RULES AND REGULATIONS

Title 25—ENVIRONMENTAL PROTECTION

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CH. 250]

Land Recycling Program

The Environmental Quality Board (Board) by this order amends Chapter 250 (relating to administration of land recycling program). The amendments provide up-to-date scientific information on toxicity and other parameters of substances and corresponding changes along with corrections to the Statewide health standard medium-specific concentrations (MCS) (numeric standards). The amendments also contain policy clarifications and changes to address issues raised during implementation of the land recycling program and during the Department of Environmental Protection's (Department) 1998-99 land recycling program evaluation.

This order was adopted by the Board at its meeting of September 18, 2001.

A. *Effective Date*

These amendments will go into effect upon publication in the *Pennsylvania Bulletin* as final-form rulemaking.

B. *Contact Persons*

For further information, contact Thomas K. Fidler, Chief, Division of Land Recycling and Cleanup Program, P. O. Box 8471, Rachel Carson State Office Building, Harrisburg, PA 17105-8471, (717) 783-7816; or Kurt Klapkowski, Assistant Counsel, Bureau of Regulatory Counsel, P. O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. 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 rulemaking is available electronically through the Department's website (www.dep.state.pa.us).

C. *Statutory Authority*

This rulemaking is being made under the authority of sections 104(a), 301(c) and 303(a) of the Land Recycling and Environmental Remediation Standards Act (35 P. S. §§ 6026.104(a), 6026.301(c) and 6026.303(a)) (Act 2). Section 104(a) of Act 2 authorizes the Board to adopt Statewide health standards, appropriate mathematically valid statistical tests to define compliance with Act 2 and other regulations that may be needed to implement the provisions of Act 2. Section 301(c) of Act 2 authorizes the Department to establish by regulation procedures for determining attainment of remediation standards when practical quantitation limits set by the United States Environmental Protection Agency (EPA) have a health risk that is greater than the risk levels established in Act 2. Section 303(a) of Act 2 authorizes the Board to promulgate Statewide health standards for regulated substances for each environmental medium and methods used to calculate the standards.

D. *Background and Purpose*

Aside from minor typographical or technical corrections to the Act 2 regulations, there are two basic reasons for the changes in this regulatory proposal. One is more up-to-date scientific information on parameters that affect the calculation of the Statewide health standard MSCs. The second is policy clarifications or developments that the Board determined would improve implementation of the Statewide health standard and attainment provisions in the land recycling program. These policy amendments primarily concern the process involved in nonuse aquifer determinations and attainment demonstrations at petroleum release sites.

The Cleanup Standards Scientific Advisory Board (CSSAB) was consulted on the proposed rulemaking and this final-form rulemaking as well. In areas where they had concerns, the CSSAB suggested language that has been incorporated into this final-form rulemaking. On February 3, 2000, the CSSAB voted to recommend approval of the proposed regulation package. The CSSAB considered the final-form rulemaking at its February 22, 2001, and March 26, 2001, meetings. At the March meeting, the CSSAB voted to recommend to the Board approval of the final-form rulemaking.

E. *Summary of Comments and Responses and Changes Made in the Final-Form Rulemaking*

Notice of the proposed rulemaking was published at 30 Pa.B. 3946 (August 5, 2000). The proposal, as corrected at 30 Pa.B. 4356 (August 19, 2000), set forth a 60-day comment period.

During the public comment period, the Board received written comments from eight individuals or groups. The Board considered the comments received in formulating the final-form regulations. The Department has prepared a comment and response document that addresses each comment on the proposed regulations.

A copy of that document was presented to the Board along with this final-form rulemaking and is available from the contact persons listed in Section B of the Preamble.

The following is a summary of major comments received and changes that have been made to the proposed rulemaking. The summary is listed in the same order as the final-form regulations.

Section 250.1. Definitions

This section includes definitions for terms that are not found in the statute but were needed to clarify language in the statute and the regulations. The term "agricultural purposes" was added to clarify what they are and that they include food processing. The commentators agreed with the change.

