800 | E | 7,000 | 1,800 | E | NA |
| DICHLOROPROPANE, 1,2- | 78-87-5 | 0.5 | 0.11 | E | 0.5 | 0.11 | E | 50 | 11 | E | 50 | 11 | E | 5 | 1.1 | E | 5 | 1.1 | E | NA |
| DICHLOROPROPENE, 1,3- | 542-75-6 | **[0.66] 0.73** | **[0.12] 0.13** | E | **[2.6] 3.4** | **[0.46] 0.61** | E | **[66] 73** | **[12] 13** | E | **[260] 340** | **[46] 61** | E | **[66] 73** | **[12] 13** | E | **[260] 340** | **[46] 61** | E | NA |
| DICHLOROPROPIONIC ACID, 2,2- (DALAPON) | 75-99-0 | 20 | 5.3 | E | 20 | 5.3 | E | 2,000 | 530 | E | 2,000 | 530 | E | 2,000 | 530 | E | 2,000 | 530 | E | NA |
| DICHLORVOS | 62-73-7 | **[0.23] 0.25** | **[0.054] 0.059** | E | **[0.9] 1.2** | **[0.21] 0.28** | E | **[23] 25** | **[5.4] 5.9** | E | **[90] 120** | **[21] 28** | E | **[0.23] 0.25** | **[0.054] 0.059** | E | **[0.9] 1.2** | **[0.21] 0.28** | E | NA |
| DICYCLOPENTADIENE | 77-73-6 | 1.5 | 3.2 | E | 6.2 | 13 | E | 150 | 320 | E | 620 | 1,300 | E | **[2] 1.5** | **[3] 3.2** | E | **[6] 6.2** | 13 | E | 30 |
| DIELDRIN | 60-57-1 | **[0.0041] 0.0046** | **[0.11] 0.13** | E | **[0.016] 0.021** | **[0.44] 0.58** | E | **[0.41] 0.46** | **[11] 13** | E | **[1.6] 2.1** | **[44] 58** | E | **[4.1] 4.6** | **[110] 130** | E | **[16] 17** | **[440] 470** | E | 15 |
| DIETHANOLAMINE | 111-42-2 | NA | NA | | NA | NA | | NA | NA | | NA | NA | | NA | NA | | NA | NA | | NA |
| DIETHYL PHTHALATE | 84-66-2 | **[2,900] 3,300** | **[910] 1,000** | E | **[8,200] 9,300** | **[2,600] 2,900** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| DIFLUBENZURON | 35367-38-5 | 20 | 52 | E | 20 | 52 | E | 20 | 52 | E | 20 | 52 | E | 20 | 52 | E | 20 | 52 | E | 20 |
| DIISOPROPYL METHYLPHOSPHONATE | 1445-75-6 | 60 | 8.2 | E | 60 | 8.2 | E | 6,000 | 820 | E | 6,000 | 820 | E | 60 | 8.2 | E | 60 | 8.2 | E | NA |
| DIMETHOATE | 60-51-5 | **[0.73] 0.83** | **[0.28] 0.32** | E | **[2] 2.3** | **[0.77] 0.89** | E | **[73] 83** | **[28] 32** | E | **[200] 230** | **[77] 89** | E | **[730] 830** | **[280] 320** | E | **[2,000] 2,300** | **[770] 890** | E | NA |
| DIMETHOXYBENZIDINE, 3,3- | 119-90-4 | **[4.7] 0.046** | **[16] 0.15** | E | **[19] 0.21** | **[64] 0.71** | E | **[470] 5** | **[1,600] 15** | E | **[1,900] 21** | **[6,400] 71** | E | **[4,700] 46** | **[16,000] 150** | E | **[6,000] 210** | **[20,000] 710** | E | 20 |
| DIMETHRIN | 70-38-2 | 3.6 | 240 | E | 3.6 | 240 | E | 3.6 | 240 | E | 3.6 | 240 | E | 3.6 | 240 | E | 3.6 | 240 | E | 10 |
| DIMETHYLAMINOAZO BENZENE, P- | 60-11-7 | **[0.014] 0.016** | **[0.037] 0.042** | E | **[0.057] 0.074** | **[0.15] 0.19** | E | **[1.4] 1.6** | **[3.7] 4.2** | E | **[5.7] 7.4** | **[15] 19** | E | **[14] 16** | **[37] 42** | E | **[57] 74** | **[150] 190** | E | 20 |
| DIMETHYLANILINE, N,N- | 121-69-7 | **[7.3] 8.3** | **[4.1] 4.7** | E | **[20] 23** | **[11] 13** | E | **[730] 830** | **[410] 470** | E | **[2,000] 2,300** | **[1,100] 1,300** | E | **[730] 830** | **[410] 470** | E | **[2,000] 2,300** | **[1,100] 1,300** | E | NA |
| DIMETHYLBENZIDINE, 3,3- | 119-93-7 | **[0.006] 0.0066** | **[0.33] 0.36** | E | **[0.024] 0.031** | **[1.3] 1.7** | E | **[0.6] 0.7** | **[33] 36** | E | **[2.4] 3.1** | **[130] 170** | E | **[6] 7** | **[330] 360** | E | **[24] 31** | **[1,300] 1,700** | E | 10 |
| DIMETHYL METHYLPHOSPHONATE | 756-79-6 | 10 | 1.2 | E | 10 | 1.2 | E | 1,000 | 120 | E | 1,000 | 120 | E | 10 | **[1] 1.2** | E | 10 | **[1] 1.2** | E | NA |
| DIMETHYLPHENOL, 2,4- | 105-67-9 | **[73] 83** | **[32] 36** | E | **[200] 230** | **[87] 100** | E | **[7,300] 8,300** | **[3,200] 3,600** | E | 10,000 | **[8,700] 10,000** | **[E] C** | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| DINITROBENZENE, 1,3- | 99-65-0 | 0.1 | 0.049 | E | 0.1 | 0.049 | E | 10 | 4.9 | E | 10 | 4.9 | E | 100 | 49 | E | 100 | 49 | E | NA |
| DINITROPHENOL, 2,4- | 51-28-5 | **[7.3] 8.3** | **[0.83] 0.94** | E | **[20] 23** | **[2.3] 2.6** | E | **[730] 830** | **[83] 94** | E | **[2,000] 2,300** | **[230] 260** | E | **[7,300] 8,300** | **[830] 940** | E | **[20,000] 23,000** | **[2,300] 2,600** | E | NA |

[1] For other options see § 250.308

All concentrations in mg/kg

E – Number calculated by the soil to groundwater equation in § 250.308

C – Cap

NA – The soil buffer distance option is not available for this substance

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| DINITROTOLUENE, 2,4- | 121-14-2 | **[0.21] 0.24** | **[0.05] 0.057** | E | **[0.84] 1.1** | **[0.2] 0.26** | E | **[21] 24** | **[5] 6** | E | **[84] 110** | **[20] 26** | E | **[210] 240** | **[50] 57** | E | **[840] 1,100** | **[200] 260** | E | NA |
| DINITROTOLUENE, 2,6- (2,6-DNT) | 606-20-2 | **[3.7] 4.2** | **[1.1] 1.2** | E | **[10] 12** | **[3] 4** | E | **[370] 420** | **[110] 120** | E | **[1,000] 1,200** | **[300] 360** | E | **[3,700] 4,200** | **[1,100] 1,200** | E | **[10,000] 12,000** | **[3,000] 3,600** | E | NA |
| DINOSEB | 88-85-7 | 0.7 | 0.29 | E | 0.7 | 0.29 | E | 70 | 29 | E | 70 | 29 | E | 700 | 290 | E | 700 | 290 | E | NA |
| DIOXANE, 1,4- | 123-91-1 | **[0.64] 0.73** | **[0.084] 0.095** | E | **[3.2] 3.4** | **[0.42] 0.44** | E | **[64] 73** | **[8.4] 9.5** | E | **[320] 340** | **[42] 44** | E | **[6.4] 7.3** | **[0.84] 0.95** | E | **[32] 34** | **[4.2] 4.4** | E | NA |
| DIPHENAMID | 957-51-7 | 20 | 12 | E | 20 | 12 | E | 2,000 | 1,200 | E | 2,000 | 1,200 | E | 20 | 12 | E | 20 | 12 | E | NA |
| DIPHENYLAMINE | 122-39-4 | **[91] 100** | **[53] 59** | E | **[260] 290** | **[150] 170** | E | **[9,100] 10,000** | **[5,300] 5,900** | E | **[26,000] 29,000** | **[15,000] 17,000** | E | 30,000 | 18,000 | E | 30,000 | 18,000 | E | NA |
| DIPHENYLHYDRAZINE, 1,2- | 122-66-7 | **[0.083] 0.091** | **[0.15] 0.16** | E | **[0.33] 0.43** | **[0.58] 0.76** | E | **[8.3] 9.1** | **[15] 16** | E | 25 | 44 | E | 25 | 44 | E | 25 | 44 | E | 30 |
| DIQUAT | 85-00-7 | 2 | 0.24 | E | 2 | 0.24 | E | 200 | 24 | E | 200 | 24 | E | 2 | 0.24 | E | 2 | 0.24 | E | NA |
| DISULFOTON | 298-04-4 | 0.07 | 0.18 | E | 0.07 | 0.18 | E | 7 | 18 | E | 7 | 18 | E | 70 | 180 | E | 70 | 180 | E | 20 |
| DITHIANE, 1,4- | 505-29-3 | 8 | 1.3 | E | 8 | 1.3 | E | 800 | 130 | E | 800 | 130 | E | 8 | 1.3 | E | 8 | 1.3 | E | NA |
| DIURON | 330-54-1 | **[7.3] 8.3** | **[6.3] 7.1** | E | **[20] 23** | **[17] 20** | E | **[730] 830** | **[630] 710** | E | **[2,000] 2,300** | **[1,700] 2,000** | E | **[7.3] 8.3** | **[6.3] 7.1** | E | **[20] 23** | **[17] 20** | E | NA |
| ENDOSULFAN | 115-29-7 | **[22] 25** | **[110] 130** | E | 48 | 250 | E | 48 | 250 | E | 48 | 250 | E | 48 | 250 | E | 48 | 250 | E | 15 |
| ENDOSULFAN I (ALPHA) | 959-98-8 | **[22] 25** | **[110] 130** | E | 50 | 260 | E | 50 | 260 | E | 50 | 260 | E | **[22] 25** | **[110] 130** | E | 50 | 260 | E | 15 |
| ENDOSULFAN II (BETA) | 33213-65-9 | **[22] 25** | **[130] 150** | E | 45 | 260 | E | 45 | 260 | E | 45 | 260 | E | **[22] 25** | **[130] 150** | E | 45 | 260 | E | 15 |
| ENDOSULFAN SULFATE | 1031-07-8 | 12 | 70 | E | 12 | 70 | E | 12 | 70 | E | 12 | 70 | E | 12 | 70 | E | 12 | 70 | E | 15 |
| ENDOTHALL | 145-73-3 | 10 | 4.1 | E | 10 | 4.1 | E | 1,000 | 410 | E | 1,000 | 410 | E | 10 | 4.1 | E | 10 | 4.1 | E | NA |
| ENDRIN | 72-20-8 | 0.2 | 5.5 | E | 0.2 | 5.5 | E | 20 | 550 | E | 20 | 550 | E | 0.2 | 5.5 | E | 0.2 | 5.5 | E | 15 |
| EPICHLOROHYDRIN | 106-89-8 | 0.21 | 0.042 | E | 0.88 | 0.17 | E | 21 | 4.2 | E | 88 | 17 | E | 21 | 4.2 | E | 88 | 17 | E | NA |
| ETHEPHON | 16672-87-0 | **[18] 21** | **[2.1] 2.4** | E | **[51] 58** | **[5.9] 6.7** | E | **[1,800] 2,100** | **[210] 240** | E | **[5,100] 5,800** | **[590] 670** | E | **[18] 21** | **[2.1] 2.4** | E | **[51] 58** | **[5.9] 6.7** | E | NA |
| ETHION | 563-12-2 | **[1.8] 2.1** | **[39] 46** | E | **[5.1] 5.8** | **[110] 130** | E | 85 | 1,900 | E | 85 | 1,900 | E | **[1.8] 2.1** | **[39] 46** | E | **[5.1] 5.8** | **[110] 130** | E | 15 |
| ETHOXYETHANOL, 2- (EGEE) | 110-80-5 | 42 | 5.9 | E | 180 | 25 | E | 4,200 | 590 | E | 10,000 | 2,500 | E | 4,200 | 590 | E | 10,000 | 2,500 | E | NA |
| ETHYL ACETATE | 141-78-6 | **[3,300] 3,800** | **[850] 980** | E | **[9,200] 10,000** | **[2,400] 2,800** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| ETHYL ACRYLATE | 140-88-5 | **[1.4] 1.5** | **[0.54] 0.58** | E | **[5.4] 7.1** | **[2.1] 2.7** | E | **[140] 150** | **[54] 58** | E | **[540] 710** | **[210] 270** | E | **[140] 150** | **[54] 58** | E | **[540] 710** | **[210] 270** | E | NA |
| ETHYL BENZENE | 100-41-4 | 70 | 46 | E | 70 | 46 | E | 7,000 | 4,600 | E | 7,000 | 4,600 | E | 7,000 | 4,600 | E | 7,000 | 4,600 | E | NA |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| ETHYL DIPROPYL THIOCARBAMATE, S- (EPTC) | 759-94-4 | **[91] 100** | **[65] 71** | E | **[260] 290** | **[180] 210** | E | **[9,100] 10,000** | **[6,500] 7,100** | E | 10,000 | 10,000 | C | **[91] 100** | **[65] 71** | E | **[260] 290** | **[180] 210** | E | NA |
| ETHYL ETHER | 60-29-7 | **[730] 830** | **[210] 230** | E | **[2,000] 2,300** | **[560] 650** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | **[730] 830** | **[210] 230** | E | **[2,000] 2,300** | **[560] 650** | E | NA |
| ETHYL METHACRYLATE | 97-63-2 | **[330] 63** | **[55] 10** | E | **[920] 260** | **[150] 43** | E | **[10,000] 6,300** | **[5,500] 1,000** | E | 10,000 | **[10,000] 4,300** | **[C] E** | **[330] 63** | **[55] 10** | E | **[920] 260** | **[150] 43** | E | NA |
| **ETHYLENE CHLORHYDRIN** | **107-07-3** | **83** | **10** | **E** | **230** | **26** | **E** | **8,300** | **950** | **E** | **10,000** | **2,600** | **E** | **83** | **10** | **E** | **230** | **26** | **E** | **NA** |
| ETHYLENE GLYCOL | 107-21-1 | 1,400 | 170 | E | 1,400 | 170 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| ETHYLENE THIOUREA (ETU) | 96-45-7 | **[0.29] 0.33** | **[0.032] 0.037** | E | **[0.82] 0.93** | **[0.092] 0.1** | E | **[29] 33** | **[3.2] 3.7** | E | **[82] 93** | **[9.2] 10** | E | **[290] 330** | **[32] 37** | E | **[820] 930** | **[92] 100** | E | NA |
| ETHYLP-NITROPHENYL PHENYLPHOSPHORO THIOATE | 2104-64-5 | **[0.037] 0.042** | **[0.12] 0.13** | E | **[0.1] 0.12** | **[0.31] 0.37** | E | **[3.7] 4.2** | **[12] 13** | E | **[10] 12** | **[31] 37** | E | **[0.037] 0.042** | **[0.12] 0.13** | E | 0.1 | **[0.31] 0.37** | E | 20 |
| FENAMIPHOS | 22224-92-6 | 0.07 | 0.06 | E | 0.07 | 0.06 | E | 7 | 6 | E | 7 | 6 | E | **[0.1] 0.07** | 0.06 | E | **[0.1] 0.07** | 0.06 | E | NA |
| FENVALERATE (PYDRIN) | 51630-58-1 | 8.5 | 94 | E | 8.5 | 94 | E | 8.5 | 94 | E | 8.5 | 94 | E | 8.5 | 94 | E | 8.5 | 94 | E | 15 |
| FLUOMETURON | 2164-17-2 | 9 | 2.5 | E | 9 | 2.5 | E | 900 | 250 | E | 900 | 250 | E | 9 | 2.5 | E | 9 | 2.5 | E | NA |
| FLUORANTHENE | 206-44-0 | 26 | 3,200 | E | 26 | 3,200 | E | 26 | 3,200 | E | 26 | 3,200 | E | 26 | 3,200 | E | 26 | 3,200 | E | 10 |
| FLUORENE | 86-73-7 | **[150] 170** | **[3,000] 3,400** | E | 190 | 3,800 | E | 190 | 3,800 | E | 190 | 3,800 | E | 190 | 3,800 | E | 190 | 3,800 | E | 15 |
| FLUOROTRICHLORO METHANE (FREON 11) | 75-69-4 | 200 | 87 | E | 200 | 87 | E | 10,000 | 8,700 | E | 10,000 | 8,700 | E | 10,000 | 8,700 | E | 10,000 | 8,700 | E | NA |
| FONOFOS | 944-22-9 | 1 | 2.9 | E | 1 | 2.9 | E | 100 | 290 | E | 100 | 290 | E | 1 | 2.9 | E | 1 | 2.9 | E | 20 |
| FORMALDEHYDE | 50-00-0 | 100 | 12 | E | 100 | 12 | E | 10,000 | 1,200 | E | 10,000 | 1,200 | E | 10,000 | 1,200 | E | 10,000 | 1,200 | E | NA |
| FORMIC ACID | 64-18-6 | **[0.63] 0.063** | **[0.071] 0.0071** | E | **[2.6] 0.26** | **[0.3] 0.029** | E | **[63] 6.3** | **[7.1] 0.71** | E | **[260] 26** | **[29] 2.9** | E | **[6.3] 0.63** | **[0.71] 0.071** | E | **[26] 2.6** | **[3] 0.29** | E | NA |
| FOSETYL-AL | 39148-24-8 | **[11,000] 13,000** | **[9,700] 12,000** | E | **[31,000] 35,000** | **[27,000] 31,000** | E | 190,000 | 190,000 | C | 190,000 | 190,000 | C | **[11,000] 13,000** | **[9,700] 12,000** | E | [31,000] 35,000 | **[27,000] 31,000** | E | NA |
| FURAN | 110-00-9 | **[3.7] 4.2** | **[1.6] 1.8** | E | **[10] 12** | **[4.4] 5.2** | E | **[370] 420** | **[160] 180** | E | **[1,000] 1,200** | **[440] 520** | E | **[370] 420** | **[160] 180** | E | **[1,000] 1,200** | **[440] 520** | E | NA |
| FURFURAL | 98-01-1 | 11 | 1.4 | E | **[31] 35** | **[3.9] 4.4** | E | 1,100 | 140 | E | **[3,100] 3,500** | **[390] 440** | E | 11 | 1.4 | E | **[31] 35** | **[3.9] 4.4** | E | NA |
| GLYPHOSATE | 1071-83-6 | 70 | 620 | E | 70 | 620 | E | 7,000 | 62,000 | E | 7,000 | 62,000 | E | 70 | 620 | E | 70 | 620 | E | 15 |
| HEPTACHLOR | 76-44-8 | 0.04 | 0.68 | E | 0.04 | 0.68 | E | 4 | 68 | E | 4 | 68 | E | 18 | 310 | E | 18 | 310 | E | 15 |
| HEPTACHLOR EPOXIDE | 1024-57-3 | 0.02 | 1.1 | E | 0.02 | 1.1 | E | 2 | 110 | E | 2 | 110 | E | 20 | 1,100 | E | 20 | 1,100 | E | 10 |
| HEXACHLOROBENZENE | 118-74-1 | 0.1 | 0.96 | E | 0.1 | 0.96 | E | 0.6 | 5.8 | E | 0.6 | 5.8 | E | 0.6 | 5.8 | E | 0.6 | 5.8 | E | 15 |
| HEXACHLOROBUTADIENE | 87-68-3 | **[0.9] 0.94** | **[10] 11** | E | **[3.3] 4.4** | **[39] 52** | E | **[85] 94** | **[1,000] 1,100** | E | 290 | 3,400 | E | 290 | 3,400 | E | 290 | 3,400 | E | 15 |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| HEXACHLOROCYCLO PENTADIENE | 77-47-4 | 5 | 91 | E | 5 | 91 | E | 180 | 3,300 | E | 180 | 3,300 | E | 180 | 3,300 | E | 180 | 3,300 | E | 15 |
| HEXACHLOROETHANE | 67-72-1 | 0.1 | 0.56 | E | 0.1 | 0.56 | E | 10 | 56 | E | 10 | 56 | E | 10 | 56 | E | 10 | 56 | E | 15 |
| HEXANE | 110-54-3 | 150 | 1,400 | E | **[610] 620** | 5,600 | E | 950 | 8,700 | E | 950 | 8,700 | E | 150 | 1,400 | E | **[610] 620** | 5,600 | E | 15 |
| HEXAZINONE | 51235-04-2 | 40 | 8.5 | E | 40 | 8.5 | E | 4,000 | 850 | E | 4,000 | 850 | E | 40 | 8.5 | E | 40 | 8.5 | E | NA |
| HEXYTHIAZOX (SAVEY) | 78587-05-0 | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 50 | 820 | E | 15 |
| HMX | 2691-41-0 | 40 | 4.8 | E | 40 | 4.8 | E | 500 | 60 | E | 500 | 60 | E | 40 | 4.8 | E | 40 | **[438] 4.8** | E | NA |
| HYDRAZINE/HYDRAZINE SULFATE | 302-01-2 | 0.001 | 0.00011 | E | 0.0051 | 0.00057 | E | 0.1 | 0.011 | E | 0.51 | 0.057 | E | 0.01 | 0.0011 | E | 0.051 | 0.0057 | E | NA |
| HYDROQUINONE | 123-31-9 | 1.2 | 0.16 | E | **[4.6] 5.7** | **[0.62] 0.77** | E | 120 | 16 | E | **[460] 570** | **[62] 77** | E | 1,200 | 160 | E | **[4,600] 5,700** | **[620] 770** | E | NA |
| INDENO[1,2,3-CD]PYRENE | 193-39-5 | **[0.029] 0.031** | **[2,200] 2,400** | E | **[0.36] 0.47** | **[28,000] 36,000** | E | **[2.9] 3.1** | 190,000 | C | 6.2 | 190,000 | C | 6.2 | 190,000 | C | 6.2 | 190,000 | C | 5 |
| IPRODIONE | 36734-19-7 | **[150] 170** | **[430] 490** | E | **[410] 470** | **[1,200] 1,300** | E | 1,300 | 3,700 | E | 1,300 | 3,700 | E | **[150] 170** | **[430] 490** | E | **[410] 470** | **[1,200] 1,300** | E | 20 |
| ISOBUTYL ALCOHOL | 78-83-1 | **[1,100] 1,300** | **[290] 340** | E | **[3,100] 3,500** | **[810] 910** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| ISOPHORONE | 78-59-1 | 10 | 1.9 | E | 10 | 1.9 | E | 1,000 | 190 | E | 1,000 | 190 | E | 10,000 | 1,900 | E | 10,000 | 1,900 | E | NA |
| ISOPROPYL METHYLPHOSPHONATE | 1832-54-8 | 70 | 8.1 | E | 70 | 8.1 | E | 7,000 | 810 | E | 7,000 | 810 | E | 70 | 8.1 | E | 70 | 8.1 | E | NA |
| KEPONE | 143-50-0 | **[0.0041] 0.0073** | **[0.56] 1** | E | **[0.016] 0.034** | **[2.2] 4.7** | E | **[0.41] 0.73** | **[56] 100** | E | **[1.6] 3.4** | **[220] 470** | E | **[4.1] 7.3** | **[560] 1,000** | E | **[16] 34** | **[2,200] 4,700** | E | 10 |
| MALATHION | 121-75-5 | 50 | 170 | E | 50 | 170 | E | 5,000 | 10,000 | C | 5,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 20 |
| MALEIC HYDRAZIDE | 123-33-1 | 400 | 47 | E | 400 | 47 | E | 40,000 | 4,700 | E | 40,000 | 4,700 | E | 400 | 47 | E | 400 | 47 | E | NA |
| MANEB | 12427-38-2 | **[18] 21** | 2 | E | **[51] 58** | **[5.8] 6.6** | E | **[1,800] 2,100** | **[200] 240** | E | 2,300 | 260 | E | **[18] 21** | 2 | E | **[51] 58** | **[5.8] 6.6** | E | NA |
| MERPHOS OXIDE | 78-48-8 | **[0.11] 0.13** | **[15] 17** | E | **[0.31] 0.35** | **[41] 46** | E | **[11] 13** | **[1,500] 1,700** | E | **[31] 35** | **[4,100] 4,600** | E | **[0.11] 0.13** | **[15] 17** | E | **[0.31] 0.35** | **[41] 46** | E | 10 |
| METHACRYLONITRILE | 126-98-7 | **[0.15] 0.42** | **[0.025] 0.069** | E | **[0.62] 1.2** | **[0.1] 0.2** | E | **[15] 42** | **[2.5] 6.9** | E | **[62] 120** | **[10] 20** | E | **[0.15] 0.42** | **[0.025] 0.069** | E | **[0.62] 1.2** | **[0.1] 0.2** | E | NA |
| METHAMIDOPHOS | 10265-92-6 | **[0.18] 0.21** | **[0.022] 0.026** | E | **[0.51] 0.58** | **[0.063] 0.072** | E | **[18] 21** | **[2.2] 2.6** | E | **[51] 58** | **[6.3] 7.2** | E | **[0.18] 0.21** | **[0.022] 0.026** | E | **[0.51] 0.58** | **[0.063] 0.072** | E | NA |
| METHANOL | 67-56-1 | **[840] 4,200** | **[99] 500** | E | **[3,500] 10,000** | **[410] 2,100** | E | 10,000 | **[9,900] 10,000** | **[E] C** | 10,000 | 10,000 | C | 10,000 | **[9,900] 10,000** | **[E] C** | 10,000 | 10,000 | C | NA |
| METHOMYL | 16752-77-5 | 20 | 3.2 | E | 20 | 3.2 | E | 2,000 | 320 | E | 2,000 | 320 | E | 20 | 3.2 | E | 20 | 3.2 | E | NA |
| METHOXYCHLOR | 72-43-5 | 4 | 630 | E | 4 | 630 | E | 4.5 | 710 | E | 4.5 | 710 | E | 4.5 | 710 | E | 4.5 | 710 | E | 10 |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**

**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| METHOXYETHANOL, 2- | 109-86-4 | 4.2 | 0.47 | E | 18 | 2 | E | 420 | 47 | E | 1,800 | 200 | E | 4.2 | 0.47 | E | 18 | 2 | E | NA |
| METHYL ACETATE | 79-20-9 | **[3,700] 4,200** | **[690] 780** | E | 10,000 | **[1,900] 2,200** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | **[3,700] 4,200** | **[690] 780** | E | 10,000 | **[1,900] 2,200** | E | NA |
| METHYL ACRYLATE | 96-33-3 | **[110] 4** | **[27] 1** | E | **[310] 18** | **[77] 5** | E | **[10,000] 420** | **[2,700] 100** | E | **[10,000] 1,800** | **[7,700] 450** | E | **[10,000] 420** | **[2,700] 100** | E | **[10,000] 1,800** | **[7,700] 450** | E | NA |
| METHYL CHLORIDE | 74-87-3 | 3 | 0.38 | E | 3 | 0.38 | E | 300 | 38 | E | 300 | 38 | E | 300 | 38 | E | 300 | 38 | E | NA |
| METHYL ETHYL KETONE | 78-93-3 | 400 | 76 | E | 400 | 76 | E | 10,000 | 7,600 | E | 10,000 | 7,600 | **[C] E** | 10,000 | 7,600 | E | 10,000 | 7,600 | **[C] E** | NA |
| **METHYL HYDRAZINE** | **60-34-4** | **0.0042** | **0.00048** | **E** | **0.018** | **0.002** | **E** | **0.42** | **0.048** | **E** | **1.8** | **0.2** | **E** | **0.042** | **0.0048** | **E** | **0.18** | **0.02** | **E** | **NA** |
| METHYL ISOBUTYL KETONE | 108-10-1 | **[290] 330** | **[45] 51** | E | **[820] 930** | **[130] 140** | E | 10,000 | **[4,500] 5,100** | E | 10,000 | 10,000 | C | 10,000 | **[4,500] 5,100** | E | 10,000 | 10,000 | C | NA |
| METHYL ISOCYANATE | 624-83-9 | 0.21 | 0.029 | E | 0.88 | 0.12 | E | 21 | 2.9 | E | 88 | 12 | E | 0.21 | 0.029 | E | 0.88 | 0.12 | E | NA |
| METHYL N-BUTYL KETONE (2-HEXANONE) | 591-78-6 | **[1.1] 6.3** | **[0.27] 1.6** | E | **[4.4] 26** | **[1.1] 6.4** | E | **[110] 630** | **[27] 160** | E | **[440] 2,600** | **[110] 640** | E | **[1.1] 6.3** | **[0.27] 1.6** | E | **[4.4] 26** | **[1.1] 6.4** | E | NA |
| METHYL METHACRYLATE | 80-62-6 | 150 | 20 | E | 620 | 84 | E | 10,000 | 2,000 | E | 10,000 | 8,400 | E | 10,000 | 2,000 | E | 10,000 | 8,400 | E | NA |
| METHYL METHANESULFONATE | 66-27-3 | **[0.67] 0.74** | **[0.083] 0.092** | E | **[2.6] 3.4** | **[0.32] 0.42** | E | **[67] 74** | **[8.3] 9.2** | E | **[260] 340** | **[32] 42** | E | **[0.67] 0.74** | **[0.083] 0.092** | E | **[2.6] 3.4** | **[0.32] 0.42** | E | NA |
| METHYL PARATHION | 298-00-0 | 0.1 | 0.21 | E | 0.1 | 0.21 | E | 10 | 21 | E | 10 | 21 | E | 100 | 210 | E | 100 | 210 | E | 30 |
| METHYL STYRENE (MIXED ISOMERS) | 25013-15-4 | 8.4 | 47 | E | 35 | 200 | E | 840 | 4,700 | E | 3,500 | 10,000 | C | 8.4 | 47 | E | 35 | 200 | E | 15 |
| METHYL TERT-BUTYL ETHER (MTBE) | 1634-04-4 | 2 | 0.28 | E | 2 | 0.28 | E | 200 | 28 | E | 200 | 28 | E | 20 | 2.8 | E | 20 | 2.8 | E | NA |
| METHYLCHLOROPHENOXYACETIC ACID (MCPA) | 94-74-6 | 3 | 1.2 | E | 3 | 1.2 | E | 300 | 120 | E | 300 | 120 | E | 3,000 | 1,200 | E | 3,000 | 1,200 | E | NA |
| METHYLENE BIS(2-CHLOROANILINE), 4,4'- | 101-14-4 | **[0.22] 0.23** | **[1.7] 1.8** | E | **[2.6] 3.4** | **[20] 26** | E | **[22] 23** | **[170] 180** | E | **[260] 340** | **[2,000] 2,600** | E | **[0.22] 0.23** | **[1.7] 1.8** | E | **[2.6] 3.4** | **[20] 26** | E | 15 |
| METHYLNAPHTHALENE, 2- | 91-57-6 | **[15] 17** | **[600] 680** | E | **[41] 47** | **[1,600] 1,900** | E | **[1,500] 1,700** | **[60,000] 68,000** | E | 2,500 | 100,000 | E | **[15] 17** | **[600] 680** | E | **[41] 47** | **[1,600] 1,900** | E | 15 |
| METHYLSTYRENE, ALPHA | 98-83-9 | **[260] 290** | **[460] 510** | E | **[720] 820** | **[1,300] 1,400** | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | **[260] 290** | **[460] 510** | E | **[720] 820** | **[1,300] 1,400** | E | 30 |
| METOLACHLOR | 51218-45-2 | 70 | 40 | E | 70 | 40 | E | 7,000 | 4,000 | E | 7,000 | 4,000 | E | 70 | 40 | E | 70 | 40 | E | NA |
| METRIBUZIN | 21087-64-9 | 7 | 2.4 | E | 7 | 2.4 | E | 700 | 240 | E | 700 | 240 | E | 7 | 2.4 | E | 7 | 2.4 | E | NA |
| MONOCHLOROACETIC ACID **(HAA)** | 79-11-8 | **[7] 6** | **[0.78] 0.67** | E | **[7] 6** | **[0.78] 0.67** | E | **[700] 600** | **[78] 67** | E | **[700] 600** | **[78] 67** | E | **[7] 6** | **[0.78] 0.67** | E | **[7] 6** | **[0.78] 0.67** | E | NA |
| NAPHTHALENE | 91-20-3 | 10 | 25 | E | 10 | 25 | E | 1,000 | 2,500 | E | 1,000 | 2,500 | E | 3,000 | 7,500 | E | 3,000 | 7,500 | E | 30 |
| NAPHTHYLAMINE, 1- | 134-32-7 | **[0.037] 0.041** | **[0.3] 0.33** | E | **[0.14] 0.19** | **[1.1] 1.5** | E | **[3.7] 4.1** | **[30] 33** | E | **[14] 19** | **[110] 150** | E | **[37] 41** | **[300] 330** | E | **[140] 190** | **[1,100] 1,500** | E | 15 |

[1] For other options see § 250.308

All concentrations in mg/kg

E – Number calculated by the soil to groundwater equation in § 250.308

C – Cap

NA – The soil buffer distance option is not available for this substance

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| NAPHTHYLAMINE, 2- | 91-59-8 | **[0.037] 0.041** | **[0.012] 0.013** | E | **[0.14] 0.19** | **[0.046] 0.062** | E | **[3.7] 4.1** | **[1.2] 1.3** | E | **[14] 19** | **[4.6] 6.2** | E | **[37] 41** | **[12] 13** | E | **[140] 190** | **[46] 62** | E | NA |
| NAPROPAMIDE | 15299-99-7 | **[370] 420** | **[860] 970** | E | **[1,000] 1,200** | **[2,300] 2,800** | E | 7,000 | 16,000 | E | 7,000 | 16,000 | E | **[370] 420** | **[860] 970** | E | **[1,000] 1,200** | **[2,300] 2,800** | E | 30 |
| NITROANILINE, M- | 99-09-2 | **[1.1] 1.3** | **[0.17] 0.2** | E | **[3.1] 3.5** | **[0.48] 0.55** | E | **[110] 130** | **[17] 20** | E | **[310] 350** | **[48] 55** | E | **[1.1] 1.3** | **[0.17] 0.2** | E | **[3.1] 3.5** | **[0.48] 0.55** | E | NA |
| NITROANILINE, O- | 88-74-4 | **[11] 42** | **[2] 8** | E | **[31] 120** | **[5.5] 21** | E | **[1,100] 4,200** | **[200] 750** | E | **[3,100] 12,000** | **[550] 2,100** | E | **[11] 42** | **[2] 8** | E | **[31] 120** | **[5.5] 21** | E | NA |
| NITROANILINE, P- | 100-01-6 | **[3.3] 3.7** | **[0.49] 0.55** | E | **[13] 17** | **[1.9] 2.5** | E | **[330] 370** | **[49] 55** | E | **[1,300] 1,700** | **[190] 250** | E | **[3.3] 3.7** | **[0.49] 0.55** | E | **[13] 17** | **[1.9] 2.5** | E | NA |
| NITROBENZENE | 98-95-3 | **[7.3] 8.3** | **[3.2] 3.6** | E | **[20] 23** | **[8.7] 10** | E | **[730] 830** | **[320] 360** | E | **[2,000] 2,300** | **[870] 1,000** | E | **[7,300] 8,300** | **[3,200] 3,600** | E | 10,000 | **[8,700] 10,000** | **[E] C** | NA |
| NITROGUANIDINE | 556-88-7 | 70 | 7.8 | E | 70 | 7.8 | E | 7,000 | 780 | E | 7,000 | 780 | E | 70 | 7.8 | E | 70 | 7.8 | E | NA |
| NITROPHENOL, 2- | 88-75-5 | **[29] 33** | **[5.9] 6.7** | E | **[82] 93** | **[17] 19** | E | **[2,900] 3,300** | **[590] 670** | E | **[8,200] 9,300** | **[1,700] 1,900** | E | **[29,000] 33,000** | **[5,900] 6,700** | E | **[82,000] 93,000** | **[17,000] 19,000** | E | NA |
| NITROPHENOL, 4- | 100-02-7 | 6 | 4.1 | E | 6 | 4.1 | E | 600 | 410 | E | 600 | 410 | E | 6,000 | 4,100 | E | 6,000 | 4,100 | E | NA |
| NITROPROPANE, 2- | 79-46-9 | 0.0018 | 0.00029 | E | 0.0093 | 0.0015 | E | 0.18 | 0.029 | E | 0.93 | 0.15 | E | 0.018 | 0.0029 | E | 0.093 | 0.015 | E | NA |
| NITROSODIETHYLAMINE, N- | 55-18-5 | 0.000045 | 0.0000079 | E | 0.00058 | 0.0001 | E | 0.0045 | 0.0008 | E | 0.058 | 0.01 | E | 0.00045 | 0.00008 | E | 0.0058 | 0.001 | E | NA |
| NITROSODIMETHYLAMINE, N- | 62-75-9 | 0.00014 | 0.000019 | E | 0.0018 | 0.00024 | E | 0.014 | 0.0019 | E | 0.18 | 0.024 | E | 0.0014 | 0.00019 | E | 0.018 | 0.0024 | E | NA |
| NITROSO-DI-N-BUTYLAMINE, N- | 924-16-3 | **[0.012] 0.014** | **[0.015] 0.017** | E | **[0.048] 0.063** | **[0.059] 0.078** | E | **[1.2] 1.4** | **[1.5] 1.7** | E | **[4.8] 6.3** | **[5.9] 7.8** | E | **[12] 14** | **[15] 17** | E | **[48] 63** | **[59] 78** | E | NA |
| NITROSODI-N-PROPYLAMINE, N- | 621-64-7 | **[0.0094] 0.01** | **[0.0013] 0.0014** | E | **[0.037] 0.049** | **[0.0051] 0.0068** | E | **[0.94] 1** | **[0.13] 0.14** | E | **[3.7] 4.9** | **[0.51] 0.68** | E | **[9.4] 10** | **[1.3] 1.4** | E | **[37] 49** | **[5.1] 6.8** | E | NA |
| NITROSODIPHENYLAMINE, N- | 86-30-6 | **[13] 15** | **[20] 23** | E | **[53] 69** | **[83] 110** | E | **[1,300] 1,500** | **[2,000] 2,300** | E | 3,500 | 5,500 | E | 3,500 | 5,500 | E | 3,500 | 5,500 | E | 30 |
| NITROSO-N-ETHYLUREA, N- | 759-73-9 | **[0.0008] 0.00084** | **[0.000092] 0.000097** | E | **[0.0096] 0.013** | **[0.0011] 0.0015** | E | 0.08 | **[0.0092] 0.0097** | E | **[0.96] 1.3** | **[0.11] 0.15** | E | 0.8 | **[0.092] 0.097** | E | **[9.6] 13** | **[1.1] 1.5** | E | NA |
| OCTYL PHTHALATE, DI-N- | 117-84-0 | **[150] 42** | 10,000 | C | **[300] 120** | 10,000 | C | 300 | 10,000 | C | 300 | 10,000 | C | 300 | 10,000 | C | 300 | 10,000 | C | 5 |
| OXAMYL (VYDATE) | 23135-22-0 | 20 | 2.6 | E | 20 | 2.6 | E | 2,000 | 260 | E | 2,000 | 260 | E | 20 | 2.6 | E | 20 | 2.6 | E | NA |
| PARAQUAT | 1910-42-5 | 3 | 120 | E | 3 | 120 | E | 300 | 12,000 | E | 300 | 12,000 | E | 3 | 120 | E | 3 | 120 | E | 15 |
| PARATHION | 56-38-2 | **[22] 25** | **[130] 150** | E | **[61] 70** | **[360] 410** | E | 2,000 | 10,000 | C | 2,000 | 10,000 | C | **[22] 25** | **[130] 150** | E | **[61] 70** | **[360] 410** | E | 15 |
| PCB-1016 (AROCLOR) | 12674-11-2 | **[0.26] 0.29** | **[72] 80** | E | **[0.72] 0.82** | **[200] 230** | E | 25 | 6,900 | E | 25 | 6,900 | E | **[0.26] 0.29** | **[72] 80** | E | **[0.72] 0.82** | **[200] 230** | E | 10 |
| PCB-1221 (AROCLOR) | 11104-28-2 | **[0.033] 0.037** | **[0.16] 0.18** | E | **[0.13] 0.17** | **[0.63] 0.83** | E | **[3.3] 3.7** | **[16] 18** | E | **[13] 17** | **[63] 83** | E | **[0.033] 0.037** | **[0.16] 0.18** | E | **[0.13] 0.17** | **[0.63] 0.83** | E | 20 |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**