Sections 250.5 and 250.6. Public notice by applicant; and public participation

Section 250.5 establishes requirements for public notice for a remediator of a site. Section 250.5(d) is a new subsection pertaining to areas not covered entirely by a nonuse aquifer areawide certification. The subsection requires that when a nonuse aquifer designation request under the Statewide health standard is made to the Department, the remediator shall send notice to every municipality and community water supplier servicing the area requested for nonuse aquifer designation. One commentator believed this would have the effect of deferring approval of nonuse aquifer determinations to the municipality, making the process of getting a nonuse aquifer determination even more difficult and time-consuming. The commentator recognized that it may be useful to

contact the municipality and local community water supplier regarding current and planned future use of groundwater. However, the commentator believed that the approach under this subsection would create a new requirement to obtain a nonuse aquifer determination prior to completion of the final report. The commentator recommended that a nonuse aquifer determination request might be submitted prior to submission of the final report. The commentator concluded that if the remediator could demonstrate that groundwater is not useable and that an ordinance is in place prohibiting groundwater use for drinking water, then the remediator's nonuse aquifer determination should be approved.

The amendment does not add a requirement to obtain concurrence by the municipality or community water supplier prior to nonuse aquifer determination. The conditions upon which the Department will make its determination are based solely on demonstrating compliance with the requirements of § 250.303 (relating to aquifer determination; current use and currently planned use of aquifer groundwater). Approval of use of the nonuse aquifer groundwater standards is, and will continue to be, as it is specified in that section.

Commentators had concerns with the 45-day review period proposed in § 250.5. One commentator felt the time period could be reduced or eliminated because the requirements of § 250.303(c) may be met through the use of local ordinances. The purpose of the 45-day period is to allow the municipality and water supplier to identify information relevant to § 250.303(c) that the Department may consider. During discussion with the CSSAB, it became apparent that municipalities commonly meet once a month, and a 30-day comment period may not be enough time for the nonuse aquifer proposal to be considered by boards and to have public input. The Board does, however, believe that the use of local ordinances will serve to satisfy the requirements of § 250.303(c)(1) and (2). Under this process, water suppliers would be expected to be involved as part of satisfying § 250.303(c), which provides the opportunity for water supplier input. The proposed rulemaking was modified to reflect the use of local ordinances. The purpose behind the 45-day period of review in § 250.5(e) is to allow both the municipality and water supplier to identify information relevant to § 250.303(c) that the Department may consider in making its final determination. In those cases where a local municipal ordinance prohibiting the use of groundwater does not exist, the 45-day review period is retained.

One commentator requested clarification on determining what was meant by receipt as it pertains to submission of a nonuse aquifer determination request. The phrase "receipt of a request" refers to the receipt by the municipality or community water supplier of a nonuse aquifer determination request. The method and procedures are specified in the technical guidance manual.

A commentator indicated that, regarding the requirements applicable to precertification requests and nonuse aquifer determinations, the proposed § 250.6(e) should be expanded to allow public involvement plans to be developed by the parties remediating a site. The commentator noted that under the proposed § 250.303(f) only municipalities and authorities could ask the Department for a nonuse determination. Only these entities would be required to develop a public involvement plan. The commentator indicated that the standards for Department approval of a remediator's request are specified in § 250.303(b), but under the proposed amendments the approval standards would include satisfaction of § 250.6, which is a set of requirements that can only be satisfied by a municipal authority or municipality. The commentator believed the disconnect between § 250.303(b), as amended, and proposed §§ 250.6(e) and 250.303(f) can be remedied by expanding § 250.6(e) to allow a public involvement plan to be developed by the party remediating a site.

The Department acknowledges that the proposed nonuse aquifer wording changes were not clear and has made clarifications in the final-form rulemaking in §§ 250.5, 250.6 and 250.303. The intent with respect to public notice and participation is that nonuse aquifer proposals made by remediators would not require a public involvement plan. Section 250.303(f) requires that a municipal ordinance prohibiting use of groundwater be in place to obtain an areawide certification. Since the process for developing an ordinance contains sufficient public notice and comment, the Department does not believe that additional public participation in connection with an areawide certification request is necessary. Consequently, the proposed § 250.6(e) has been deleted from the final-form rulemaking.