**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| PCB-1232 (AROCLOR) | 11141-16-5 | **[0.033] 0.037** | **[0.13] 0.14** | E | **[0.13] 0.17** | **[0.5] 0.7** | E | **[3.3] 3.7** | **[13] 14** | E | **[13] 17** | **[50] 66** | E | **[0.033] 0.037** | **[0.13] 0.14** | E | **[0.13] 0.17** | **[0.5] 0.7** | E | 20 |
| PCB-1242 (AROCLOR) | 53469-21-9 | **[0.033] 0.037** | 4 | E | **[0.13] 0.17** | **[16] 20** | E | **[3.3] 3.7** | **[400] 440** | E | 10 | 1,200 | E | **[0.033] 0.037** | 4 | E | **[0.13] 0.17** | **[16] 20** | E | 10 |
| PCB-1248 (AROCLOR) | 12672-29-6 | **[0.033] 0.037** | **[16] 18** | E | **[0.13] 0.17** | **[62] 81** | E | **[3.3] 3.7** | **[1,600] 1,800** | E | 5.4 | 2,600 | E | **[0.033] 0.037** | **[16] 18** | E | **[0.13] 0.17** | **[62] 81** | E | 10 |
| PCB-1254 (AROCLOR) | 11097-69-1 | **[0.033] 0.037** | **[67] 75** | E | **[0.13] 0.17** | **[260] 340** | E | **[3.3] 3.7** | **[6,700] 7,500** | E | 5.7 | 10,000 | C | **[0.033] 0.037** | **[67] 75** | E | **[0.13] 0.17** | **[260] 340** | E | 5 |
| PCB-1260 (AROCLOR) | 11096-82-5 | **[0.033] 0.037** | **[150] 170** | E | **[0.13] 0.17** | **[590] 770** | E | **[3.3] 3.7** | **[15,000] 17,000** | E | 8 | 36,000 | E | **[0.033] 0.037** | **[150] 170** | E | **[0.13] 0.17** | **[590] 770** | E | 5 |
| PEBULATE | 1114-71-2 | **[180] 210** | **[300] 350** | E | **[510] 580** | **[860] 980** | E | 9,200 | 10,000 | C | 9,200 | 10,000 | C | **[180] 210** | **[300] 350** | E | **[510] 580** | **[860] 980** | E | 30 |
| PENTACHLOROBENZENE | 608-93-5 | **[2.9] 3.3** | **[230] 260** | E | **[8.2] 9.3** | **[660] 750** | E | 74 | 5,900 | E | 74 | 5,900 | E | 74 | 5,900 | E | 74 | 5,900 | E | 10 |
| PENTACHLOROETHANE | 76-01-7 | **[0.73] 0.81** | **[3.6] 3.9** | E | **[2.9] 3.8** | **[14] 19** | E | **[73] 81** | **[360] 390** | E | **[290] 380** | **[1,400] 1,900** | E | **[0.73] 0.81** | **[3.6] 3.9** | E | **[2.9] 3.8** | **[14] 19** | E | 20 |
| PENTACHLORO NITROBENZENE | 82-68-8 | **[0.25] 0.28** | **[5] 6** | E | 1 | **[20] 26** | E | **[25] 28** | **[500] 560** | E | 44 | 870 | E | 44 | 870 | E | 44 | 870 | E | 15 |
| PENTACHLOROPHENOL | 87-86-5 | 0.1 | 5 | E | 0.1 | 5 | E | 10 | 500 | E | 10 | 500 | E | 100 | 5,000 | E | 100 | 5,000 | E | 10 |
| PHENACETIN | 62-44-2 | **[30] 33** | **[12] 13** | E | **[120] 150** | **[46] 58** | E | **[3,000] 3,300** | **[1,200] 1,300** | E | **[12,000] 15,000** | **[4,600] 5,800** | E | **[30,000] 33,000** | **[12,000] 13,000** | E | 76,000 | 29,000 | E | NA |
| PHENANTHRENE | 85-01-8 | 110 | 10,000 | E | 110 | 10,000 | E | 110 | 10,000 | E | 110 | 10,000 | E | 110 | 10,000 | E | 110 | 10,000 | E | 10 |
| PHENOL | 108-95-2 | 200 | 33 | E | 200 | 33 | E | 20,000 | 3,300 | E | 20,000 | 3,300 | E | 20,000 | 3,300 | E | 20,000 | 3,300 | E | NA |
| PHENYL MERCAPTAN | 108-98-5 | **[0.037] 4,200** | **[0.056] 6,400** | E | **[0.1] 12** | **[0.15] 18** | E | **[3.7] 420** | **[5.6] 640** | E | **[10] 1,200** | **[15] 1,800** | E | **[0.037] 4.2** | **[0.056] 6.4** | E | **[0.1] 12** | **[0.15] 18** | E | 30 |
| PHENYLENEDIAMINE, M- | 108-45-2 | **[22] 25** | **[3.1] 3.5** | E | **[61] 70** | **[8.6] 9.9** | E | **[2,200] 2,500** | **[310] 350** | E | **[6,100] 7,000** | **[860] 990** | E | **[22,000] 25,000** | **[3,100] 3,500** | E | **[61,000] 70,000** | **[8,600] 9,900** | E | NA |
| PHENYLPHENOL, 2- | 90-43-7 | **[35] 38** | **[500] 550** | E | **[140] 180** | **[2,000] 2,600** | E | **[3,500] 3,800** | **[50,000] 55,000** | E | **[14,000] 18,000** | 190,000 | **[E] C** | **[35,000] 38,000** | 190,000 | C | 70,000 | 190,000 | C | 15 |
| PHORATE | 298-02-2 | **[0.73] 0.83** | **[1.6] 1.8** | E | 2 | **[4.3] 4.9** | E | **[73] 83** | **[160] 180** | E | **[200] 230** | **[430] 490** | E | **[0.73] 0.83** | **[1.6] 1.8** | E | 2 | **[4.3] 4.9** | E | 30 |
| PHTHALIC ANHYDRIDE | 85-44-9 | **[7,300] 8,300** | **[2,300] 2,600** | E | **[20,000] 23,000** | **[6,200] 7,100** | E | 190,000 | 190,000 | C | 190,000 | 190,000 | C | 190,000 | 190,000 | C | 190,000 | 190,000 | C | NA |
| PICLORAM | 1918-02-1 | 50 | 7.4 | E | 50 | 7.4 | E | 5,000 | 740 | E | 5,000 | 740 | E | 50 | 7.4 | E | 50 | 7.4 | E | NA |
| PROMETON | 1610-18-0 | 40 | 39 | E | 40 | 39 | E | 4,000 | 3,900 | E | 4,000 | 3,900 | E | 40 | 39 | E | 40 | 39 | E | NA |
| PRONAMIDE | 23950-58-5 | **[270] 310** | **[170] 190** | E | **[770] 880** | **[470] 540** | E | 1,500 | 920 | E | 1,500 | 920 | E | **[270] 310** | **[170] 190** | E | **[770] 880** | **[470] 540** | E | NA |

[1] For other options see § 250.308

All concentrations in mg/kg

E – Number calculated by the soil to groundwater equation in § 250.308

C – Cap

NA – The soil buffer distance option is not available for this substance

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**

**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**

**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| PROPANIL | 709-98-8 | **[18] 21** | **[9.2] 11** | E | **[51] 58** | **[26] 30** | E | **[1,800] 2,100** | **[920] 1,100** | E | **[5,100] 5,800** | **[2,600] 3,000** | E | **[18] 21** | **[9.2] 11** | E | **[51] 58** | **[26] 30** | E | NA |
| PROPANOL, 2- (ISOPROPYL ALCOHOL) | 67-63-0 | 1,500 | 260 | E | 6,200 | 1,100 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 1,500 | 260 | E | 6,200 | 1,100 | E | NA |
| PROPAZINE | 139-40-2 | 1 | 0.5 | E | 1 | 0.5 | E | 100 | 50 | E | 100 | 50 | E | 1 | 0.5 | E | 1 | 0.5 | E | NA |
| PROPHAM | 122-42-9 | 10 | 2.4 | E | 10 | 2.4 | E | 1,000 | 240 | E | 1,000 | 240 | E | 10 | 2.4 | E | 10 | 2.4 | E | NA |
| PROPYLBENZENE, N- | 103-65-1 | **[150] 210** | **[290] 400** | E | **[410] 880** | **[780] 1,700** | E | 5,200 | 9,900 | E | 5,200 | 9,900 | E | **[150] 210** | **[290] 400** | E | **[410] 880** | **[780] 1,700** | E | 30 |
| PROPYLENE OXIDE | 75-56-9 | **[0.28] 0.3** | **[0.049] 0.052** | E | **[1.1] 1.4** | **[0.19] 0.24** | E | **[28] 30** | **[4.9] 5.2** | E | **[110] 140** | **[19] 24** | E | **[0.28] 0.30** | **[0.049] 0.052** | E | **[1.1] 1.4** | **[0.19] 0.24** | E | NA |
| PYRENE | 129-00-0 | 13 | 2,200 | E | 13 | 2,200 | E | 13 | 2,200 | E | 13 | 2,200 | E | 13 | 2,200 | E | 13 | 2,200 | E | 10 |
| PYRIDINE | 110-86-1 | **[3.7] 4.2** | **[0.41] 0.47** | E | **[10] 12** | **[1.1] 1.3** | E | **[370] 420** | **[41] 47** | E | **[1,000] 1,200** | **[110] 130** | E | **[37] 42** | **[4.1] 4.7** | E | **[100] 120** | **[11] 13** | E | NA |
| QUINOLINE | 91-22-5 | **[0.022] 0.024** | **[0.074] 0.081** | E | **[0.087] 0.11** | **[0.29] 0.37** | E | **[2.2] 2.4** | **[7.4] 8.1** | E | **[8.7] 11** | **[29] 37** | E | **[22] 24** | **[74] 81** | E | **[87] 110** | **[290] 370** | E | 20 |
| QUIZALOFOP (ASSURE) | 76578-14-8 | 30 | 47 | E | 30 | 47 | E | 30 | 47 | E | 30 | 47 | E | 30 | 47 | E | 30 | 47 | E | 30 |
| RDX | 121-82-4 | 0.2 | 0.057 | E | 0.2 | 0.057 | E | 20 | 5.7 | E | 20 | 5.7 | E | 0.2 | 0.057 | E | 0.2 | 0.057 | E | NA |
| RESORCINOL | 108-46-3 | **[7,300] 8,300** | **[850] 970** | E | **[20,000] 23,000** | **[2,300] 2,700** | E | 190,000 | **[85,000] 97,000** | E | 190,000 | 190,000 | C | **[7,300] 8,300** | **[850] 970** | E | **[20,000] 23,000** | **[2,300] 2,700** | E | NA |
| RONNEL | 299-84-3 | **[180] 210** | **[280] 330** | E | **[510] 580** | **[800] 910** | E | 4,000 | 6,200 | E | 4,000 | 6,200 | E | **[180] 210** | **[280] 330** | E | **[510] 580** | **[800] 910** | E | 30 |
| SIMAZINE | 122-34-9 | 0.4 | 0.15 | E | 0.4 | 0.15 | E | 40 | 15 | E | 40 | 15 | E | 0.4 | 0.15 | E | 0.4 | 0.15 | E | NA |
| STRYCHNINE | 57-24-9 | **[1.1] 1.3** | **[0.89] 1.1** | E | **[3.1] 3.5** | **[2.5] 2.8** | E | **[110] 130** | **[89] 110** | E | **[310] 350** | **[250] 280** | E | **[1,100] 1,300** | **[890] 1,100** | E | **[3,100] 3,500** | **[2,500] 2,800** | E | NA |
| STYRENE | 100-42-5 | 10 | 24 | E | 10 | 24 | E | 1,000 | 2,400 | E | 1,000 | 2,400 | E | 1,000 | 2,400 | E | 1,000 | 2,400 | E | 30 |
| TEBUTHIURON | 34014-18-1 | 50 | 83 | E | 50 | 83 | E | 5,000 | 8,300 | E | 5,000 | 8,300 | E | 50 | 83 | E | 50 | 83 | E | 30 |
| TERBACIL | 5902-51-2 | 9 | 2.2 | E | 9 | 2.2 | E | 900 | 220 | E | 900 | 220 | E | 9 | 2.2 | E | 9 | 2.2 | E | NA |
| TERBUFOS | 13071-79-9 | 0.04 | 0.055 | E | 0.04 | 0.055 | E | 4 | 5.5 | E | 4 | 5.5 | E | 0.04 | 0.055 | E | 0.04 | 0.055 | E | 30 |
| TETRACHLOROBENZENE, 1,2,4,5- | 95-94-3 | **[1.1] 1.3** | **[5.1] 6** | E | **[3.1] 3.5** | **[14] 16** | E | 58 | 270 | E | 58 | 270 | E | 58 | 270 | E | 58 | 270 | E | 20 |
| TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8- (TCDD) | 1746-01-6 | 0.000003 | 0.032 | E | 0.000003 | 0.032 | E | 0.0003 | 3.2 | E | 0.0003 | 3.2 | E | 0.0019 | 20 | E | 0.0019 | 20 | E | 5 |
| TETRACHLOROETHANE, 1,1,1,2- | 630-20-6 | 7 | 18 | E | 7 | 18 | E | 700 | 1,800 | E | 700 | 1,800 | E | 700 | 1,800 | E | 700 | 1,800 | E | 30 |
| TETRACHLOROETHANE, 1,1,2,2- | 79-34-5 | 0.08 | 0.026 | E | 0.43 | 0.13 | E | 8 | 2.6 | E | 43 | 13 | E | 8 | 2.6 | E | 43 | 13 | E | NA |
| TETRACHLOROETHYLENE (PCE) | 127-18-4 | 0.5 | 0.43 | E | 0.5 | 0.43 | E | 50 | 43 | E | 50 | 43 | E | 5 | 4.3 | E | 5 | 4.3 | E | NA |

[1] For other options see § 250.308

All concentrations in mg/kg

E – Number calculated by the soil to groundwater equation in § 250.308

C – Cap

NA – The soil buffer distance option is not available for this substance

**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**

**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| TETRACHLOROPHENOL, 2,3,4,6- | 58-90-2 | **[110] 130** | **[1,700] 2,000** | E | **[310] 350** | **[4,800] 5,500** | E | **[11,000] 13,000** | **[170,000] 190,000** | **[E] C** | 18,000 | 190,000 | C | 18,000 | 190,000 | C | 18,000 | 190,000 | C | 15 |
| TETRAETHYL LEAD | 78-00-2 | **[0.00037] 0.00042** | **[0.0046] 0.0052** | E | **[0.001] 0.0012** | **[0.012] 0.015** | E | **[0.037] 0.042** | **[0.46] 0.52** | E | 0.1 | **[1.2] 1.5** | E | **[0.37] 0.42** | **[4.6] 0.52** | E | 1 | **[12] 15** | E | 15 |
| TETRAETHYLDITHIO PYROPHOSPHATE | 3689-24-5 | **[1.8] 2.1** | **[2.7] 3.1** | E | **[5.1] 5.8** | **[7.6] 8.6** | E | **[180] 210** | **[270] 310** | E | **[510] 580** | **[760] 860** | E | **[1.8] 2.1** | **[2.7] 3.1** | E | **[5.1] 5.8** | **[7.6] 8.6** | E | 30 |
| TETRAHYDROFURAN | 109-99-9 | **[2.5] 2.6** | **[0.55] 0.57** | E | 13 | 2.8 | E | **[250] 260** | **[55] 57** | E | 1,300 | 280 | E | **[2.5] 2.6** | **[0.55] 0.57** | E | 13 | 2.8 | E | NA |
| THIOFANOX | 39196-18-4 | **[1.1] 1.3** | **[0.12] 0.14** | E | **[3.1] 3.5** | **[0.34] 0.39** | E | **[110] 130** | **[12] 14** | E | **[310] 350** | **[34] 39** | E | **[1.1] 1.3** | **[0.12] 0.14** | E | **[3.1] 3.5** | **[0.34] 0.39** | E | NA |
| THIRAM | 137-26-8 | **[18] 21** | **[47] 55** | E | **[51] 58** | **[130] 150** | E | **[1,800] 2,100** | **[4,700] 5,500** | E | 3,000 | 7,800 | E | **[18] 21** | **[47] 55** | E | **[51] 58** | **[130] 150** | E | 20 |
| TOLUENE | 108-88-3 | 100 | 44 | E | 100 | 44 | E | 10,000 | 4,400 | E | 10,000 | 4,400 | E | 10,000 | 4,400 | E | 10,000 | 4,400 | E | NA |
| TOLUIDINE, M- | 108-44-1 | **[0.37] 0.41** | **[0.17] 0.19** | E | **[1.4] 1.9** | **[0.65] 0.88** | E | **[37] 41** | **[17] 19** | E | **[140] 190** | **[65] 88** | E | **[0.37] 0.41** | **[0.17] 0.19** | E | **[1.4] 1.9** | **[0.65] 0.88** | E | NA |
| TOLUIDINE, O- | 95-53-4 | **[0.37] 4.6** | **[0.42] 5.2** | E | **[1.4] 21** | **[1.6] 24** | E | **[37] 460** | **[42] 520** | E | **[140] 2,100** | **[160] 2,400** | E | **[370] 4,600** | **[420] 5,200** | E | **[1,400] 10,000** | **[1,600] 10,000** | **[E] C** | NA |
| TOLUIDINE, P- | 106-49-0 | **[0.35] 2.4** | **[0.32] 2.2** | E | **[1.4] 11** | **[1.3] 10** | E | **[35] 240** | **[32] 220** | E | **[140] 1,100** | **[130] 1,000** | E | **[0.35] 2.4** | **[0.32] 2.2** | E | **[1.4] 11** | **[1.3] 10** | E | NA |
| TOXAPHENE | 8001-35-2 | 0.3 | 1.2 | E | 0.3 | 1.2 | E | 30 | 120 | E | 30 | 120 | E | 0.3 | 1.2 | E | 0.3 | 1.2 | E | 20 |
| TRIALLATE | 2303-17-5 | **[47] 54** | **[240] 280** | E | **[130] 150** | **[660] 770** | E | 400 | 2,000 | E | 400 | 2,000 | E | **[47] 54** | **[240] 280** | E | **[130] 150** | **[660] 770** | E | 15 |
| TRIBROMOMETHANE (BROMOFORM) **(THM)** | 75-25-2 | 8 | 3.5 | E | 8 | 3.5 | E | 800 | 350 | E | 800 | 350 | E | 800 | 350 | E | 800 | 350 | E | NA |
| TRICHLORO-1,2,2-TRIFLUOROETHANE, 1,1,2- | 76-13-1 | 6,300 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 20 |
| **TRICHLOROACETIC ACID (HAA)** | **76-03-9** | **2** | **0.32** | **E** | **2** | **0.32** | **E** | **200** | **32** | **E** | **200** | **32** | **E** | **2** | **0.32** | **E** | **2** | **0.332** | **E** | **NA** |
| TRICHLOROBENZENE, 1,2,4- | 120-82-1 | 7 | 27 | E | 7 | 27 | E | 700 | 2,700 | E | 700 | 2,700 | E | 4,400 | 10,000 | C | 4,400 | 10,000 | C | 20 |
| TRICHLOROBENZENE, 1,3,5- | 108-70-3 | 4 | 31 | E | 4 | 31 | E | 400 | 3,100 | E | 400 | 3,100 | E | 4 | 31 | E | 4 | 31 | E | 15 |
| TRICHLOROETHANE, 1,1,1- | 71-55-6 | 20 | 7.2 | E | 20 | 7.2 | E | 2,000 | 720 | E | 2,000 | 720 | E | 200 | 72 | E | 200 | 72 | E | NA |
| TRICHLOROETHANE, 1,1,2- | 79-00-5 | 0.5 | 0.15 | E | 0.5 | 0.15 | E | 50 | 15 | E | 50 | 15 | E | 5 | 1.5 | E | 5 | 1.5 | E | NA |
| TRICHLOROETHYLENE (TCE) | 79-01-6 | 0.5 | 0.17 | E | 0.5 | 0.17 | E | 50 | 17 | E | 50 | 17 | E | 5 | 1.7 | E | 5 | 1.7 | E | NA |
| TRICHLOROPHENOL, 2,4,5- | 95-95-4 | **[370] 420** | **[2,300] 2,600** | E | **[1,000] 1,200** | **[6,100] 7,300** | E | **[37,000] 42,000** | 190,000 | C | 100,000 | 190,000 | C | 100,000 | 190,000 | C | 100,000 | 190,000 | C | 15 |
| TRICHLOROPHENOL, 2,4,6- | 88-06-2 | **[3.7] 4.2** | **[11] 12** | E | **[10] 12** | **[29] 34** | E | **[370] 420** | **[1,100] 1,200** | E | **[1,000] 1,200** | **[2,900] 3,400** | E | **[3,700] 4,200** | **[11,000] 12,000** | E | **[10,000] 12,000** | **[29,000] 34,000** | E | 20 |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL**
**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | | | | | *Non-Use Aquifers* | | | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS ≤ 2500* | | | | | | *TDS > 2500* | | | | | | | | | | | | |
| | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | *Residential* | | | *Non-Residential* | | | |
| | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | *100 X GW MSC* | *Generic Value* | | |
| TRICHLOROPHENOXY ACETIC ACID, 2,4,5- (2,4,5-T) | 93-76-5 | 7 | 1.5 | E | 7 | 1.5 | E | 700 | 150 | E | 700 | 150 | E | 7,000 | 1,500 | E | 7,000 | 1,500 | E | NA |
| TRICHLOROPHENOXY PROPIONIC ACID, 2,4,5- (2,4,5-TP) (SILVEX) | 93-72-1 | 5 | 22 | E | 5 | 22 | E | 500 | 2,200 | E | 500 | 2,200 | E | 5 | 22 | E | 5 | 22 | E | 20 |
| TRICHLOROPROPANE, 1,1,2- | 598-77-6 | **[18] 21** | **[3.1] 3.6** | E | **[51] 58** | **[8.7] 9.9** | E | **[1,800] 2,100** | **[310] 360** | E | **[5,100] 5,800** | **[870] 990** | E | **[18] 21** | **[3.1] 3.6** | **E** | **[51] 58** | **[8.7] 9.9** | E | NA |
| TRICHLOROPROPANE, 1,2,3- | 96-18-4 | 4 | 3.2 | E | 4 | 3.2 | E | 400 | 320 | E | 400 | 320 | E | 400 | 320 | E | 400 | 320 | E | NA |
| TRICHLOROPROPENE, 1,2,3- | 96-19-5 | **[0.21] 0.063** | **[0.12] 0.037** | E | **[0.88] 0.26** | **[0.52] 0.15** | E | **[21] 6.3** | **[12] 3.7** | E | **[88] 26** | **[52] 15** | E | **[0.21] 0.063** | **[0.12] 0.037** | E | **[0.88] 0.26** | **[0.52] 0.15** | E | NA |
| TRIETHYLAMINE | 121-44-8 | 1.5 | 0.36 | E | 6.2 | 1.5 | E | 150 | 36 | E | 620 | 150 | E | 1.5 | 0.36 | E | 6.2 | 1.5 | E | NA |
| TRIFLURALIN | 1582-09-8 | 1 | 1.9 | E | 1 | 1.9 | E | 100 | 190 | E | 100 | 190 | E | 1 | 1.9 | E | 1 | 1.9 | E | 30 |
| TRIMETHYLBENZENE, 1,3,4- (TRIMETHYLBENZENE, 1,2,4-) | 95-63-6 | 1.5 | 8.4 | E | 6.2 | 35 | E | 150 | 840 | E | 620 | **[3,200] 3,500** | E | 150 | 840 | E | 620 | 3,500 | E | 15 |
| TRIMETHYLBENZENE, 1,3,5- | 108-67-8 | **[1.3] 42** | **[2.3] 74** | E | **[5.3] 120** | **[9.3] 210** | E | **[130] 4,200** | **[230] 7,400** | E | **[530] 4,900** | **[930] 8,600** | E | **[1.3] 42** | **[2.3] 74** | E | **[5.3] 120** | **[9.3] 210** | E | 30 |
| TRINITROGLYCEROL (NITROGLYCERIN) | 55-63-0 | 0.5 | 0.056 | E | 0.5 | 0.056 | E | 50 | 5.6 | E | 50 | 5.6 | E | 0.5 | 0.056 | E | 0.5 | 0.056 | E | NA |
| TRINITROTOLUENE, 2,4,6- | 118-96-7 | 0.2 | 0.023 | E | 0.2 | 0.023 | E | 20 | 2.3 | E | 20 | 2.3 | E | 0.2 | 0.023 | E | 0.2 | 0.023 | E | NA |
| VINYL ACETATE | 108-05-4 | 42 | 5 | E | 180 | 21 | E | 4,200 | 500 | E | 10,000 | 2,100 | E | 42 | 5 | E | 180 | 21 | E | NA |
| VINYL BROMIDE (BROMOETHENE) | 593-60-2 | 0.15 | 0.073 | E | 0.78 | 0.38 | E | 15 | 7.3 | E | 78 | 38 | E | 1.5 | 0.73 | E | 7.8 | 3.8 | E | NA |
| VINYL CHLORIDE | 75-01-4 | 0.2 | 0.027 | E | 0.2 | 0.027 | E | 20 | 2.7 | E | 20 | 2.7 | E | 2 | 0.27 | E | 2 | 0.27 | E | NA |
| WARFARIN | 81-81-2 | **[1.1] 1.3** | **[2.6] 3.1** | E | **[3.1] 3.5** | **[7.4] 8.4** | E | **[110] 130** | **[260] 310** | E | **[310] 350** | **[740] 840** | E | **[1,100] 1,300** | **[2,600] 3,100** | E | 1,700 | 4,100 | E | 30 |
| XYLENES (TOTAL) | 1330-20-7 | 1,000 | 990 | E | 1,000 | 990 | E | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | 10,000 | 10,000 | C | NA |
| ZINEB | 12122-67-7 | **[180] 210** | **[29] 33** | E | **[510] 580** | **[81] 92** | E | 1,000 | 160 | E | 1,000 | 160 | E | **[180] 210** | **[29] 33** | E | **[510] 580** | **[81] 92** | E | NA |

[1] For other options see § 250.308
All concentrations in mg/kg
E – Number calculated by the soil to groundwater equation in § 250.308
C – Cap
NA – The soil buffer distance option is not available for this substance
**THMs – The values listed for trihalomethanes (THMs) are the total for all THMs combined.**
**HAAs – The values listed for haloacetic acids (HAAs) are the total for all HAAs combined.**

**APPENDIX A**
**TABLE 4—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR INORGANIC REGULATED SUBSTANCES IN SOIL**
**A. Direct Contact Numeric Values**

| *REGULATED SUBSTANCE* | *CASRN* | *Residential MSC 0-15 feet* | | *Non-Residential MSCs* | | | |
|---|---|---|---|---|---|---|---|
| | | | | *Surface Soil 0-2 feet* | | *Subsurface Soil 2-15 feet* | |
| ALUMINUM | 7429-90-5 | 190,000 | C | 190,000 | C | 190,000 | C |
| ANTIMONY | 7440-36-0 | 88 | G | **[1,100] 1,300** | G | 190,000 | C |
| ARSENIC | 7440-38-2 | 12 | G | **[53] 61** | G | 190,000 | C |
| BARIUM AND COMPOUNDS | 7440-39-3 | 44,000 | G | 190,000 | C | 190,000 | C |
| BERYLLIUM | 7440-41-7 | 440 | G | **[5,600] 6,400** | G | 190,000 | C |
| BORON AND COMPOUNDS | 7440-42-8 | 44,000 | G | 190,000 | C | 190,000 | C |
| CADMIUM | 7440-43-9 | 110 | G | **[1,400] 1,600** | G | 190,000 | C |
| CHROMIUM III | 16065-83-1 | 190,000 | C | 190,000 | C | 190,000 | C |
| CHROMIUM VI | 18540-29-9 | 660 | G | **[8,400] 9,600** | G | 20,000 | N |
| COBALT | 7440-48-4 | 66 | G | **[840] 960** | G | 190,000 | **[C] N** |
| COPPER | 7440-50-8 | 8,100 | G | **[100,000] 120,000** | G | 190,000 | C |
| CYANIDE, FREE | 57-12-5 | **[4,400] 130** | G | **[56,000] 1,900** | G | 190,000 | C |
| FLUORIDE | 16984-48-8 | 8,800 | G | **[110,000] 130,000** | G | 190,000 | **[G] C** |
| IRON | 7439-89-6 | 150,000 | G | 190,000 | C | 190,000 | C |
| LEAD | 7439-92-1 | 500 | U | 1,000 | S | 190,000 | C |
| LITHIUM | **[7439-93-0] 7439-93-2** | 440 | G | **[5,600] 6,400** | G | 190,000 | C |
| MANGANESE | 7439-96-5 | 10,000 | G | **[130,000] 150,000** | G | 190,000 | C |
| MERCURY | 7439-97-6 | 35 | G | **[450] 510** | G | 190,000 | C |
| MOLYBDENUM | 7439-98-7 | 1,100 | G | **[14,000] 16,000** | G | 190,000 | C |
| NICKEL | 7440-02-0 | 4,400 | G | **[56,000] 64,000** | G | 190,000 | C |
| PERCHLORATE | 7790-98-9 | 150 | G | **[2,000] 2,200** | G | 190,000 | C |
| SELENIUM | 7782-49-2 | 1,100 | G | **[14,000] 16,000** | G | 190,000 | C |
| SILVER | 7440-22-4 | 1,100 | G | **[14,000] 16,000** | G | 190,000 | C |
| **STRONTIUM** | **7440-24-6** | **130,000** | **G** | **190,000** | **C** | **190,000** | **C** |
| THALLIUM | 7440-28-0 | **[15] 2** | G | **[200] 32** | G | 190,000 | C |
| TIN | 7440-31-5 | 130,000 | G | 190,000 | C | 190,000 | C |
| VANADIUM | 7440-62-2 | **[1,500] 15** | G | **[20,000] 220** | G | 190,000 | C |
| ZINC | 7440-66-6 | 66,000 | G | 190,000 | C | 190,000 | C |

All concentrations in mg/kg (except asbestos, which is in fibers/kg)
R – Residential
NR – Non-Residential
G – Ingestion
**[H] N** – Inhalation
C- Cap
U – UBK Model
S – SEGH Model
NA – Not Applicable

**APPENDIX A**

**TABLE 4—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR INORGANIC REGULATED SUBSTANCES IN SOIL**

**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | *Non-use Aquifers* | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS < = 2500* | | | | *TDS > 2500* | | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | | |
| | | *100 X GW MSC* | *Generic Value* | *100 X GW MSC* | *Generic Value* | *100 X GW MSC* | *Generic Value* | *100 X GW MSC* | *Generic Value* | *100 X GW MSC* | *Generic Value* | *100 X GW MSC* | *Generic Value* | |
| ALUMINUM | 7429-90-5 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| ANTIMONY | 7440-36-0 | 0.6 | 27 | 0.6 | 27 | 60 | 2,700 | 60 | 2,700 | 600 | 27,000 | 600 | 27,000 | 15 |
| ARSENIC | 7440-38-2 | 1 | 29 | 1 | 29 | 100 | 2,900 | 100 | 2,900 | 1,000 | 29,000 | 1,000 | 29,000 | 15 |
| BARIUM AND COMPOUNDS | 7440-39-3 | 200 | 8,200 | 200 | 8,200 | 20,000 | 190,000 | 20,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 15 |
| BERYLLIUM | 7440-41-7 | 0.4 | 320 | 0.4 | 320 | 40 | 32,000 | 40 | 32,000 | 400 | 190,000 | 400 | 190,000 | 10 |
| BORON AND COMPOUNDS | 7440-42-8 | 600 | 1,900 | 600 | 1,900 | 60,000 | 190,000 | 60,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 30 |
| CADMIUM | 7440-43-9 | 0.5 | 38 | 0.5 | 38 | 50 | 3,800 | 50 | 3,800 | 500 | 38,000 | 500 | 38,000 | 15 |
| CHROMIUM (III) | 16065-83-1 | 10 | 190,000 | 10 | 190,000 | 1,000 | 190,000 | 1,000 | 190,000 | 10,000 | 190,000 | 10,000 | 190,000 | 5 |
| CHROMIUM (VI) | 18540-29-9 | 10 | 190 | 10 | 190 | 1,000 | 19,000 | 1,000 | 19,000 | 10,000 | 190,000 | 10,000 | 190,000 | 15 |
| COBALT | 7440-48-4 | 1 | **[50] 59** | **[3] 4** | **[140] 160** | **[110] 130** | **[5,000] 5,900** | **[310] 350** | **[14,000] 16,000** | **[1,100] 1,300** | **[50,000] 59,000** | **[3,100] 3,500** | **[140,000] 160,000** | 15 |
| COPPER | 7440-50-8 | 100 | 43,000 | 100 | 43,000 | 10,000 | 190,000 | 10,000 | 190,000 | 100,000 | 190,000 | 100,000 | 190,000 | 10 |
| CYANIDE, FREE | 57-12-5 | 20 | 200 | 20 | 200 | 2,000 | 20,000 | 2,000 | 20,000 | 20,000 | 190,000 | 20,000 | 190,000 | 20 |
| FLUORIDE | 16984-48-8 | 400 | 44 | 400 | 44 | 40,000 | 4,400 | **[44,000] 40,000** | 4,400 | 190,000 | 44,000 | 190,000 | 44,000 | NA |
| IRON | 7439-89-6 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| LEAD | 7439-92-1 | 0.5 | 450 | 0.5 | 450 | 50 | 45,000 | 50 | 45,000 | 500 | 190,000 | 500 | 190,000 | 10 |
| LITHIUM | 7439-93-2 | **[7] 8** | **[2,200] 2,500** | **[20] 23** | **[6,000] 6,900** | **[730] 830** | 190,000 | **[2,000] 2,300** | 190,000 | **[7,300] 8,300** | 190,000 | **[20,000] 23,000** | 190,000 | 10 |
| MANGANESE | 7439-96-5 | 30 | 2,000 | 30 | 2,000 | 3,000 | 190,000 | 3,000 | 190,000 | 30,000 | 190,000 | 30,000 | 190,000 | 15 |
| MERCURY | 7439-97-6 | 0.2 | 10 | 0.2 | 10 | 20 | 1,000 | 20 | 1,000 | 200 | 10,000 | 200 | 10,000 | 15 |
| MOLYBDENUM | 7439-98-7 | 4 | 650 | 4 | 650 | 400 | 65,000 | 400 | 65,000 | 4,000 | 190,000 | 4,000 | 190,000 | 15 |
| NICKEL | 7440-02-0 | 10 | 650 | 10 | 650 | 1,000 | 65,000 | 1,000 | 65,000 | 10,000 | 190,000 | 10,000 | 190,000 | 15 |
| PERCHLORATE | 7790-98-9 | 1.5 | 0.17 | 1.5 | **[0.2] 0.17** | 150 | 17 | 150 | 17 | 1,500 | 170 | 1,500 | 170 | NA |
| SELENIUM | 7782-49-2 | 5 | 26 | 5 | 26 | 500 | 2,600 | 500 | 2,600 | 5,000 | 26,000 | 5,000 | 26,000 | 20 |
| SILVER | 7440-22-4 | 10 | 84 | 10 | 84 | 1,000 | 8,400 | 1,000 | 8,400 | 10,000 | 84,000 | 10,000 | 84,000 | 20 |
| **STRONTIUM** | **7440-24-6** | **400** | **44** | **400** | **44** | **40,000** | **4,400** | **40,000** | **4,400** | **190,000** | **44,000** | **190,000** | **44,000** | **NA** |

[1]For other options see **[Section]** § 250.308

All concentrations in mg/kg

R – Residential

NR – Non-Residential

NA – Not Applicable

**APPENDIX A**

**TABLE 4—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR INORGANIC REGULATED SUBSTANCES IN SOIL**

**B. Soil to Groundwater Numeric Values[1]**

| *REGULATED SUBSTANCE* | *CASRN* | *Used Aquifers* | | | | | | | | *Non-use Aquifers* | | | | *Soil Buffer Distance (feet)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *TDS < = 2500* | | | | *TDS > 2500* | | | | | | | | |
| | | *R* | | *NR* | | *R* | | *NR* | | *R* | | *NR* | | |
| | | *100 X GW MSC* | *Generic Value* | *100 X GW MSC* | *Generic Value* | *100 X GW MSC* | *Generic Value* | *100 X GW MSC* | *Generic Value* | *100 X GW MSC* | *Generic Value* | *100 X GW MSC* | *Generic Value* | |
| THALLIUM | 7440-28-0 | 0.2 | 14 | **[0.20] 0.2** | 14 | 20 | 1,400 | 20 | 1,400 | 200 | 14,000 | 200 | 14,000 | 15 |
| TIN | 7440-31-5 | **[2,200] 2,500** | 190,000 | **[6,100] 7,000** | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 10 |
| VANADIUM | 7440-62-2 | **[26] 0.29** | **[26,000] 290** | **[72] 0.82** | **[72,000] 820** | **[2,600] 29** | **[190,000] 29,000** | **[7,200] 82** | **[190,000] 82,000** | **[26,000] 290** | 190,000 | **[72,000] 820** | 190,000 | 5 |
| ZINC | 7440-66-6 | 200 | 12,000 | 200 | 12,000 | 20,000 | 190,000 | 20,000 | 190,000 | 190,000 | 190,000 | 190,000 | 190,000 | 15 |

[1]For other options see **[Section]** § 250.308
All concentrations in mg/kg
R – Residential
NR – Non-Residential
NA – Not Applicable

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**A. Organic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfDo (mg/kg-d)* | | *CSFo $(mg/kg\text{-}d)^{-1}$* | | *RfCi $(mg/m^3)$* | | *IUR $(\mu g/m^3)^{-1}$* | | *Koc (L/KG)* | *VOC?* | *Aqueous Sol (mg/L)* | *Aqueous Sol Reference[1]* | *TF Vol from Surface Soil* | *TF Vol from SubSurface Soil* | *Organic Liquid* | *Boiling Point (degrees C)* | *Degradation Coefficient $(K)(yr^{-1})$* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ACENAPHTHENE | 83-32-9 | 0.06 | I | | | | | | | 4,900 | | 3.8 | 1,5,6 | | | | 279 | 1.24 |
| ACENAPHTHYLENE | 208-96-8 | 0.06 | S | | | | | | | 4,500 | | 16.1 | 5,6,7 | | | | 280 | 2.11 |
| ACEPHATE | 30560-19-1 | 0.004 | I | 0.0087 | I | | | | | 3 | | 818,000 | 6 | | | | 340 | |
| ACETALDEHYDE | 75-07-0 | | | | | 0.009 | I | 0.0000022 | I | 4.1 | X | 1,000,000 | 1 | 13,100 | 15,100 | X | 20 | |
| ACETONE | 67-64-1 | 0.9 | I | | | 31 | D | | | 0.31 | X | 1,000,000 | 1 | 13,100 | 15,000 | X | 56 | 18.07 |
| ACETONITRILE | 75-05-8 | | | | | 0.06 | I | | | 0.5 | X | 1,000,000 | 1 | 13,100 | 15,000 | X | 82 | 4.50 |
| ACETOPHENONE | 98-86-2 | 0.1 | I | | | | | | | 170 | | 5500 | 1 | | | X | 203 | |
| ACETYLAMINO-FLUORENE, 2- (2AAF) | 53-96-3 | | | 3.8 | C | | | 0.0013 | C | 1,600 | | 10.13 | 7 | | | | 303 | 0.69 |
| ACROLEIN | 107-02-8 | 0.0005 | I | | | 0.00002 | I | | | 0.56 | X | 208,000 | 1,2,4 | 13,100 | 15,100 | X | 53 | 4.50 |
| ACRYLAMIDE | 79-06-1 | **[0.0002] 0.002** | I | **[4.5] 0.5** | I | **0.006** | **I** | **[0.0013] 0.0001** | I | 25 | X | 2,151,000 | 4 | 13,000 | 15,000 | | 193 | |
| ACRYLIC ACID | 79-10-7 | 0.5 | I | | | 0.001 | I | | | 29 | X | 1,000,000 | 2 | 13,000 | 14,900 | X | 141 | 1.39 |
| ACRYLONITRILE | 107-13-1 | 0.04 | D | 0.54 | I | 0.002 | I | 0.000068 | I | 11 | X | 73,500 | 1 | 13,100 | 15,100 | X | 77 | 5.50 |
| ALACHLOR | 15972-60-8 | 0.01 | I | 0.056 | C | | | | | 110 | | 140 | 2 | | | | 378 | |
| ALDICARB | 116-06-3 | 0.001 | I | | | | | | | 22 | | 6,000 | 2 | | | | 287 | 0.40 |
| ALDICARB SULFONE | 1646-88-4 | 0.001 | I | | | | | | | 10 | | 8,000 | 5 | | | | 317 | |
| ALDICARB SULFOXIDE | 1646-87-3 | 0.001 | **[I] M** | | | | | | | 0.22 | | 330,000 | 5 | | | | 307 | |
| ALDRIN | 309-00-2 | 0.00003 | I | 17 | I | | | 0.0049 | I | 48,000 | | 0.02 | 4,5,6 | | | | 330 | 0.22 |
| ALLYL ALCOHOL | 107-18-6 | 0.005 | I | | | **[0.0003] 0.0001** | **[P] X** | | | 3.2 | X | 1,000,000 | 2 | 13,100 | 15,000 | X | 97 | 18.07 |
| AMETRYN | 834-12-8 | 0.009 | I | | | | | | | 389 | | 185 | 5 | | | | 345 | |
| AMINOBIPHENYL, 4- | 92-67-1 | | | 21 | C | | | 0.006 | C | 110 | | 1,200 | 5 | | | | 302 | 18.07 |
| AMITROLE | 61-82-5 | | | 0.94 | C | | | 0.00027 | C | 120 | | 280,000 | 4 | | | | 258 | 0.69 |
| AMMONIA | 7664-41-7 | 0.97 | H | | | 0.1 | I | | | 3 | X | 310,000 | 2,5,7 | 13,100 | 15,000 | X | -33 | |
| AMMONIUM SULFAMATE | 7773-06-0 | 0.2 | I | | | | | | | 3 | | 2,160,000 | 10 | | | | 603 | |
| ANILINE | 62-53-3 | 0.007 | P | 0.0057 | I | 0.001 | I | 0.0000016 | C | 190 | X | 33,800 | 1 | 13,000 | 14,900 | X | 184 | |
| ANTHRACENE | 120-12-7 | 0.3 | I | | | | | | | 21,000 | | 0.066 | 1,5,6,7,8,9 | | | | 340 | 0.28 |
| ATRAZINE | 1912-24-9 | 0.035 | I | 0.23 | C | | | | | 130 | | 70 | 2,4,5 | | | | 313 | |
| AZINPHOS-METHYL (GUTHION) | 86-50-0 | 0.003 | D | | | 0.01 | D | | | 407.4 | | 31.5 | 1, 2 | | | | 421 | |
| BAYGON (PROPOXUR) | 114-26-1 | 0.004 | I | | | | | | | 31 | | 2,000 | 2,4,5 | | | | decomp. | 4.50 |
| BENOMYL | 17804-35-2 | 0.05 | I | | | | | | | 1,900 | | 2 | 5 | | | | 520 | |
| BENTAZON | 25057-89-0 | 0.03 | I | | | | | | | 13 | | 500 | 2 | | | | 415 | |
| BENZENE | 71-43-2 | 0.004 | I | 0.055 | I | 0.03 | I | 0.0000078 | I | 58 | X | 1,780.5 | 1,2,3,4 | 13,100 | 15,000 | X | 81 | 0.35 |
| BENZIDINE | 92-87-5 | 0.003 | I | 230 | I | | | 0.067 | I | 530,000 | | 520 | 1,2,4 | | | | 400 | 15.81 |
| BENZO[A]ANTHRACENE | 56-55-3 | | | **[0.73] 0.7** | **[N] X** | | | 0.00011 | C | 350,000 | | 0.011 | 1,5,6 | | | | 438 | 0.19 |
| BENZO[A]PYRENE | 50-32-8 | | | 7.3 | I | | | 0.0011 | C | 910,000 | | 0.0038 | 1,5,6 | | | | 495 | 0.24 |
| BENZO[B]FLUORANTHENE | 205-99-2 | | | 0.73 | N | | | 0.00011 | C | 550,000 | | 0.0012 | 5,6,7 | | | | 357 | 0.21 |
| BENZO[GHI]PERYLENE | 191-24-2 | 0.06 | S | | | | | | | 2,800,000 | | 0.00026 | 1,5,6 | | | | 500 | 0.19 |
| BENZO[K]FLUORANTHENE | 207-08-9 | | | 0.073 | N | | | 0.00011 | C | 4,400,000 | | 0.00055 | 5,6,7 | | | | 480 | 0.06 |
| BENZOIC ACID | 65-85-0 | 4 | I | | | | | | | 32 | | 2,700 | 2,3,4,5 | | | | 249 | |
| BENZOTRICHLORIDE | 98-07-7 | | | 13 | I | | | | | 920 | | 53 | 1,5,13 | | | X | 221 | 121413.60 |

[1] Aqueous solubility references are keyed to the numbered list found at § 250.304(f). Where there are multiple sources cited, the table value is the median of the values in the individual references.