Section 250.303. Aquifer determination; current use and currently planned use of aquifer groundwater

This section identifies the criteria that must be met for a remediator to use the nonuse aquifer MSCs, and the area within which those criteria must be met; establishes a 45-day review period for municipalities and water suppliers; and establishes a process for designating nonuse aquifer areawide certification when no specific site is involved.

One commentator was concerned that the proposal to limit the on-property area to which the requirements of § 250.303(c) apply to the area of the site, rather than to the entire property, would in effect move the point of compliance inside the property boundary.

The rulemaking does not suggest that there are Points of Compliance (POC) internal to the property boundary. Section 250.303(b) does not attempt to apply standards within the property—"behind" the POC—as determined by § 250.302 (relating to point of compliance). Instead, it establishes the geographic area within which the conditions in § 250.303(c) must be met for the site to qualify for a nonuse aquifer standard. As written in the existing version of Chapter 250, the geographic area includes the area within the property, as well as a minimum of 1,000 feet downgradient of the POC. This revision limits the geographic area within the property where the requirements of § 250.303(c) apply to only that area which is contaminated (that is, the "site"). The Board's intention in applying § 250.303 is to assure that anywhere the contamination exists (even within the property), or may reasonably migrate (assuming a minimum of 1,000 feet), that the requirements of § 250.303(c) are met. Once the remediator is granted the use of the nonuse aquifer MSCs, the demonstration of attainment must be made at the POC (normally the property boundary), as determined by § 250.302.

Commentators were concerned that the 45-day period should be reduced to 30 days, that the requirements of § 250.303(c) may be met through the use of local ordinances and that the section imposes a requirement that the municipality and water supplier must concur in the approval of the nonuse aquifer designation.

The Board initially planned to propose a 30-day comment period for municipalities and community water suppliers to review nonuse aquifer designation requests.

As noted previously, the Board recognizes that a 30-day time period may not be enough time for the nonuse aquifer proposal to be considered by municipalities and for the associated public input. Although this is not necessarily a factor with community water suppliers, the Board is declining to accept the commentators' suggestion and the final rulemaking retains the 45-day period in the final rulemaking except where municipal ordinances are in place.

The Board believes there is merit to allowing appropriate local ordinances to satisfy requirements of § 250.303(c)(1) and (2). Under this process, water suppliers should be involved as a part of satisfying § 250.303(c)(3)—(4), which provides opportunity for their input. The final rulemaking includes the use of local ordinances to demonstrate compliance with the § 250.303(c) requirements at an individual site as well as in the designation of nonuse aquifer areas in the absence of a specific cleanup.

One commentator was concerned that the proposed amendment effectively added a requirement to obtain concurrence by the municipality and water supplier prior to approval of the nonuse aquifer determination by the Department. The amendment does not add a requirement to obtain concurrence by the municipality or community water supplier prior to nonuse aquifer determination. The conditions upon which the Department will make its determination are based solely on demonstrating compliance with the requirements of § 250.303. Approval of use of the nonuse aquifer groundwater standards is and will continue to be as it is specified in that section. The purpose behind the notice and the 45-day period of review is to allow both the municipality and water supplier to identify information relevant to § 250.303(c), which the Department may consider in making its final determination. For instance, the Department believes the municipality may be a source of knowledge of the existence of wells used for drinking water, and the water supplier should be a source of information of whether all properties are connected to public water—both examples of conditions relevant to § 250.303(c) criteria.

It is true that by instituting a 45-day review period, this proposed amendment will require the remediator to wait a minimum of 45 days to receive the nonuse aquifer determination from the Department. It will be in the remediator's best interest to file the nonuse aquifer determination request at the time of, or as soon as possible after, the filing of the Notice of Intent to Remediate (NIR).

Commentators had concerns that § 250.303(f) limited the ability to request a nonuse aquifer designation to municipalities and political subdivisions, and that the 3-year sunset provision would make the designation difficult to obtain and implement. Parts of the comments are related to the misunderstanding that the proposed new subsection applied to remediators requesting a nonuse aquifer designation for a specific site. In fact, the Board intended those requirements to only apply in cases where municipalities or redevelopment authorities propose a determination, in the absence of an NIR for a specific site. This process was intended to provide a tool for use by municipalities and redevelopment authorities to encourage the remediation and reuse of contaminated properties. Section 250.303(f) has been modified to provide that a municipal authority or political subdivision can demonstrate that the conditions of § 250.303(c)(1)—(2) are satisfied by documenting that the requirements of § 250.303(c) are met in the designation area and that the local municipalities have in place an ordinance which prohibits the use of groundwater for drinking or agricultural purposes and requires the lateral connection to a public water supply for every property.

The proposed requirement that the applicant request renewal of the areawide certification every 3 years is deleted from the final-form rulemaking as the result of several commentators' concerns that it makes the process unworkable. In place of mandated renewal timeframes, the Board has revised § 250.303(d) to include a requirement that institutional controls or a postremediation care plan be included in a final report to provide documentation that the site continues to meet the requirements of the nonuse aquifer designation contained in § 250.303(c). The final-form rulemaking also provides a mechanism for determining when the postremediation care may be terminated.

Section 250.311. Evaluation of ecological receptors

Section 250.311(c) and (d) were modified to clarify that the Constituents of Potential Ecological Concern (CPECs) to be investigated by the screening process are those that are associated with the release being addressed by the current remediation, and not those that may be present as part of the site background or through historical releases at the site.

Section 250.703. General attainment requirements for soil

A minor change was made to the wording of the proposed changes to this section to clarify the Department's intent that if the contaminated soil is removed from the site, attainment samples are to be taken from the base and sides of the excavation.

Section 250.707 Statistical tests

Section 250.707(b) was amended to include a procedure for demonstrating attainment of a Statewide health standard for petroleum releases when full characterization has not been completed prior to remediation. Several commentators supported this concept as being a cost-effective method for determining attainment and suggested that the methodology be extended to include all small spills, rather than just petroleum releases. Other commentators suggested that this methodology be extended to the background standard or to restrict its use to cleanups where the final report is submitted within 90 days of the spill or release.

As originally proposed, the amendment restricted the use of this methodology to remediations of regulated storage tank spills being conducted under the Department's guidance document "Closure Requirements for Underground Storage Tank Systems." In the final-form rulemaking, the use of this methodology is extended to include all releases of petroleum products, whether from regulated storage tanks or other sources. However, the Board disagrees with the idea of extending this methodology to all small spills. The Board and the CSSAB felt that it was critical to limit the concept to contaminants that could be easily detected by field observations and measurements and, therefore, could realistically be used in a biased sampling approach. Not all contaminants satisfy this condition because they do not readily exhibit properties that can be seen, smelled, and the like. The Board and the CSSAB felt that field observations and measurements could easily detect petroleum spills, and these present the bulk of the small spill cases under Act 2. Commentators also suggested extending this option to the background standard, and restricting this option to remediations being completed within 90 days of the spill or release. The Board does not agree that the suggested

changes are appropriate and these options are not a part of the final-form rulemaking.

Finally, the term "full site characterization" was clarified by adding a reference to the requirements of § 250.204(b) (relating to final report). That section provides a detailed description of the items included in a full site characterization.

Appendix A. Statewide Health MSC Tables

Changes to the MSC values from those published in the proposed amendment occurred as the result of new toxicological values being available since the publication of that amendment and the changes to several MCL values published by the EPA in the same time period. Several commentators commented that the toxicological values as published in the final-form regulations should use the most current data available. Specifically mentioned were the oral slope factor for beryllium and reference doses for methyl methacrylate and vinyl chloride. Several commentators commented on the methodology for calculating the MSC values for PCBs.