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
P = EPA Provisional Peer-Reviewed Toxicity Value
S = surrogate
T = TEF
TE = TERA ITER Peer-Reviewed Value
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**A. Organic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfDo (mg/kg-d)* | | *CSFo (mg/kg-d)$^{-1}$* | | *RfCi (mg/m$^3$)* | | *IUR (µg/m$^3$)$^{-1}$* | | *Koc (L/KG)* | *VOC?* | *Aqueous Sol (mg/L)* | *Aqueous Sol Reference[1]* | *TF Vol from Surface Soil* | *TF Vol from SubSurface Soil* | *Organic Liquid* | *Boiling Point (degrees C)* | *Degradation Coefficient (K)(yr$^{-1}$)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BENZYL ALCOHOL | 100-51-6 | **[0.5] 0.1** | P | | | | | | | 100 | | 40,000 | 1,2,3 | | | X | 205 | |
| BENZYL CHLORIDE | 100-44-7 | 0.002 | P | 0.17 | I | 0.001 | P | 0.000049 | C | 190 | X | 493 | 1 | 13,000 | 15,000 | X | 179 | 20.90 |
| BETA PROPIOLACTONE | 57-57-8 | | | 14 | C | | | 0.004 | C | 4 | X | 370,000 | 2 | 13,100 | 15,000 | X | 162 | 0.01 |
| BHC, ALPHA | 319-84-6 | 0.008 | D | 6.3 | I | | | 0.0018 | I | 1,800 | | 1.7 | 4,5,6,7 | | | | 288 | 0.94 |
| BHC, BETA- | 319-85-7 | | | 1.8 | I | | | 0.00053 | I | 2,300 | | 0.1 | 6 | | | | 304 | 1.02 |
| BHC, GAMMA (LINDANE) | 58-89-9 | 0.0003 | I | 1.1 | C | | | 0.00031 | C | 1,400 | | 7.3 | 4,5,6 | | | | 323 | 1.05 |
| BIPHENYL, 1,1- | 92-52-4 | **[0.05] 0.5** | I | **0.008** | **X** | **0.0004** | **X** | | | 1,700 | | 7.2 | 1 | | | | 255 | 18.07 |
| BIS(2-CHLORO ETHOXY)METHANE | 111-91-1 | 0.003 | P | | | | | | | 61 | | 100,500 | 4,6,7,9,10,11 | | | X | 218 | |
| BIS(2-CHLOROETHYL)ETHER | 111-44-4 | | | 1.1 | I | | | 0.00033 | I | 76 | X | 10,200 | 1,4,5 | 13,000 | 14,900 | X | 179 | 0.69 |
| BIS(2-CHLORO-ISOPROPYL)ETHER | 108-60-1 | 0.04 | I | 0.07 | H | | | 0.00001 | H | 62 | X | 1,700 | 5 | 13,000 | 14,900 | X | 189 | 0.69 |
| BIS(CHLOROMETHYL)ETHER | 542-88-1 | | | 220 | I | | | 0.062 | I | 16 | X | 22,000 | 6 | 13,100 | 15,100 | X | 105 | 57270.57 |
| BIS[2-ETHYLHEXYL] PHTHALATE | 117-81-7 | 0.02 | I | 0.014 | I | | | 0.0000024 | C | 87,000 | | 0.285 | 4,5,6 | | | X | 384 | 0.65 |
| BISPHENOL A | 80-05-7 | 0.05 | I | | | | | | | 1,500 | | 120 | 4 | | | | 220 | 0.69 |
| BROMACIL | 314-40-9 | 0.1 | M | | | | | | | 58 | | 815 | 2 | | | | 421 | |
| BROMOCHLOROMETHANE | 74-97-5 | 0.01 | M | | | **0.04** | **X** | | | 27 | X | 16,700 | 4 | 13,100 | 15,000 | X | 68 | |
| BROMODICHLOROMETHANE | 75-27-4 | 0.02 | I | 0.062 | I | | | 0.000037 | C | 93 | X | 4,500 | 6 | 13,100 | 15,000 | X | 87 | |
| BROMOMETHANE | 74-83-9 | 0.0014 | I | | | 0.005 | I | | | 170 | X | 17,500 | 2 | 13,100 | 15,000 | X | 4 | 6.66 |
| BROMOXYNIL | 1689-84-5 | 0.02 | I | | | | | | | 300 | | 130 | 2 | | | | 329 | |
| BROMOXYNIL OCTANOATE | 1689-99-2 | 0.02 | I | | | | | | | 18,000 | | 0.08 | 12 | | | | 414 | 5.75 |
| BUTADIENE, 1,3- | 106-99-0 | | | 3.4 | C | 0.002 | I | 0.00003 | I | 120 | X | 735 | 1 | 13,200 | 15,000 | X | -4.5 | 4.50 |
| BUTYL ALCOHOL, N- | 71-36-3 | 0.1 | I | | | | | | | 3.2 | X | 74,000 | 1 | 13,000 | 14,900 | X | 118 | 4.68 |
| BUTYLATE | 2008-41-5 | 0.05 | I | | | | | | | 540 | X | 45 | 2 | 13,200 | 15,200 | X | 138 | |
| BUTYLBENZENE, N- | 104-51-8 | **[0.04] 0.05** | **[N] P** | | | | | | | 2,500 | X | 15 | 1,6,7 | 13,100 | 15,100 | X | 183 | |
| BUTYLBENZENE, SEC- | 135-98-8 | **[0.04] 0.1** | **[N] X** | | | | | | | 890 | X | 17 | 1,6,7 | 13,100 | 15,000 | X | 174 | |
| BUTYLBENZENE, TERT- | 98-06-6 | **[0.04] 0.1** | **[N] X** | | | | | | | 680 | X | 30 | 1,6,7 | 13,100 | 15,000 | X | 169 | |
| BUTYLBENZYL PHTHALATE | 85-68-7 | 0.2 | I | 0.0019 | P | | | | | 34,000 | | 2.69 | 4,5,6 | | | X | 370 | 1.39 |
| CAPTAN | 133-06-2 | 0.13 | I | 0.0023 | C | | | 0.00000066 | C | 200 | | 0.5 | 4 | | | | 259 | 589.39 |
| CARBARYL | 63-25-2 | 0.1 | I | | | | | | | 190 | | 120 | 2,4,5 | | | | 315 | 4.22 |
| CARBAZOLE | 86-74-8 | | | 0.02 | H | | | | | 2,500 | | 1.2 | 1,5,6 | | | | 355 | |
| CARBOFURAN | 1563-66-2 | 0.005 | I | | | | | | | 43 | | 700 | 2 | | | | 311 | |
| CARBON DISULFIDE | 75-15-0 | 0.1 | I | | | 0.7 | I | | | 300 | X | 2,100 | 1,2,3 | 13,100 | 15,100 | X | 46 | |
| CARBON TETRACHLORIDE | 56-23-5 | **[0.0007] 0.004** | I | **[0.13] 0.07** | I | **[0.19] 0.1** | **[D] I** | **[0.000015] 0.000006** | I | 160 | X | 795 | 1,2,3 | 13,100 | 15,000 | X | 77 | 0.07 |
| CARBOXIN | 5234-68-4 | 0.1 | I | | | | | | | 260 | | 170 | 5,6,8 | | | | 407 | |

[1] Aqueous solubility references are keyed to the numbered list found at § 250.304(f). Where there are multiple sources cited, the table value is the median of the values in the individual references.

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
P = EPA Provisional Peer-Reviewed Toxicity Value
S = surrogate
T = TEF
TE = TERA ITER Peer-Reviewed Value
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**A. Organic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfDo (mg/kg-d)* | | *CSFo (mg/kg-d)$^{-1}$* | | *RfCi (mg/m$^3$)* | | *IUR (µg/m$^3$)$^{-1}$* | | *Koc (L/KG)* | *VOC?* | *Aqueous Sol (mg/L)* | *Aqueous Sol Reference[1]* | *TF Vol from Surface Soil* | *TF Vol from SubSurface Soil* | *Organic Liquid* | *Boiling Point (degrees C)* | *Degradation Coefficient (K)(yr$^{-1}$)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CHLORAMBEN | 133-90-4 | 0.015 | I | | | | | | | 20 | | 700 | 2 | | | | 210 | |
| CHLORDANE | 57-74-9 | 0.0005 | I | 0.35 | I | 0.0007 | I | 0.0001 | I | 98,000 | | 0.056 | 4,5,7 | | | | 351 | 0.09 |
| CHLORO-1,1-DIFLUOROETHANE, 1- | 75-68-3 | | | | | 50 | I | | | 22 | X | 1,400 | 4 | 13,100 | 15,000 | X | -9 | |
| CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE) | 107-05-1 | | | 0.021 | C | 0.001 | I | 0.000006 | C | 48 | X | 3,300 | 1,3,5,7,10 | 13,100 | 15,000 | X | 45 | 18.07 |
| **CHLOROACETALDEHYDE** | **107-20-0** | | | **0.3** | **X** | | | | | **3.2** | **X** | **1,000,000** | **9** | **13,000** | **14,900** | **X** | **85** | |
| CHLOROACETOPHENONE, 2- | 532-27-4 | | | | | 0.00003 | I | | | 76 | | 1,100 | 3 | | | | 247 | 4.50 |
| CHLOROANILINE, P- | 106-47-8 | 0.004 | I | 0.2 | P | | | | | 460 | | 3,900 | 1 | | | | 232 | |
| CHLOROBENZENE | 108-90-7 | 0.02 | I | | | 0.05 | P | | | 200 | X | 490 | 3 | 13,100 | 15,000 | X | 132 | 0.84 |
| CHLOROBENZILATE | 510-15-6 | 0.02 | I | 0.11 | C | | | 0.000031 | C | 2,600 | | 13 | 4 | | | | 415 | 3.60 |
| CHLOROBUTANE, 1- | 109-69-3 | **[0.4] 0.04** | P | | | | | | | 580 | X | 680 | 1,2,3,4 | 13,200 | 15,000 | X | 79 | |
| CHLORODIBROMOMETHANE | 124-48-1 | 0.02 | I | 0.084 | I | | | 0.000027 | C | 83 | X | 4,200 | 4,6,7,9 | 13,100 | 15,100 | X | 116 | 1.39 |
| CHLORODIFLUOROMETHANE | 75-45-6 | | | | | 50 | I | | | 59 | X | 2,899 | 4 | 13,200 | 15,000 | X | -41 | |
| CHLOROETHANE | 75-00-3 | 0.4 | N | 0.0029 | N | 10 | I | | | 42 | X | 5,700 | 1 | 13,100 | 15,000 | X | 12 | 4.50 |
| CHLOROFORM | 67-66-3 | 0.01 | I | | | 0.098 | D | 0.000023 | I | 56 | X | 8,000 | 1,2,3 | 13,100 | 15,000 | X | 61 | 0.01 |
| CHLORONAPHTHALENE, 2- | 91-58-7 | 0.08 | I | | | | | | | 8,500 | | 11.7 | 1 | | | | 256 | |
| CHLORONITROBENZENE, P- | 100-00-5 | 0.001 | P | 0.0063 | P | 0.0006 | P | | | 480 | | 220 | 1 | | | | 242 | |
| CHLOROPHENOL, 2- | 95-57-8 | 0.005 | I | | | | | | | 400 | X | 24,000 | 1,3,4 | 12,900 | 14,900 | X | 175 | |
| CHLOROPRENE | 126-99-8 | 0.02 | H | | | **[0.007] 0.02** | **[H] I** | **0.003** | **I** | 50 | X | 1,736 | 9 | 13,100 | 15,000 | X | 59 | 0.69 |
| CHLOROPROPANE, 2- | 75-29-6 | | | | | 0.1 | H | | | 260 | X | 3,100 | 1,3,5 | 13,200 | 15,000 | X | 47 | |
| CHLOROTHALONIL | 1897-45-6 | 0.015 | I | 0.0031 | C | | | 0.00000089 | C | 980 | | 0.6 | 2 | | | | 350 | |
| CHLOROTOLUENE, O- | 95-49-8 | 0.02 | I | | | | | | | 760 | X | 422 | **[14,15] 1,4,5** | 13,100 | 15,000 | X | 159 | |
| CHLOROTOLUENE, P- | 106-43-4 | **[0.07] 0.02** | **[P] X** | | | | | | | 375 | X | 106 | 12 | 13,000 | 14,900 | X | 162 | |
| CHLORPYRIFOS | 2921-88-2 | **[0.003] 0.001** | **[I] D** | | | | | | | 4,600 | | 1.12 | 2,4,6,7 | | | | 377 | |
| CHLORSULFURON | 64902-72-3 | 0.05 | I | | | | | | | 11 | | 192 | 2,5,6,8,9 | | | | 531 | |
| CHLORTHAL-DIMETHYL (DACTHAL) (DCPA) | 1861-32-1 | 0.01 | I | | | | | | | 6,500 | | 0.5 | 2,5,7 | | | | 360 | 1.37 |
| CHRYSENE | 218-01-9 | | | 0.0073 | N | | | 0.000011 | C | 490,000 | | 0.0019 | 1 | | | | 448 | 0.13 |
| CRESOL(S) | 1319-77-3 | 0.005 | S | | | 0.06 | C | | | 25 | X | 20,000 | 2 | 13,000 | 14,900 | X | 139 | 5.16 |
| CRESOL, 4,6-DINITRO-O- | 534-52-1 | 0.0001 | P | | | | | | | 257 | | 150 | 4 | | | | 312 | 6.02 |
| CRESOL, O- (METHYLPHENOL, 2-) | 95-48-7 | 0.05 | I | | | | | | | 22 | X | 2,500 | 3,5,6 | 13,000 | 14,900 | | 191 | 18.07 |
| CRESOL, M (METHYLPHENOL, 3-) | 108-39-4 | 0.05 | I | | | | | | | 35 | | 2,500 | 2 | | | X | 202 | 5.16 |
| CRESOL, P (METHYLPHENOL, 4-) | 106-44-5 | 0.005 | H | | | | | | | 49 | | 22,000 | 6 | | | | 202 | 9.03 |
| CRESOL, P-CHLORO-M- | 59-50-7 | **[0.005] 0.1** | **[S] X** | | | | | | | 780 | | 3,846 | 2 | | | | 235 | |
| CROTONALDEHYDE | 4170-30-3 | | | 1.9 | S | | | | | 5.6 | X | 180,000 | 3 | 13,000 | 14,900 | X | 104 | 18.07 |

[1] Aqueous solubility references are keyed to the numbered list found at § 250.304(f). Where there are multiple sources cited, the table value is the median of the values in the individual references.

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
P = EPA Provisional Peer-Reviewed Toxicity Value
S = surrogate
T = TEF
TE = TERA ITER Peer-Reviewed Value
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**A. Organic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfDo (mg/kg-d)* | | *CSFo (mg/kg-d)$^{-1}$* | | *RfCi (mg/m$^3$)* | | *IUR (µg/m$^3$)$^{-1}$* | | *Koc (L/KG)* | *VOC?* | *Aqueous Sol (mg/L)* | *Aqueous Sol Reference[1]* | *TF Vol from Surface Soil* | *TF Vol from SubSurface Soil* | *Organic Liquid* | *Boiling Point (degrees C)* | *Degradation Coefficient (K)(yr$^{-1}$)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CROTONALDEHYDE, TRANS- | 123-73-9 | **0.001** | **P** | 1.9 | H | | | | | 6.1 | X | 156,000 | 1 | 13,100 | 15,100 | X | 104 | 18.07 |
| CUMENE (ISOPROPYL BENZENE) | 98-82-8 | 0.1 | I | | | 0.4 | I | | | 2,800 | X | 50 | 1,5,6 | 13,100 | 15,100 | X | 152 | 15.81 |
| CYANAZINE | 21725-46-2 | 0.002 | M | 0.84 | H | | | | | 199 | | 171 | 2,5 | | | | 369 | |
| CYCLOHEXANE | 110-82-7 | | | | | 6 | I | | | 479 | X | 55 | 1,2,4,5,6 | 13,100 | 15,100 | X | 81 | |
| CYCLOHEXANONE | 108-94-1 | 5 | I | | | **0.7** | **P** | | | 66 | X | 36,500 | 1,2,4,5 | 13,000 | 14,900 | X | 157 | |
| CYFLUTHRIN | 68359-37-5 | 0.025 | I | | | | | | | 130,000 | | 0.001 | 2 | | | | 448 | |
| CYROMAZINE | 66215-27-8 | 0.0075 | I | | | | | | | 1,200 | | 11,000 | 12 | | | | 222 | |
| DDD, 4,4'- | 72-54-8 | 0.002 | P | 0.24 | I | | | 0.000069 | C | 44,000 | | 0.16 | 5,6,7 | | | | 350 | 0.02 |
| DDE, 4,4'- | 72-55-9 | | | 0.34 | I | | | 0.000097 | C | 87,000 | | 0.04 | 5 | | | | 348 | 0.02 |
| DDT, 4,4'- | 50-29-3 | 0.0005 | I | 0.34 | I | | | 0.000097 | I | 240,000 | | 0.0055 | 5,6,7 | | | | 260 | 0.02 |
| DI(2-ETHYLHEXYL)ADIPATE | 103-23-1 | 0.6 | I | 0.0012 | I | | | | | 47,000,000 | | 200 | 5 | | | X | 214 | 4.50 |
| DIALLATE | 2303-16-4 | | | 0.061 | H | | | | | 190 | | 40 | 2,4,6,8 | | | X | 328 | 1.39 |
| DIAMINOTOLUENE, 2,4- | 95-80-7 | | | 3.8 | C | | | 0.0011 | C | 36 | | 7,470 | 4 | | | | 292 | 0.69 |
| DIAZINON | 333-41-5 | 0.0007 | D | | | | | | | 500 | | 50 | 2,4,6,8 | | | X | 306 | |
| DIBENZO[A,H]ANTHRACENE | 53-70-3 | | | 7.3 | N | | | 0.0012 | C | 1,800,000 | | 0.0006 | 1,5,6 | | | | 524 | 0.13 |
| DIBENZOFURAN | 132-64-9 | 0.001 | **[P] X** | | | | | | | 10,233 | | 4.48 | 1,6,7,9 | | | | 287 | 7.23 |
| DIBROMO-3-CHLOROPROPANE, 1,2- | 96-12-8 | 0.0002 | P | 0.8 | P | 0.0002 | I | 0.006 | P | 140 | X | 1,000 | 4 | 13,000 | 15,000 | X | 196 | 0.69 |
| DIBROMOBENZENE, 1,4- | 106-37-6 | 0.01 | I | | | | | | | 1,600 | | 20 | 1 | | | | 220 | |
| DIBROMOETHANE, 1,2-(ETHYLENE DIBROMIDE) | 106-93-4 | 0.009 | I | 2 | I | 0.009 | I | 0.0006 | I | 54 | X | 4,150 | 1,2,3,5 | 13,100 | 15,100 | X | 131 | 2.11 |
| DIBROMOMETHANE | 74-95-3 | 0.01 | H | | | **0.004** | **X** | | | 110 | X | 11,400 | 1 | 13,100 | 15,100 | X | 96 | 4.50 |
| DIBUTYL PHTHALATE, N- | 84-74-2 | 0.1 | I | | | | | | | 1,600 | | 400 | 1,2,3 | | | X | 340 | 11.00 |
| DICAMBA | 1918-00-9 | 0.03 | I | | | | | | | 0.27 | | 5,600 | 4,5,6,8,10 | | | | 329 | |
| DICHLOROACETIC ACID | 76-43-6 | 0.004 | I | **0.05** | **I** | | | | | 8.1 | X | 1,000,000 | 1 | 12,900 | 14,900 | X | 194 | |
| DICHLORO-2-BUTENE, 1,4- | 764-41-0 | | | | | | | 0.0042 | P | 180 | X | 850 | 9 | 13,100 | 15,000 | X | 156 | |
| DICHLORO-2-BUTENE, TRANS-1,4- | 110-57-6 | | | | | | | 0.0042 | S | 215 | X | 850 | 9 | 12,900 | 14,800 | X | 155 | |
| DICHLOROBENZENE, 1,2- | 95-50-1 | 0.09 | I | | | 0.2 | H | | | 350 | X | 147 | 1,4,5,6,7 | 13,100 | 15,100 | X | 180 | 0.69 |
| DICHLOROBENZENE, 1,3- | 541-73-1 | 0.003 | N | | | | | | | 360 | X | 106 | 1 | 13,100 | 15,100 | X | 173 | 0.69 |
| DICHLOROBENZENE, P- | 106-46-7 | 0.07 | D | 0.0054 | C | 0.8 | I | 0.000011 | C | 510 | X | 82.9 | 1 | 12,900 | 14,900 | | 174 | 0.69 |
| DICHLOROBENZIDINE, 3,3'- | 91-94-1 | | | 0.45 | I | | | 0.00034 | C | 22,000 | | 3.11 | 4,5,6 | | | | 368 | 0.69 |
| DICHLORODIFLUOROMETHANE (FREON 12) | 75-71-8 | 0.2 | I | | | **[0.2] 0.1** | **[H] X** | | | 360 | X | 280 | 1 | 13,200 | 15,000 | X | -30 | 0.69 |
| DICHLOROETHANE, 1,1- | 75-34-3 | 0.2 | P | 0.0057 | C | 0.5 | H | 0.0000016 | C | 52 | X | 5,000 | 2 | 13,100 | 15,000 | X | 57 | 0.16 |
| DICHLOROETHANE, 1,2- | 107-06-2 | **[0.02] 0.006** | **[P] X** | 0.091 | I | **[2.4] 0.007** | **[D] P** | 0.000026 | I | 38 | X | 8,412 | 1,2,3,4 | 13,100 | 15,000 | X | 83 | 0.07 |
| DICHLOROETHYLENE, 1,1- | 75-35-4 | 0.05 | I | | | 0.2 | I | | | 65 | X | 2,500 | 1,4,5 | 13,100 | 15,000 | X | 32 | 0.19 |
| DICHLOROETHYLENE, CIS-1,2- | 156-59-2 | **[0.01] 0.002** | **[P] I** | | | | | | | 49 | X | 3,500 | 1 | 13,100 | 15,000 | X | 60 | 0.01 |
| DICHLOROETHYLENE, TRANS-1,2- | 156-60-5 | 0.02 | I | | | 0.06 | P | | | 47 | X | 6,300 | 1 | 13,100 | 15,000 | X | 48 | 0.01 |

[1] Aqueous solubility references are keyed to the numbered list found at § 250.304(f). Where there are multiple sources cited, the table value is the median of the values in the individual references.

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
P = EPA Provisional Peer-Reviewed Toxicity Value
S = surrogate
T = TEF
TE = TERA ITER Peer-Reviewed Value
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**A. Organic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfDo (mg/kg-d)* | | *CSFo (mg/kg-d)$^{-1}$* | | *RfCi (mg/m$^3$)* | | *IUR (µg/m$^3$)$^{-1}$* | | *Koc (L/KG)* | *VOC?* | *Aqueous Sol (mg/L)* | *Aqueous Sol Reference[1]* | *TF Vol from Surface Soil* | *TF Vol from SubSurface Soil* | *Organic Liquid* | *Boiling Point (degrees C)* | *Degradation Coefficient (K)(yr$^{-1}$)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DICHLOROMETHANE (METHYLENE CHLORIDE) | 75-09-2 | **[0.06] 0.006** | I | **[0.0075] 0.002** | I | **[1] 0.6** | **[D] I** | **[0.00000047] 0.00000001** | I | 16 | X | 20,000 | 1,2,3 | 13,100 | 15,000 | X | 40 | 4.50 |
| DICHLOROPHENOL, 2,4- | 120-83-2 | 0.003 | I | | | | | | | 160 | | 4,500 | 1 | | | | 210 | 5.88 |
| DICHLOROPHENOXYACETIC ACID, 2,4- (2,4-D) | 94-75-7 | 0.01 | I | | | | | | | 59 | | 677 | 4,5,6,7,10 | | | | 215 | 1.39 |
| DICHLOROPROPANE, 1,2- | 78-87-5 | 0.09 | D | 0.036 | C | 0.004 | I | 0.00001 | C | 47 | X | 2,700 | 1,3,4 | 13,100 | 15,000 | X | 96 | 0.10 |
| DICHLOROPROPENE, 1,3- | 542-75-6 | 0.03 | I | 0.1 | I | 0.02 | I | 0.000004 | I | 27 | X | 2,700 | 6 | 13,100 | 15,000 | X | 108 | 22.38 |
| DICHLOROPROPIONIC ACID, 2,2- (DALAPON) | 75-99-0 | 0.03 | I | | | | | | | 62 | X | 500,000 | 5 | 13,000 | 14,900 | X | 190 | 2.11 |
| DICHLORVOS | 62-73-7 | 0.0005 | I | 0.29 | I | 0.0005 | I | 0.000083 | C | 50 | | 10,000 | 2,4,5 | | | X | 234 | |
| DICYCLOPENTADIENE | 77-73-6 | 0.008 | P | | | 0.007 | P | | | 810 | X | 40 | 5 | 13,000 | 14,900 | | 167 | |
| DIELDRIN | 60-57-1 | 0.00005 | I | 16 | I | | | 0.0046 | I | 11,000 | | 0.17 | 4,5,6 | | | | 385 | 0.12 |
| DIETHANOLAMINE | 111-42-2 | | | | | 0.003 | C | | | 4 | | 1,000,000 | 2,3,9 | | | X | 269 | |
| DIETHYL PHTHALATE | 84-66-2 | 0.8 | I | | | | | | | 81 | | 1,080 | 4,5,6 | | | X | 298 | 2.25 |
| DIFLUBENZURON | 35367-38-5 | 0.02 | I | | | | | | | 1,000 | | 0.2 | 2 | | | | 201 | |
| DIISOPROPYL METHYLPHOSPHONATE | 1445-75-6 | 0.08 | I | | | | | | | 10 | X | 160,000 | 9 | 13,000 | 14,900 | X | 190 | |
| DIMETHOATE | 60-51-5 | 0.0002 | I | | | | | | | 110 | | 25,000 | 4 | | | | 361 | 2.26 |
| DIMETHOXYBENZIDINE, 3,3- | 119-90-4 | | | **[0.014] 1.6** | **[H] X** | | | | | 1,300 | | 60 | 9 | | | | 331 | 0.69 |
| DIMETHRIN | 70-38-2 | 0.3 | M | | | | | | | 27,000 | | 0.036 | 13 | | | | 353 | |
| DIMETHYLAMINOAZOBENZENE, P- | 60-11-7 | | | 4.6 | C | | | 0.0013 | C | 1,000 | | 13.6 | 7 | | | | 335 | 4.50 |
| DIMETHYLANILINE, N,N- | 121-69-7 | 0.002 | I | | | | | | | 180 | X | 1,200 | 5,6,7,9 | 13,000 | 14,900 | X | 192 | 0.69 |
| DIMETHYLBENZIDINE, 3,3- | 119-93-7 | | | 11 | **[H] P** | | | | | 22,000 | | 1,300 | 10 | | | | 300 | 18.07 |
| DIMETHYL METHYLPHOSPHONATE | 756-79-6 | 0.06 | P | 0.0017 | P | | | | | 5 | X | 1,000,000 | 14 | 13,000 | 14,900 | X | 181 | |
| DIMETHYLPHENOL, 2,4- | 105-67-9 | 0.02 | I | | | | | | | 130 | | 7,869 | 1,4,6,7 | | | X | 211 | 18.07 |
| DINITROBENZENE, 1,3- | 99-65-0 | 0.0001 | I | | | | | | | 150 | | 523 | 3,5,6,7 | | | | 291 | 0.69 |
| DINITROPHENOL, 2,4- | 51-28-5 | 0.002 | I | | | | | | | 0.79 | | 5,600 | 2,4,5,6,7 | | | | 332 | 0.48 |
| DINITROTOLUENE, 2,4- | 121-14-2 | 0.002 | I | 0.31 | C | | | 0.000089 | C | 51 | | 270 | 4,5,6 | | | | 300 | 0.69 |
| DINITROTOLUENE, 2,6- (2,6-DNT) | 606-20-2 | 0.001 | P | | | | | | | 74 | | 200 | 6 | | | | 300 | 0.69 |
| DINOSEB | 88-85-7 | 0.001 | I | | | | | | | 120 | | 50 | 5 | | | | 223 | 1.03 |
| DIOXANE, 1,4- | 123-91-1 | **[0.1] 0.03** | **[D] I** | **[0.011] 0.1** | I | **[3.6] 0.03** | D | **[0.0000077] 0.000006** | **[C] I** | 7.8 | X | 1,000,000 | 5 | 13,000 | 14,900 | X | 101 | 0.69 |
| DIPHENAMID | 957-51-7 | 0.03 | I | | | | | | | 200 | | 260 | 5 | | | | 210 | |
| DIPHENYLAMINE | 122-39-4 | 0.025 | I | | | | | | | 190 | | 300 | 3 | | | | 302 | 4.50 |
| DIPHENYLHYDRAZINE, 1,2- | 122-66-7 | | | 0.8 | I | | | 0.00022 | I | 660 | | 0.252 | 6 | | | | 309 | 0.69 |
| DIQUAT | 85-00-7 | 0.0022 | I | | | | | | | 2.6 | | 700,000 | 5 | | | | 355 | |
| DISULFOTON | 298-04-4 | 0.00004 | I | | | | | | | 1,000 | | 25 | 4,5,6 | | | X | 332 | 6.02 |
| DITHIANE, 1,4- | 505-29-3 | 0.01 | I | | | | | | | 22.7 | **[x] X** | 3,000 | 15 | 13,000 | 14,900 | | 199 | |
| DIURON | 330-54-1 | 0.002 | I | | | | | | | 300 | | 42 | 2,4,5 | | | | 354 | |
| ENDOSULFAN | 115-29-7 | 0.006 | I | | | | | | | 2,000 | | 0.48 | 4 | | | | 401 | 2.78 |

[1] Aqueous solubility references are keyed to the numbered list found at § 250.304(f). Where there are multiple sources cited, the table value is the median of the values in the individual references.

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
P = EPA Provisional Peer-Reviewed Toxicity Value
S = surrogate
T = TEF
TE = TERA ITER Peer-Reviewed Value
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**A. Organic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfDo (mg/kg-d)* | | *CSFo (mg/kg-d)$^{-1}$* | | *RfCi (mg/m$^3$)* | | *IUR (µg/m$^3$)$^{-1}$* | | *Koc (L/KG)* | *VOC?* | *Aqueous Sol (mg/L)* | *Aqueous Sol Reference[1]* | *TF Vol from Surface Soil* | *TF Vol from SubSurface Soil* | *Organic Liquid* | *Boiling Point (degrees C)* | *Degradation Coefficient (K)(yr$^{-1}$)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ENDOSULFAN I (ALPHA) | 959-98-8 | 0.006 | S | | | | | | | 2,000 | | 0.5 | 6 | | | | 401 | |
| ENDOSULFAN II (BETA) | 33213-65-9 | 0.006 | S | | | | | | | 2,300 | | 0.45 | 6 | | | | 390 | |
| ENDOSULFAN SULFATE | 1031-07-8 | 0.006 | S | | | | | | | 2,300 | | 0.117 | 7,9 | | | | 409 | |
| ENDOTHALL | 145-73-3 | 0.02 | I | | | | | | | 120 | | 100,000 | 2 | | | | 350 | |
| ENDRIN | 72-20-8 | 0.0003 | I | | | | | | | 11,000 | | 0.23 | 4,6,7,9 | | | | 245 | |
| EPICHLOROHYDRIN | 106-89-8 | 0.006 | P | 0.0099 | I | 0.001 | I | 0.0000012 | I | 35 | X | 65,800 | 1,3,4 | 13,000 | 14,900 | X | 116 | 4.50 |
| ETHEPHON | 16672-87-0 | 0.005 | I | | | | | | | 2 | | 1,240,000 | 12 | | | | 201 | |
| ETHION | 563-12-2 | 0.0005 | I | | | | | | | 8,700 | | 0.85 | 4,6,9,10 | | | X | 415 | |
| ETHOXYETHANOL, 2-(EGEE) | 110-80-5 | **[0.4] 0.09** | **[H] P** | | | 0.2 | I | | | 12 | X | 1,000,000 | 2 | 13,200 | 15,000 | X | 136 | 4.50 |
| ETHYL ACETATE | 141-78-6 | 0.9 | I | | | | | | | 59 | X | 80,800 | 1,2,3,4,5,6 | 13,100 | 15,000 | X | 77 | 18.07 |
| ETHYL ACRYLATE | 140-88-5 | | | 0.048 | H | | | | | 110 | X | 15,000 | 1,2,6 | 13,100 | 15,100 | X | 100 | 18.07 |
| ETHYL BENZENE | 100-41-4 | 0.1 | I | | | 1 | I | | | 220 | X | 161 | 1,3,4 | 13,100 | 15,000 | X | 136 | 1.11 |
| ETHYL DIPROPYLTHIOCARBAMATE, S-(EPTC) | 759-94-4 | 0.025 | I | | | | | | | 240 | X | 365 | 2 | 12,900 | 14,900 | X | 127 | |
| ETHYL ETHER | 60-29-7 | 0.2 | I | | | | | | | 68 | X | 60,400 | 1 | 13,100 | 15,100 | X | 35 | |
| ETHYL METHACRYLATE | 97-63-2 | 0.09 | H | | | **0.3** | **P** | | | 22 | X | 4,635.5 | 9,10 | 13,100 | 15,000 | X | 117 | |
| **ETHYLENE CHLORHYDRIN** | **107-07-3** | **0.02** | **P** | | | | | | | **1** | **X** | **1,000,000** | **9** | **13,000** | **14,900** | **X** | **128** | |
| ETHYLENE GLYCOL | 107-21-1 | 2 | I | | | 0.4 | C | | | 4.4 | X | 1,000,000 | 2 | 13,100 | 15,100 | X | 198 | 10.54 |
| ETHYLENE THIOUREA (ETU) | 96-45-7 | 0.00008 | I | 0.045 | C | | | 0.000013 | C | 0.23 | | 20,000 | 2 | | | | 347 | 4.50 |
| ETHYL P-NITROPHENYL PHENYLPHOSPHORO THIOATE | 2104-64-5 | 0.00001 | I | | | | | | | 1,200 | | 3.1 | 4 | | | | 215 | |
| FENAMIPHOS | 22224-92-6 | 0.00025 | I | | | | | | | 300 | | 329 | 2 | | | | 390 | |
| FENVALERATE (PYDRIN) | 51630-58-1 | 0.025 | I | | | | | | | 4,400 | | 0.085 | 5 | | | X | 300 | |
| FLUOMETURON | 2164-17-2 | 0.013 | I | | | | | | | 68 | | 97.5 | 2,5,6,8 | | | | 318 | |
| FLUORANTHENE | 206-44-0 | 0.04 | I | | | | | | | 49,000 | | 0.26 | 1,5,6 | | | | 375 | 0.29 |
| FLUORENE | 86-73-7 | 0.04 | I | | | | | | | 7,900 | | 1.9 | 1 | | | | 298 | 2.11 |
| FLUOROTRICHLOROMETHANE (FREON 11) | 75-69-4 | 0.3 | I | | | 0.7 | H | | | 130 | X | 1,090 | 1,4,5,6 | 13,100 | 15,000 | X | 24 | 0.35 |
| FONOFOS | 944-22-9 | 0.002 | I | | | | | | | 1,100 | | 13 | 5,6,8 | | | X | 324 | |
| FORMALDEHYDE | 50-00-0 | 0.2 | I | | | 0.0098 | D | 0.000013 | I | 3.6 | X | 55,000 | 1 | 13,100 | 15,100 | X | -21 | 18.07 |
| FORMIC ACID | 64-18-6 | **[2] 0.9** | **[H] P** | | | **[0.003] 0.0003** | **[P] X** | | | 0.54 | X | 1,000,000 | 2 | 13,000 | 14,900 | X | 101 | 18.07 |
| FOSETYL-AL | 39148-24-8 | 3 | I | | | | | | | 310 | | 120,000 | 2 | | | | 464 | |
| FURAN | 110-00-9 | 0.001 | I | | | | | | | 130 | X | 10,000 | 1 | 13,100 | 15,000 | X | 31 | 2.25 |
| FURFURAL | 98-01-1 | 0.003 | I | | | 0.05 | H | | | 6.3 | X | 91,000 | 1,2,3 | 13,000 | 14,900 | X | 162 | |
| GLYPHOSATE | 1071-83-6 | 0.1 | I | | | | | | | 3,500 | | 12,000 | 1,5,6 | | | | 417 | |
| HEPTACHLOR | 76-44-8 | 0.0005 | I | 4.5 | I | | | 0.0013 | I | 6,800 | | 0.18 | 4,6,7 | | | | 310 | 46.84 |
| HEPTACHLOR EPOXIDE | 1024-57-3 | 0.000013 | I | 9.1 | I | | | 0.0026 | I | 21,000 | | 0.311 | 4,6,7,9 | | | | 341 | 0.23 |
| HEXACHLOROBENZENE | 118-74-1 | 0.0008 | I | 1.6 | I | | | 0.00046 | I | 3,800 | | 0.006 | 1,4,5 | | | | 319 | 0.06 |
| HEXACHLOROBUTADIENE | 87-68-3 | 0.001 | P | 0.078 | I | | | 0.000022 | I | 4,700 | | 2.89 | 4,5,6,7 | | | X | 215 | 0.69 |

[1] Aqueous solubility references are keyed to the numbered list found at § 250.304(f). Where there are multiple sources cited, the table value is the median of the values in the individual references.

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
P = EPA Provisional Peer-Reviewed Toxicity Value
S = surrogate
T = TEF
TE = TERA ITER Peer-Reviewed Value
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**A. Organic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfDo (mg/kg-d)* | | *CSFo $(mg/kg\text{-}d)^{-1}$* | | *RfCi $(mg/m^3)$* | | *IUR $(\mu g/m^3)^{-1}$* | | *Koc (L/KG)* | *VOC?* | *Aqueous Sol (mg/L)* | *Aqueous Sol Reference[1]* | *TF Vol from Surface Soil* | *TF Vol from SubSurface Soil* | *Organic Liquid* | *Boiling Point (degrees C)* | *Degradation Coefficient $(K)(yr^{-1})$* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HEXACHLOROCYCLOPENTADIENE | 77-47-4 | 0.006 | I | | | 0.0002 | I | | | 7,200 | | 1.8 | 5,6,7 | | | X | 239 | 4.50 |
| HEXACHLOROETHANE | 67-72-1 | **[0.001] 0.0007** | I | **[0.014] 0.04** | I | **0.03** | **I** | **[0.000004] 0.00001** | **[I] C** | 2,200 | X | 50 | 1 | 13,000 | 15,000 | | 187 | 0.69 |
| HEXANE | 110-54-3 | 0.06 | H | | | 0.7 | I | | | 3,600 | X | 9.5 | 1,5,6 | 13,100 | 15,000 | X | 69 | |
| HEXAZINONE | 51235-04-2 | 0.033 | I | | | | | | | 41 | | 330,000 | 1,2 | | | | 408 | |
| HEXYTHIAZOX (SAVEY) | 78587-05-0 | 0.025 | I | | | | | | | 6,500 | | 0.5 | 2 | | | | 539 | |
| HMX | 2691-41-0 | 0.05 | I | | | | | | | 4 | | 5 | 16 | | | | 436 | |
| HYDRAZINE/HYDRAZINE SULFATE | 302-01-2 | | | 3 | I | **[0.0002] 0.00003** | **[C] P** | 0.0049 | I | 0.0053 | X | 1,000,000 | 2 | 13,000 | 15,000 | X | 114 | 18.07 |
| HYDROQUINONE | 123-31-9 | 0.04 | P | **[0.056] 0.06** | P | | | | | 10 | | 70,000 | 2,3,5 | | | | 285 | 18.07 |
| INDENO[1,2,3-CD]PYRENE | 193-39-5 | | | 0.73 | N | | | 0.00011 | C | 31,000,000 | | 0.062 | 5 | | | | 536 | 0.17 |
| IPRODIONE | 36734-19-7 | 0.04 | I | | | | | | | 1,100 | | 13 | 2 | | | | 545 | |
| ISOBUTYL ALCOHOL | 78-83-1 | 0.3 | I | | | | | | | 60 | X | 81,000 | 1,2,3,4,5 | 13,000 | 14,900 | X | 108 | 17.57 |
| ISOPHORONE | 78-59-1 | 0.2 | I | 0.00095 | I | 2 | C | | | 31 | | 12,000 | 2,4,5 | | | X | 215 | 4.5 |
| ISOPROPYL METHYLPHOSPHONATE | 1832-54-8 | 0.1 | I | | | | | | | **[1.64] 1.84** | | 50,000 | 13 | | | X | 230 | |
| KEPONE | 143-50-0 | **[0.0005] 0.0003** | **[D] I** | **[16] 10** | **[C] I** | | | 0.0046 | C | 55,000 | | 7.6 | 4 | | | | 350 | 0.17 |
| MALATHION | 121-75-5 | 0.02 | I | | | | | | | 1,300 | | 143 | 4 | | | X | 351 | 2.46 |
| MALEIC HYDRAZIDE | 123-33-1 | 0.5 | I | | | | | | | 2.8 | | 6,000 | 4 | | | | 260 | |
| MANEB | 12427-38-2 | 0.005 | I | | | | | | | 1 | | 23 | 9,13 | | | | 351 | |
| MERPHOS OXIDE | 78-48-8 | 0.00003 | I | | | | | | | 53,000 | | 2.3 | 8,10,12 | | | X | 392 | |
| METHACRYLONITRILE | 126-98-7 | 0.0001 | I | | | **[0.0007] 0.03** | **[H] P** | | | 21 | X | 25,700 | 1 | 13,100 | 15,100 | X | 90 | |
| METHAMIDOPHOS | 10265-92-6 | 0.00005 | I | | | | | | | 5 | | 2,000,000 | 5 | | | | 223 | |
| METHANOL | 67-56-1 | **[0.5] 2** | I | | | **[4] 20** | **[C] I** | | | 2.8 | X | 1,000,000 | 2 | 13,100 | 15,100 | X | 65 | 36.14 |
| METHOMYL | 16752-77-5 | 0.025 | I | | | | | | | 20 | | 58,000 | 2 | | | | 228 | |
| METHOXYCHLOR | 72-43-5 | 0.005 | I | | | | | | | 63,000 | | 0.045 | 4,5,6 | | | | 346 | 0.69 |
| METHOXYETHANOL, 2- | 109-86-4 | **[0.003] 0.005** | P | | | 0.02 | I | | | | X | 1,000,000 | 2 | 13,100 | 15,000 | X | 124 | 4.50 |
| METHYL ACETATE | 79-20-9 | 1 | H | | | | | | | 30 | X | 243,500 | 4,5,6 | 13,100 | 15,100 | X | 57 | |
| METHYL ACRYLATE | 96-33-3 | 0.03 | H | | | **0.02** | **P** | | | 55 | X | 52,000 | 1,2,5 | 13,100 | 15,100 | X | 70 | 18.07 |
| METHYL CHLORIDE | 74-87-3 | **[0.004]** | **[M]** | 0.013 | H | 0.09 | I | 0.0000018 | H | 6 | X | 6,180 | 1,2,3,4 | 13200 | 15,000 | X | -24 | 4.50 |
| METHYL ETHYL KETONE | 78-93-3 | 0.6 | I | | | 5 | I | | | 32 | X | 275,000 | 1,2,3,4,5 | 13,100 | 15,100 | X | 80 | 2.57 |
| **METHYL HYDRAZINE** | **60-34-4** | **0.001** | **P** | | | **0.00002** | **X** | **0.001** | **X** | **1** | **X** | **1,000,000** | **2** | **1,300** | **14,900** | **X** | **88** | **5.27** |
| METHYL ISOBUTYL KETONE | 108-10-1 | 0.08 | H | | | 3 | I | | | 17 | X | 19,550 | 1,2,4,5 | 13,100 | 15,100 | X | 117 | 18.07 |
| METHYL ISOCYANATE | 624-83-9 | | | | | 0.001 | C | | | 10 | X | 100,000 | 7 | 13,000 | 15,000 | X | 40 | |
| METHYL N-BUTYL KETONE (2-HEXANONE) | 591-78-6 | **[0.04] 0.005** | **[N] I** | | | **[0.005] 0.03** | **[N] I** | | | 54 | X | 17,500 | 1 | 13,100 | 15,100 | X | 128 | |
| METHYL METHACRYLATE | 80-62-6 | 1.4 | I | | | 0.7 | I | | | 10 | X | 15,600 | 1 | 13,100 | 15,100 | X | 100 | 4.50 |

[1] Aqueous solubility references are keyed to the numbered list found at § 250.304(f). Where there are multiple sources cited, the table value is the median of the values in the individual references.