Based upon changes made by the EPA, the MCL or lifetime Health Advisory Level (HAL) was changed for six substances: ethylene glycol, malathion, chlorobenzene, naphthalene, 1,1,2,2-tetrachloroethane and trinitroglycerol (nitroglycerin).

The oral slope factor for beryllium was removed since the value presented in the proposed amendment is no longer cited by any of the sources used in developing the toxicological values.

In the proposed amendment, changes to the oral and inhalation reference doses (RfDo and RfDi) were made for methyl methacrylate, but changes to the direct contact MSC for residential exposures were not. The residential direct contact value changed in the final-form regulations to 10,000 mg/kg. The proposed rulemaking did not correctly show that this value was being revised, so the MSC for methyl methacrylate was not included.

The RfDo for cobalt was revised to 0.02 mg/kg/day, and the RfDi to 0.000005 mg/kg/day.

The RfDo for 1,3-dichlorobenzene was revised to 0.03 mg/kg/day.

An oral slope factor of 0.0018 and an inhalation slope factor of 0.0018 were added for methyl tert-butyl ether.

The RfDo for 2,3,6-trichlorophenol was revised to 0.0003 mg/kg/day and an RfDi of 0.0003 mg/kg/day was added.

The RfDo for hexachlorocyclopentadiene was revised from 0.007 to 0.006 mg/kg/day and the RfDi was revised from 0.00002 to 0.00006 mg/kg/day.

For vinyl chloride, the RfDo was updated to 0.003 mg/kg/day, and the RfDi to 0.029 mg/kg/day.

In the proposed rulemaking, the groundwater MSCs for the individual PCB Aroclor formulations were removed and the MCL for total PCBs was used to provide more consistency with the requirement of Act 2 that the groundwater MSC comply with an MCL where one exists. The soil-to-groundwater numeric values for PCBs in soil were calculated using the MCL for total PCBs in groundwater as the endpoint for the generic value equation in § 250.308 (relating to soil to groundwater pathway numeric values). In consultation with the CSSAB and as the result of several comments on the proposed amendment, the Department has revised the methodology for calculating MSCs for PCBs in soil and groundwater. For PCBs in groundwater, Table 1 of Appendix A now includes both the MCL for total PCBs and the Aroclor-specific values calculated according to the methodology in § 250.304. It is intended that the remediator have the choice between the MCL and the Aroclor-specific values for PCBs in groundwater. The generic value soil-to-groundwater numeric values in Table 3b of Appendix A have been calculated using the Aroclor-specific groundwater MSCs as the endpoint for the equation in § 250.308. The 100X groundwater MSC value is also based on the Aroclor-specific value.

F. *Benefits, Costs and Compliance*

Executive Order 1996-1 requires a cost/benefit analysis of the final-form regulations.

Benefits

Remediators will benefit from the additional flexibility for demonstrating attainment on groundwater cleanups and in cases where small excavations of soil cleanups are performed. The remediators will also benefit from having information and standards that incorporate more current scientific information than was available during the previous final regulation. Local governments will benefit from their ability to provide comments on nonuse aquifer area designation decisions and from their ability to "pre-certify" areas in their communities as meeting the nonuse aquifer conditions of § 250.303.

Compliance Costs

There are no direct increased costs from the final-form rulemaking amendment. Indirectly, there are some increases in costs in some areas and decreases in costs in other areas. Increased costs for remediators will occur in cases where the local municipality requests a public involvement plan in the designation of a nonuse aquifer area. These costs will be related to the development of a public participation plan, interaction with the municipality and project delays related to the additional time required to have the municipality involved in the process. Decreased costs will occur associated with the demonstration of compliance with a standard in cases of minor groundwater or soil contamination.

Compliance Assistance Plan

The land recycling program regularly provides outreach in two areas: updates to the technical guidance manual supporting Chapter 250 and annual client workshops where training on the regulations, guidance and policies takes place.

Paperwork Requirements

No new paperwork is required by this final-form rulemaking. Additional paperwork will be required when an areawide certification of nonuse aquifer status is voluntarily sought under § 250.303, although a determination will ultimately lead to a reduction in paperwork for remediators who wish to use the areawide determination in future cleanups.