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
P = EPA Provisional Peer-Reviewed Toxicity Value
S = surrogate
T = TEF
TE = TERA ITER Peer-Reviewed Value
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**A. Organic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfDo (mg/kg-d)* | | *CSFo $(mg/kg\text{-}d)^{-1}$* | | *RfCi $(mg/m^3)$* | | *IUR $(\mu g/m^3)^{-1}$* | | *Koc (L/KG)* | *VOC?* | *Aqueous Sol (mg/L)* | *Aqueous Sol Reference[1]* | *TF Vol from Surface Soil* | *TF Vol from SubSurface Soil* | *Organic Liquid* | *Boiling Point (degrees C)* | *Degradation Coefficient $(K)(yr^{-1})$* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| METHYL METHANESULFONATE | 66-27-3 | | | 0.099 | C | | | 0.000028 | C | 5.2 | | 200,000 | 2 | | | X | 203 | |
| METHYL PARATHION | 298-00-0 | 0.00025 | I | | | | | | | 790 | | 25 | 4,5,6 | | | | 348 | 3.61 |
| METHYL STYRENE (MIXED ISOMERS) | 25013-15-4 | 0.006 | H | | | 0.04 | H | | | 2,200 | X | 89 | 9 | 13,100 | 15,000 | X | 163 | |
| METHYL TERT-BUTYL ETHER (MTBE) | 1634-04-4 | | | 0.0018 | C | 3 | I | 0.00000026 | C | 12 | X | 45,000 | 1,2,4,6 | 13,100 | 15,100 | X | 55 | 0.69 |
| METHYLCHLOROPHENOXY ACETIC ACID (MCPA) | 94-74-6 | 0.0005 | I | | | | | | | 112 | | 1,000 | 5,6,8,9 | | | | 287 | 1.39 |
| METHYLENE BIS(2-CHLOROANILINE), 4,4'- | 101-14-4 | 0.002 | P | 0.1 | P | | | 0.00043 | C | 3,000 | | 13.9 | 10 | | | | 379 | |
| METHYLNAPHTHALENE, 2- | 91-57-6 | 0.004 | I | | | 0.003 | S | | | 16,000 | | 25 | 1 | | | | 241 | |
| METHYLSTYRENE, ALPHA | 98-83-9 | 0.07 | H | | | | | | | 660 | X | 560 | 9 | 13,100 | 15,100 | X | 165 | |
| METOLACHLOR | 51218-45-2 | 0.15 | I | | | | | | | 182 | X | 530 | 1,5 | 13,000 | 15,000 | X | 100 | |
| METRIBUZIN | 21087-64-9 | 0.025 | I | | | | | | | 95 | | 1,200 | 1,5 | | | | 367 | |
| MONOCHLOROACETIC ACID | 79-11-8 | **[0.01] 0.002** | **[M] H** | | | | | | | 0.24 | X | 858,000 | 17 | 13,000 | 14,900 | | 189 | |
| NAPHTHALENE | 91-20-3 | 0.02 | I | | | 0.003 | I | | | 950 | | 30 | 3 | | | | 218 | 0.98 |
| NAPHTHYLAMINE, 1- | 134-32-7 | | | 1.8 | S | | | 0.00051 | S | 3,200 | | 1,690 | 2 | | | | 301 | 0.69 |
| NAPHTHYLAMINE, 2- | 91-59-8 | | | 1.8 | C | | | 0.00051 | C | 87 | | 6.4 | 6 | | | | 306 | 0.69 |
| NAPROPAMIDE | 15299-99-7 | 0.1 | I | | | | | | | 880 | | 70 | 2 | | | | 399 | |
| NITROANILINE, M- | 99-09-2 | 0.0003 | P | 0.021 | P | 0.001 | P | | | 18 | | 100 | 3 | | | | 306 | |
| NITROANILINE, O- | 88-74-4 | **[0.003] 0.01** | **[P] X** | | | **[0.0001] 0.00005** | **[P] X** | | | 27 | | 1,200 | 6 | | | | 284 | |
| NITROANILINE, P- | 100-01-6 | 0.004 | P | 0.02 | P | 0.006 | P | | | 15 | | 800 | 2 | | | | 332 | |
| NITROBENZENE | 98-95-3 | 0.002 | I | | | 0.009 | I | 0.00004 | I | 130 | | 2,000 | 2 | | | X | 211 | 0.64 |
| NITROGUANIDINE | 556-88-7 | 0.1 | I | | | | | | | 0.13 | | 4,400 | 9 | | | | 231 | |
| NITROPHENOL, 2- | 88-75-5 | 0.008 | S | | | | | | | 37 | | 2,100 | 1,2,3,4,5,6 | | | | 215 | 9.01 |
| NITROPHENOL, 4- | 100-02-7 | 0.008 | N | | | | | | | 230 | | 16,000 | 2 | | | | 279 | 25.81 |
| NITROPROPANE, 2- | 79-46-9 | | | | | 0.02 | I | 0.0027 | H | 20 | X | 16,700 | 1,3,4,5 | 13,000 | 14,900 | X | 120 | 0.69 |
| NITROSODIETHYLAMINE, N- | 55-18-5 | | | 150 | I | | | 0.043 | I | 26 | X | 93,000 | 10 | 13,000 | 14,900 | X | 176 | 0.69 |
| NITROSODIMETHYLAMINE, N- | 62-75-9 | 0.000008 | P | 51 | I | **0.00004** | **X** | 0.014 | I | 8.5 | X | 1,000,000 | 2 | 13,000 | 14,900 | X | 154 | 0.69 |
| NITROSO-DI-N-BUTYLAMINE, N- | 924-16-3 | | | 5.4 | I | | | **[0.016] 0.0016** | I | 450 | | 1,200 | **[0,13] 9,10,11** | | | X | 235 | 0.69 |
| NITROSODI-N-PROPYLAMINE, N- | 621-64-7 | | | 7 | I | | | 0.002 | C | 11 | | 9,900 | 6 | | | X | 206 | 0.69 |
| NITROSODIPHENYLAMINE, N- | 86-30-6 | **[0.02]** | **[P]** | 0.0049 | I | | | 0.0000026 | C | 580 | | 35 | 1 | | | | 269 | 3.72 |
| NITROSO-N-ETHYLUREA, N- | 759-73-9 | | | 27 | C | | | 0.0077 | C | 2 | | 13,000 | 9 | | | | 223 | 1734.48 |
| OCTYL PHTHALATE, DI-N- | 117-84-0 | **[0.04] 0.01** | P | | | | | | | 980,000,000 | | 3 | 5 | | | X | 234 | 0.69 |
| OXAMYL (VYDATE) | 23135-22-0 | 0.025 | I | | | | | | | 7.1 | | 280,000 | 2 | | | | 334 | |
| PARAQUAT | 1910-42-5 | 0.0045 | I | | | | | | | 16,200 | | 660,000 | 6,8 | | | | 352 | |
| PARATHION | 56-38-2 | 0.006 | H | | | | | | | 2,300 | | 20 | 2,4,5,6,7 | | | X | 375 | |

[1] Aqueous solubility references are keyed to the numbered list found at § 250.304(f). Where there are multiple sources cited, the table value is the median of the values in the individual references.

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
P = EPA Provisional Peer-Reviewed Toxicity Value
S = surrogate
T = TEF
TE = TERA ITER Peer-Reviewed Value
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**A. Organic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfDo (mg/kg-d)* | | *CSFo $(mg/kg\text{-}d)^{-1}$* | | *RfCi $(mg/m^3)$* | | *IUR $(\mu g/m^3)^{-1}$* | | *Koc (L/KG)* | *VOC?* | *Aqueous Sol (mg/L)* | *Aqueous Sol Reference[1]* | *TF Vol from Surface Soil* | *TF Vol from SubSurface Soil* | *Organic Liquid* | *Boiling Point (degrees C)* | *Degradation Coefficient $(K)(yr^{-1})$* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PCB-1016 (AROCLOR) | 12674-11-2 | 0.00007 | I | 0.07 | I | | | 0.00002 | I | 110,000 | | 0.25 | 5 | | | X | 325 | |
| PCB-1221 (AROCLOR) | 11104-28-2 | | | 2 | I | | | 0.00057 | I | 1,900 | | 0.59 | 5 | | | X | 275 | |
| PCB-1232 (AROCLOR) | 11141-16-5 | | | 2 | I | | | 0.00057 | I | 1,500 | | 1.45 | 7 | | | X | 290 | |
| PCB-1242 (AROCLOR) | 53469-21-9 | | | 2 | I | | | 0.00057 | I | 48,000 | | 0.1 | 5 | | | X | 325 | |
| PCB-1248 (AROCLOR) | 12672-29-6 | | | 2 | I | | | 0.00057 | I | 190,000 | | 0.054 | 7,9,11 | | | X | 340 | |
| PCB-1254 (AROCLOR) | 11097-69-1 | 0.00002 | I | 2 | I | | | 0.00057 | I | 810,000 | | 0.057 | 5 | | | X | 365 | |
| PCB-1260 (AROCLOR) | 11096-82-5 | | | 2 | I | | | 0.00057 | I | 1,800,000 | | 0.08 | 5 | | | | 385 | |
| PEBULATE | 1114-71-2 | 0.05 | H | | | | | | | 630 | | 92 | 5 | | | X | 303 | |
| PENTACHLOROBENZENE | 608-93-5 | 0.0008 | I | | | | | | | 32,000 | | 0.74 | 1,5,6,7 | | | | 277 | 0.37 |
| PENTACHLOROETHANE | 76-01-7 | | | 0.09 | P | | | | | 1,905 | X | 480 | 1,3 | 13,100 | 15,100 | X | 160 | |
| PENTACHLORONITROBENZENE | 82-68-8 | 0.003 | I | 0.26 | H | | | | | 7,900 | | 0.44 | 4,6,8 | | | | 328 | 0.36 |
| PENTACHLOROPHENOL | 87-86-5 | **[0.03] 0.005** | I | **[0.12] 0.4** | I | | | 0.0000046 | C | 20,000 | | 14 | 1,2,4,5 | | | | 310 | 0.17 |
| PHENACETIN | 62-44-2 | | | 0.0022 | C | | | 0.00000063 | C | 110 | | 763 | 2,3,9 | | | | 341 | 4.50 |
| PHENANTHRENE | 85-01-8 | 0.3 | S | | | | | | | 38,000 | | 1.1 | 1,4,5 | | | | 341 | 0.63 |
| PHENOL | 108-95-2 | 0.3 | I | | | 0.2 | C | | | 22 | X | 84,300 | 1,2,3,4 | 13,000 | 14,900 | | 182 | 36.14 |
| PHENYL MERCAPTAN | 108-98-5 | **[0.00001] 0.001** | **[H] P** | | | | | | | 562 | X | 653 | 5,9 | 13,000 | 15,000 | X | 170 | |
| PHENYLENEDIAMINE, M- | 108-45-2 | 0.006 | I | | | | | | | 12 | | 351,000 | 3 | | | | 286 | 4.50 |
| PHENYLPHENOL, 2- | 90-43-7 | | | 0.0019 | H | | | | | 5,700 | | 700 | 5 | | | | 280 | 18.07 |
| PHORATE | 298-02-2 | 0.0002 | H | | | | | | | 810 | | 50 | 2 | | | X | 319 | |
| PHTHALIC ANHYDRIDE | 85-44-9 | 2 | I | | | 0.02 | C | | | 79 | | 6,170 | 2 | | | | 285 | 13,490.40 |
| PICLORAM | 1918-02-1 | 0.07 | I | | | | | | | 15 | | 430 | 2 | | | | 373 | |
| POLYCHLORINATED BIPHENYLS (AROCLORS) (PCBS) | 1336-36-3 | | | 2 | I | | | 0.00057 | I | | | 0.0505 | 10,13 | | | | 360 | |
| PROMETON | 1610-18-0 | 0.015 | I | | | | | | | 346 | | 750 | 2,5 | | | | 347 | |
| PRONAMIDE | 23950-58-5 | 0.075 | I | | | | | | | 200 | | 15 | 2 | | | | 321 | |
| PROPANIL | 709-98-8 | 0.005 | I | | | | | | | 160 | | 225 | 2 | | | | 355 | |
| PROPANOL, 2- (ISOPROPYL ALCOHOL) | 67-63-0 | | | | | 7 | C | | | 25 | X | 1,000,000 | 2 | 13,000 | 14,900 | X | 82 | |
| PROPAZINE | 139-40-2 | 0.02 | I | | | | | | | 155 | | 8.6 | 1,5 | | | X | 318 | |
| PROPHAM | 122-42-9 | 0.02 | I | | | | | | | 51 | | 250 | 5 | | | | 257 | |
| PROPYLBENZENE, N- | 103-65-1 | **[0.04] 0.1** | **[N] X** | | | **1** | **X** | | | 720 | X | 52 | 6 | 13,100 | 15,100 | X | 159 | |
| PROPYLENE OXIDE | 75-56-9 | | | 0.24 | I | 0.03 | I | 0.0000037 | I | 25 | X | 405,000 | 1 | 13,100 | 15,000 | X | 34 | |
| PYRENE | 129-00-0 | 0.03 | I | | | | | | | 68,000 | | 0.132 | 1 | | | | 393 | 0.07 |
| PYRIDINE | 110-86-1 | 0.001 | I | | | | | | | 0.0066 | X | 1,000,000 | 2 | 13,100 | 15,000 | X | 115 | 18.07 |
| QUINOLINE | 91-22-5 | | | 3 | I | | | | | 1,300 | | 60,000 | 1,3,5 | | | X | 238 | 12.65 |
| QUIZALOFOP (ASSURE) | 76578-14-8 | 0.009 | I | | | | | | | 580 | | 0.3 | 2 | | | | 220 | |
| RDX | 121-82-4 | 0.003 | I | 0.11 | I | | | **[0.0000031]** | **[I]** | 70 | | 59.9 | 1,9 | | | | 353 | |
| RESORCINOL | 108-46-3 | 2 | TE | | | | | | | 2 | | 717,000 | | | | | 280 | |
| RONNEL | 299-84-3 | 0.05 | H | | | | | | | 580 | | 40 | 2 | | | | 349 | |
| SIMAZINE | 122-34-9 | 0.005 | I | 0.12 | H | | | | | 110 | | 5 | 5 | | | | 225 | |

[1] Aqueous solubility references are keyed to the numbered list found at § 250.304(f). Where there are multiple sources cited, the table value is the median of the values in the individual references.

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
P = EPA Provisional Peer-Reviewed Toxicity Value
S = surrogate
T = TEF
TE = TERA ITER Peer-Reviewed Value
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**A. Organic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfDo (mg/kg-d)* | | *CSFo (mg/kg-d)$^{-1}$* | | *RfCi (mg/m$^3$)* | | *IUR (µg/m$^3$)$^{-1}$* | | *Koc (L/KG)* | *VOC?* | *Aqueous Sol (mg/L)* | *Aqueous Sol Reference[1]* | *TF Vol from Surface Soil* | *TF Vol from SubSurface Soil* | *Organic Liquid* | *Boiling Point (degrees C)* | *Degradation Coefficient (K)(yr$^{-1}$)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STRYCHNINE | 57-24-9 | 0.0003 | I | | | | | | | 280 | | 143 | 5 | | | | 270 | 4.50 |
| STYRENE | 100-42-5 | 0.2 | I | | | 1 | I | | | 910 | X | 300 | 5 | 13,100 | 15,100 | X | 145 | 1.20 |
| TEBUTHIURON | 34014-18-1 | 0.07 | I | | | | | | | 620 | | 2,500 | 2 | | | | 394 | |
| TERBACIL | 5902-51-2 | 0.013 | I | | | | | | | 53 | | 710 | 2 | | | | 396 | |
| TERBUFOS | 13071-79-9 | 0.000025 | H | | | | | | | 510 | | 5 | 6 | | | X | 332 | |
| TETRACHLOROBENZENE, 1,2,4,5- | 95-94-3 | 0.0003 | I | | | | | | | 1,800 | | 0.583 | 1,5,6,7 | | | | 245 | 0.69 |
| TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8- (TCDD) | 1746-01-6 | **[0.000000001] 0.0000000007** | D | 130000 | C | 0.00000004 | C | 38 | C | 4,300,000 | | 0.0000193 | 6 | | | | 412 | 0.21 |
| TETRACHLOROETHANE, 1,1,1,2- | 630-20-6 | 0.03 | I | 0.026 | I | | | 0.0000074 | I | 980 | X | 1,100 | 1 | 13,000 | 14,600 | X | 131 | 3.79 |
| TETRACHLOROETHANE, 1,1,2,2- | 79-34-5 | **[0.004] 0.02** | **[P] I** | 0.2 | I | | | 0.000058 | I | 79 | X | 2,860 | 2 | 13,100 | 15,100 | X | 147 | 0.56 |
| TETRACHLOROETHYLENE (PCE) | 127-18-4 | **[0.01] 0.006** | I | **[0.052] 0.0021** | **[N] I** | **[0.5] 0.04** | **[N] I** | **[0.00000058] 0.00000026** | **[N] I** | 300 | X | 162 | 1,2,3,4,5 | 13,100 | 15,000 | X | 121 | 0.03 |
| TETRACHLOROPHENOL, 2,3,4,6- | 58-90-2 | 0.03 | I | | | | | | | 6,200 | | 183 | 6 | | | | 288 | 0.69 |
| TETRAETHYL LEAD | 78-00-2 | 0.0000001 | I | | | | | | | 4,900 | | 0.8 | 5 | | | X | 202 | 4.50 |
| TETRAETHYLDITHIOPYROPHOSPHATE | 3689-24-5 | 0.0005 | I | | | | | | | 550 | | 25 | 2 | | | X | 349 | |
| TETRAHYDROFURAN | 109-99-9 | **[0.2] 0.9** | **[N] I** | 0.0076 | N | **[0.3] 2** | **[N] I** | 0.00000194 | N | 43 | X | 300,000 | 1,6,7 | 13,100 | 15,100 | X | 66 | |
| THIOFANOX | 39196-18-4 | 0.0003 | H | | | | | | | 0.022 | | 5,200 | 9 | | | | 280 | |
| THIRAM | 137-26-8 | 0.005 | I | | | | | | | 1,000 | | 30 | 4 | | | | 339 | |
| TOLUENE | 108-88-3 | 0.08 | I | | | 5 | I | | | 130 | X | 532.4 | 1,2,3,4 | 13,100 | 15,000 | X | 111 | 9.01 |
| TOLUIDINE, M- | 108-44-1 | | | 0.18 | S | | | 0.000051 | S | 140 | | 15,030 | 6 | | | X | 203 | |
| TOLUIDINE, O- | 95-53-4 | | | **[0.18] 0.016** | **[C] P** | | | 0.000051 | C | 410 | | 15,000 | 1,3,5 | | | X | 200 | 18.07 |
| TOLUIDINE, P- | 106-49-0 | | | **[0.19] 0.03** | **[H] P** | | | | | 320 | | 7410 | 1,2,3 | | | | 200 | |
| TOXAPHENE | 8001-35-2 | | | 1.1 | I | | | 0.00032 | I | 1,500 | | 3 | 2,4,5 | | | | 432 | |
| TRIALLATE | 2303-17-5 | 0.013 | I | | | | | | | 2,000 | | 4 | 5 | | | X | 343 | |
| TRIBROMOMETHANE (BROMOFORM) | 75-25-2 | 0.02 | I | 0.0079 | I | | | 0.0000011 | I | 130 | X | 3,050 | 1,2,3,4 | 13,100 | 15,100 | X | 149 | 0.69 |
| TRICHLORO-1,2,2-TRIFLUOROETHANE, 1,1,2- | 76-13-1 | 30 | I | | | 30 | H | | | 1,200 | X | 170 | 1 | 13,100 | 15,000 | X | 48 | 0.35 |
| **TRICHLOROACETIC ACID** | **76-03-9** | **0.02** | **I** | **0.07** | **I** | | | | | **20** | **X** | **1,200,000** | **2,3,5,9** | | | | **196** | |
| TRICHLOROBENZENE, 1,2,4- | 120-82-1 | 0.01 | I | **[0.0036] 0.029** | **[C] P** | **[0.004] 0.002** | P | | | 1,500 | | 44.4 | 1,4,6,7 | | | X | 213 | 0.69 |
| TRICHLOROBENZENE, 1,3,5- | 108-70-3 | 0.006 | M | | | **[0.004] 0.002** | S | | | 3,100 | | 5.8 | 5 | | | | 208 | |
| TRICHLOROETHANE, 1,1,1- | 71-55-6 | 2 | I | | | 5 | I | | | 100 | X | 1,495 | 1,4,5,6 | 13,100 | 15,000 | X | 74 | 0.05 |
| TRICHLOROETHANE, 1,1,2- | 79-00-5 | 0.004 | I | 0.057 | I | **0.0002** | **X** | 0.000016 | I | 76 | X | 4,420 | 1 | 13,100 | 15,100 | X | 114 | 0.03 |

[1] Aqueous solubility references are keyed to the numbered list found at § 250.304(f). Where there are multiple sources cited, the table value is the median of the values in the individual references.

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
P = EPA Provisional Peer-Reviewed Toxicity Value
S = surrogate
T = TEF
TE = TERA ITER Peer-Reviewed Value
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**A. Organic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfDo (mg/kg-d)* | | *CSFo (mg/kg-d)$^{-1}$* | | *RfCi (mg/m$^3$)* | | *IUR (µg/m$^3$)$^{-1}$* | | *Koc (L/KG)* | *VOC?* | *Aqueous Sol (mg/L)* | *Aqueous Sol Reference[1]* | *TF Vol from Surface Soil* | *TF Vol from SubSurface Soil* | *Organic Liquid* | *Boiling Point (degrees C)* | *Degradation Coefficient (K)(yr$^{-1}$)* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TRICHLOROETHYLENE (TCE) | 79-01-6 | **[0.006] 0.0005** | **[N] I** | **[0.011] 0.05** | **[N] I** | **[0.5] 0.002** | **[D] I** | **[0.0000017] 0.000004** | **[N] I** | 93 | X | 1,100 | 1 | 13,100 | 15,000 | X | 87 | 0.02 |
| TRICHLOROPHENOL, 2,4,5- | 95-95-4 | 0.1 | I | | | | | | | 2,400 | | 1,000 | 1,2,4 | | | | 246 | 0.14 |
| TRICHLOROPHENOL, 2,4,6- | 88-06-2 | 0.001 | P | 0.011 | I | | | 0.0000031 | I | 1,100 | | 850 | 1,2,4,5 | | | | 246 | 0.14 |
| TRICHLOROPHENOXYACETIC ACID, 2,4,5- (2,4,5-T) | 93-76-5 | 0.01 | I | | | | | | | 43 | | 278 | 2,4,5 | | | | 279 | 1.39 |
| TRICHLOROPHENOXYPROPIONIC ACID, 2,4,5- (2,4,5-TP)(SILVEX) | 93-72-1 | 0.008 | I | | | | | | | 1,700 | | 140 | 2 | | | | 353 | |
| TRICHLOROPROPANE, 1,1,2- | 598-77-6 | 0.005 | I | | | | | | | 24 | X | 2,700 | 14 | 13,100 | 15,000 | X | 117 | |
| TRICHLOROPROPANE, 1,2,3- | 96-18-4 | **[0.006] 0.004** | I | **[7] 160** | **[H] I** | **[0.005] 0.0003** | **[N] I** | | | 280 | X | 1,896 | 1,4,6 | 13,100 | 15,100 | X | 157 | 0.35 |
| TRICHLOROPROPENE, 1,2,3- | 96-19-5 | **[0.01] 0.003** | **[P] X** | | | **[0.001] 0.0003** | P | | | 190 | X | 2,700 | 14 | 13,100 | 15,000 | X | 142 | |
| TRIETHYLAMINE | 121-44-8 | | | | | 0.007 | I | | | 51 | X | 55,000 | 1,4 | 13,100 | 15,100 | X | 90 | |
| TRIFLURALIN | 1582-09-8 | 0.0075 | I | 0.0077 | I | | | | | 720 | | 4 | 2,5,6,7 | | | | 382 | |
| TRIMETHYLBENZENE, 1,3,4- (TRIMETHYLBENZENE, 1,2,4-) | 95-63-6 | **[0.05]** | **[P]** | | | 0.007 | P | | | 2,200 | X | 56 | 1 | 13,100 | 15,000 | X | 169 | 4.50 |
| TRIMETHYLBENZENE, 1,3,5- | 108-67-8 | **[0.05] 0.01** | **[P] X** | | | **[0.006]** | **[P]** | | | 660 | X | 48.9 | 1 | 13,100 | 15,100 | X | 165 | |
| TRINITROGLYCEROL (NITROGLYCERIN) | 55-63-0 | 0.0001 | P | 0.017 | P | | | | | | X | 1,800 | 2,3,5 | 13,000 | 15,000 | X | 190 | 18.07 |
| TRINITROTOLUENE, 2,4,6- | 118-96-7 | 0.0005 | I | 0.03 | I | | | | | 1 | | 100 | 2 | | | | 240 | |
| VINYL ACETATE | 108-05-4 | 1 | H | | | 0.2 | I | | | 2.8 | X | 20,000 | 1 | 13,200 | 15,000 | X | 73 | |
| VINYL BROMIDE (BROMOETHENE) | 593-60-2 | | | | | 0.003 | I | 0.000032 | H | 150 | X | 4,180 | 12 | 13,100 | 15,000 | X | 16 | 0.09 |
| VINYL CHLORIDE | 75-01-4 | 0.003 | I | **[0.72] 1.5** | I | 0.1 | I | **[0.0000044] 0.000009** | I | 10 | X | 2,700 | 1 | 13,200 | 15,000 | X | -13 | 0.09 |
| WARFARIN | 81-81-2 | 0.0003 | I | | | | | | | 910 | | 17 | 4 | | | | 356 | 4.50 |
| XYLENES (TOTAL) | 1330-20-7 | 0.2 | I | | | 0.1 | I | | | 350 | X | 175 | 13 | 13,100 | 15,000 | X | 140 | 0.69 |
| ZINEB | 12122-67-7 | 0.05 | I | | | | | | | 19 | | 10 | 4 | | | | 474 | |

[1] Aqueous solubility references are keyed to the numbered list found at § 250.304(f). Where there are multiple sources cited, the table value is the median of the values in the individual references.

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk information System (IRIS)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
P = EPA Provisional Peer-Reviewed Toxicity Value
S = surrogate
T = TEF
TE = TERA ITER Peer-Reviewed Value
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**
**B. Inorganic Regulated Substances**

| *Regulated Substance* | *CAS* | *RfD (mg/kg-d)* | | *CSFo (mg/kg-d)$^{-1}$* | | *RfCi (mg/m$^3$)[-I]* | | *IUR ($\mu$g/m$^3$)$^{-1}$* | | *Kd* |
|---|---|---|---|---|---|---|---|---|---|---|
| ALUMINUM | 7429-90-5 | 1 | P | | | 0.005 | P | | | 9.9 |
| ANTIMONY | 7440-36-0 | 0.0004 | I | | | | | | | 45 |
| ARSENIC | 7440-38-2 | 0.0003 | I | 1.5 | I | 0.000015 | C | 0.0043 | I | 29 |
| BARIUM AND COMPOUNDS | 7440-39-3 | 0.2 | I | | | 0.0005 | H | | | 41 |
| BERYLLIUM | 7440-41-7 | 0.002 | I | | | 0.00002 | I | 0.0024 | I | 790 |
| BORON AND COMPOUNDS | 7440-42-8 | 0.2 | I | | | 0.02 | H | | | 3 |
| CADMIUM | 7440-43-9 | 0.0005 | I | | | 0.00001 | D | 0.0018 | I | 75 |
| CHROMIUM III | 16065-83-1 | 1.5 | I | | | | | | | 1,800,000 |
| CHROMIUM VI | 18540-29-9 | 0.003 | I | | | 0.000008 | I | 0.084 | I | 19 |
| COBALT | 7440-48-4 | 0.0003 | P | | | 0.000006 | P | 0.009 | P | 45 |
| COPPER | 7440-50-8 | 0.037 | H | | | | | | | 430 |
| CYANIDE, FREE | 57-12-5 | **[0.02] 0.0006** | I | | | | | | | 9.9 |
| FLUORIDE | 16984-48-8 | 0.04 | C | | | 0.013 | C | | | |
| IRON | 7439-89-6 | 0.7 | P | | | | | | | 25 |
| LEAD | 7439-92-1 | | | 0.0085 | C | | | 0.000012 | C | 900 |
| LITHIUM | 7439-93-2 | 0.002 | P | | | | | | | 300 |
| MANGANESE | 7439-96-5 | 0.047 | I | | | 0.00005 | I | | | 65 |
| MERCURY | 7439-97-6 | 0.00016 | C | | | 0.0003 | I | | | 52 |
| MOLYBDENUM | 7439-98-7 | 0.005 | I | | | | | | | 20 |
| NICKEL | 7440-02-0 | 0.02 | I | | | 0.00009 | D | 0.00024 | **[Is] S** | 65 |
| NITRATE NITROGEN | 14797-55-8 | 1.6 | I | | | | | | | |
| NITRITE NITROGEN | 14797-65-0 | 0.1 | I | | | | | | | |
| PERCHLORATE | 7790-98-9 | 0.0007 | I | | | | | | | 0 |
| SELENIUM | 7782-49-2 | 0.005 | I | | | 0.02 | C | | | 5 |
| SILVER | 7440-22-4 | 0.005 | I | | | | | | | 8.3 |
| **STRONTIUM** | **7440-24-6** | **0.06** | **I** | | | | | | | |
| THALLIUM | 7440-28-0 | **[0.00007] 0.00001** | **[I] X** | | | | | | | 71 |
| TIN | 7440-31-5 | 0.6 | H | | | | | | | 250 |
| VANADIUM | 7440-62-2 | **[0.007] 0.00007** | **[H] P** | | | **0.0001** | **D** | | | 1,000 |
| ZINC | 7440-66-6 | 0.3 | I | | | | | | | 62 |

Toxicity Value Sources:
C = California EPA Cancer Potency Factor
D = ATSDR Minimal Risk Level
H = Health Effects Assessment Summary Table (HEAST)
I = Integrated Risk Information System (IRIS)
P = EPA Provisional Peer-Reviewed Toxicity Value
**[s = surrogate] S = Surrogate**
**X = EPA Provisional Peer-Reviewed Toxicity Value Appendix**

**APPENDIX A**
**TABLE 6—THRESHOLD OF REGULATION COMPOUNDS**

| *REGULATED SUBSTANCE* | *CASRN* | *ALL AQUIFER GROUNDWATER MSC* (µg/L) | *Residential Soil MSC* (mg/kg) 0-15 feet | *Non-Residential Soil MSCs* | | *Soil to Groundwater*[1] (mg/kg) |
|---|---|---|---|---|---|---|
| | | | | *Surface Soil* (mg/kg) 0-2 feet | *Subsurface Soil* (mg/kg) 2-15 feet | |
| ACETIC ACID | 64-19-7 | 5 | 100 | 100 | 100 | 0.5 |
| ACETIC ANHYDRIDE | 108-24-7 | 5 | 100 | 100 | 100 | 0.5 |
| AMYL ACETATE, N- | 628-63-7 | 5 | 100 | 100 | 100 | 0.5 |
| AMYL ACETATE, SEC- | 626-38-0 | 5 | 100 | 100 | 100 | 0.5 |
| ANTU (ALPHA-NAPHTHYLTHIOUREA) | 86-88-4 | 5 | 100 | 100 | 100 | 0.5 |
| **[AZINPHOS-METHYL (GUTHION)]** | **[86-50-0]** | **[5]** | **[100]** | **[100]** | **[100]** | **[0.5]** |
| BHC, DELTA | 319-86-8 | 5 | 100 | 100 | 100 | 0.5 |
| **[BIS(2-CHLOROETHOXY)METHANE]** | **[111-91-1]** | **[5]** | **[100]** | **[100]** | **[100]** | **[0.5]** |
| BROMOPHENYL PHENYL ETHER, 4- | 101-55-3 | 5 | 100 | 100 | 100 | 0.5 |
| BUTYL ACETATE, N- | 123-86-4 | 5 | 100 | 100 | 100 | 0.5 |
| BUTYL ACETATE, SEC- | 105-46-4 | 5 | 100 | 100 | 100 | 0.5 |
| BUTYL ACETATE, TERT- | 540-88-5 | 5 | 100 | 100 | 100 | 0.5 |
| BUTYLAMINE, N- | 109-73-9 | 5 | 100 | 100 | 100 | 0.5 |
| CALCIUM CHROMATE | 13765-19-0 | 5 | 100 | 100 | 100 | 0.5 |
| CALCIUM CYANAMIDE | 156-62-7 | 5 | 100 | 100 | 100 | 0.5 |
| CARBONYL FLUORIDE | 353-50-4 | 5 | 100 | 100 | 100 | 0.5 |
| CATECHOL | 120-80-9 | 5 | 100 | 100 | 100 | 0.5 |
| **[CHLOROACETALDEHYDE]** | **[107-20-0]** | **[5]** | **[100]** | **[100]** | **[100]** | **[0.5]** |
| CHLOROETHYL VINYL ETHER, 2- | 110-75-8 | 5 | 100 | 100 | 100 | 0.5 |
| CHLOROPHENYL PHENYL ETHER, 4- | 7005-72-3 | 5 | 100 | 100 | 100 | 0.5 |
| DECABORANE | 17702-41-9 | 5 | 100 | 100 | 100 | 0.5 |
| **[DIETHANOLAMINE]** | **[111-42-2]** | **[5]** | **[100]** | **[100]** | **[100]** | **[0.5]** |
| DIETHYLAMINE | 109-89-7 | 5 | 100 | 100 | 100 | 0.5 |
| DIGLYCIDYL ETHER (DGE) | 7/5/2238 | 5 | 100 | 100 | 100 | 0.5 |
| DIMETHYL PHTHALATE | 131-11-3 | 5 | 100 | 100 | 100 | 0.5 |
| DIMETHYL SULFATE | 77-78-1 | 5 | 100 | 100 | 100 | 0.5 |
| DIMETHYLPHENETHYLAMINE, ALPHA, ALPHA- | 122-09-8 | 5 | 100 | 100 | 100 | 0.5 |
| DIOXATHION | 78-34-2 | 5 | 100 | 100 | 100 | 0.5 |
| ETHYL METHANESULFONATE | 62-50-0 | 5 | 100 | 100 | 100 | 0.5 |
| ETHYLAMINE | 75-04-7 | 5 | 100 | 100 | 100 | 0.5 |
| ETHYLENE CHLORHYDRIN | 107-07-3 | 5 | 100 | 100 | 100 | 0.5 |
| FAMPHUR | 52-85-7 | 5 | 100 | 100 | 100 | 0.5 |

**APPENDIX A**
**TABLE 6—THRESHOLD OF REGULATION COMPOUNDS**

| *REGULATED SUBSTANCE* | *CASRN* | *ALL AQUIFER GROUNDWATER MSC* (µg/L) | *Residential Soil MSC* (mg/kg) | *Non-Residential Soil MSCs* | | *Soil to Groundwater*[1] (mg/kg) |
|---|---|---|---|---|---|---|
| | | | | *Surface Soil* (mg/kg) | *Subsurface Soil* (mg/kg) | |
| | | | *0-15 feet* | *0-2 feet* | *2-15 feet* | |
| FENSULFOTHION | 115-90-2 | 5 | 100 | 100 | 100 | 0.5 |
| HEXACHLOROPROPENE | 1888-71-7 | 5 | 100 | 100 | 100 | 0.5 |
| IODOMETHANE | 74-88-4 | 5 | 100 | 100 | 100 | 0.5 |
| ISOAMYL ACETATE | 123-92-2 | 5 | 100 | 100 | 100 | 0.5 |
| ISOBUTYL ACETATE | 110-19-0 | 5 | 100 | 100 | 100 | 0.5 |
| ISODRIN | 465-73-6 | 5 | 100 | 100 | 100 | 0.5 |
| ISOPHORONE DIISOCYANATE | 4098-71-9 | 5 | 100 | 100 | 100 | 0.5 |
| ISOSAFROLE | 120-58-1 | 5 | 100 | 100 | 100 | 0.5 |
| LITHIUM HYDRIDE | 7580-67-8 | 5 | 100 | 100 | 100 | 0.5 |
| MANGANESE CYCLOPENTADIENYL TRICARBONYL | 12079-65-1 | 5 | 100 | 100 | 100 | 0.5 |
| **[METHYL HYDRAZINE]** | **[60-34-4]** | **[5]** | **[100]** | **[100]** | **[100]** | **[0.5]** |
| METHYL ISOAMYL KETONE | 110-12-3 | 5 | 100 | 100 | 100 | 0.5 |
| **[METHYL ISOCYANATE]** | **[624-83-9]** | **[5]** | **[100]** | **[100]** | **[100]** | **[0.5]** |
| METHYL MERCAPTAN | 74-93-1 | 5 | 100 | 100 | 100 | 0.5 |
| METHYLAMINE | 74-89-5 | 5 | 100 | 100 | 100 | 0.5 |
| MEVINPHOS | 7786-34-7 | 5 | 100 | 100 | 100 | 0.5 |
| MONOCROTOPHOS | 6923-22-4 | 5 | 100 | 100 | 100 | 0.5 |
| NAPHTHOQUINONE, 1,4- | 130-15-4 | 5 | 100 | 100 | 100 | 0.5 |
| NITRIC ACID | 7697-37-2 | 5 | 100 | 100 | 100 | 0.5 |
| NITROQUINOLINE-1-OXIDE, 4- | 56-57-5 | 5 | 100 | 100 | 100 | 0.5 |
| OSMIUM TETROXIDE | 20816-12-0 | 5 | 100 | 100 | 100 | 0.5 |
| PENTABORANE | 19624-22-7 | 5 | 100 | 100 | 100 | 0.5 |
| **[PENTACHLOROETHANE]** | **[76-01-7]** | **[5]** | **[100]** | **[100]** | **[100]** | **[0.5]** |
| PERCHLOROMETHYL MERCAPTAN | 594-42-3 | 5 | 100 | 100 | 100 | 0.5 |
| PICOLINE, 2- | 109-06-8 | 5 | 100 | 100 | 100 | 0.5 |
| PROPANOL, 1- | 71-23-8 | 5 | 100 | 100 | 100 | 0.5 |
| **[PROPANOL, 2-(ISOPROPYLALCOHOL)]** | **[67-63-0]** | **[5]** | **[100]** | **[100]** | **[100]** | **[0.5]** |
| PROPIONIC ACID | 79-09-4 | 5 | 100 | 100 | 100 | 0.5 |
| PROPIONITRILE (ETHYL CYANIDE) | 107-12-0 | 5 | 100 | 100 | 100 | 0.5 |
| PROPYLENE IMINE | 75-55-8 | 5 | 100 | 100 | 100 | 0.5 |
| PYRETHRUM | 8003-34-7 | 5 | 100 | 100 | 100 | 0.5 |
| QUINONE (p-BENZOQUINONE) | 106-51-4 | 5 | 100 | 100 | 100 | 0.5 |

**APPENDIX A**
**TABLE 6—THRESHOLD OF REGULATION COMPOUNDS**

| *REGULATED SUBSTANCE* | *CASRN* | *ALL AQUIFER GROUNDWATER MSC* (µg/L) | *Residential Soil MSC* (mg/kg) 0-15 feet | *Non-Residential Soil MSCs* | | *Soil to Groundwater*[1] (mg/kg) |
|---|---|---|---|---|---|---|
| | | | | *Surface Soil* (mg/kg) 0-2 feet | *Subsurface Soil* (mg/kg) 2-15 feet | |
| SELENIUM HEXAFLUORIDE | 7783-79-1 | 5 | 100 | 100 | 100 | 0.5 |
| SODIUM BISULFITE | 7631-90-5 | 5 | 100 | 100 | 100 | 0.5 |
| SULFIDE | 18496-25-8 | 5 | 100 | 100 | 100 | 0.5 |
| SULFUR MONOCHLORIDE | 10025-67-9 | 5 | 100 | 100 | 100 | 0.5 |
| SULFURIC ACID | 7664-93-9 | 5 | 100 | 100 | 100 | 0.5 |
| TELLURIUM | 13494-80-9 | 5 | 100 | 100 | 100 | 0.5 |
| TELLURIUM HEXAFLUORIDE | 7783-80-4 | 5 | 100 | 100 | 100 | 0.5 |
| TEPP (TETRAETHYL PYROPHOSPHATE) | 107-49-3 | 5 | 100 | 100 | 100 | 0.5 |
| TETRANITROMETHANE | 509-14-8 | 5 | 100 | 100 | 100 | 0.5 |
| THIONAZIN | 297-97-2 | 5 | 100 | 100 | 100 | 0.5 |
| TRIETHYLPHOSPHOROTHIOATE, O,O,O- | 126-68-1 | 5 | 100 | 100 | 100 | 0.5 |

[1] The value in the table is 100 time the groundwater MSC.
The option to use the SPLP is also available to calculate the soil to groundwater numeric value. (See §250.310.)

[Pa.B. Doc. No. 14-1076. Filed for public inspection May 16, 2014, 9:00 a.m.]