G. *Sunset Review*

These final-form 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.

H. *Regulatory Review*

Under section 5(a) of the Regulatory Review Act (71 P. S. § 745.5(a)), on July 11, 2000, the Department sub-

mitted a copy of the notice of proposed rulemaking, published at 30 Pa.B. 3946, and corrected at 30 Pa.B. 4356, to the Independent Regulatory Review Commission (IRRC) and the Chairpersons of the House and Senate Environmental Resources and Energy Committees for review and comment.

Under section 5(c) of the Regulatory Review Act, IRRC and the Committees were provided with copies of the comments received during the public comment period, as well as other documents when requested. In preparing these final-form regulations, the Department has considered all comments from IRRC, the Committees and the public.

Under section 5.1(d) of the Regulatory Review Act (71 P. S. § 745.5a(d)), on October 11, 2001, these final-form regulations were deemed approved by the House and Senate Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on October 18, 2001, and approved the final-form regulations.

I. *Findings*

The Board finds that:

(1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P. L. 769, No. 240) (45 P. S. §§ 1201 and 1202) and regulations promulgated thereunder at 1 Pa. Code §§ 7.1 and 7.2.

(2) A public comment period was provided as required by law, and all comments were considered.

(3) These regulations do not enlarge the purpose of the proposal published at 30 Pa.B. 3946 and corrected at 30 Pa.B. 4356.

(4) These final-form regulations are necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this Preamble.

J. *Order*

The Board, acting under the authorizing statutes, orders that:

(a) The regulations of the Department, 25 Pa. Code Chapter 250, are amended by amending §§ 250.1, 250.5, 250.6, 250.303, 250.304, 250.311, 250.703, 250.707 and Appendix A, to read as set forth in Annex A.

(b) The Chairperson of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.

(c) The Chairperson shall submit this order and Annex A to IRRC and the Senate and House Environmental Resources and Energy Committees as required by the Regulatory Review Act.

(d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.

(e) This order shall take effect immediately upon publication in the *Pennsylvania Bulletin*.

DAVID E. HESS,
Chairperson

(*Editor's Note*: For the text of the order of the Independent Regulatory Review Commission, relating to this document, see 31 Pa.B. 6120 (November 3, 2001).)

Fiscal Note: Fiscal Note 7-356 remains valid for the final adoption of the subject regulations.

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

§ 250.1. Definitions.

In addition to the words and terms defined in the act, the following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

ASTM—The American Society for Testing and Materials.

Act—The Land Recycling and Environmental Remediation Standards Act (35 P. S. §§ 6026.101—6026.909).

Agricultural purposes—Commercial agricultural activities, including, but not limited to, irrigation of crops, watering of livestock, and food production, processing or packaging.

Anisotropy—The variability of a physical property based on direction, for example, variation in permeability in relation to direction of groundwater flow.

Community water system—As defined in the Pennsylvania Safe Drinking Water Act (35 P. S. §§ 721.1—721.17), a public water system, which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

EQL—Estimated quantitation limit.

Enterprise zone—An area specially designated as an enterprise zone under requirements determined by the Department of Community and Economic Development.

Environmental protection acts—Includes:

(i) The Clean Streams Law (35 P. S. §§ 691.1—691.1001).

(ii) The Municipal Waste Planning, Recycling and Waste Reduction Act (53 P. S. §§ 4001.101—4001.1904).

(iii) The Hazardous Sites Cleanup Act (35 P. S. §§ 6020.101—6020.1305).

(iv) The Low-Level Radioactive Waste Disposal Act (35 P. S. §§ 7130.101—7130.906).

(v) The act of July 13, 1988 (35 P. S. §§ 6019.1—6019.6), known as the Infectious and Chemotherapeutic Waste Disposal Law.

(vi) The Air Pollution Control Act (35 P. S. §§ 4001—4015).

(vii) The Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.31).

(viii) The Noncoal Surface Mining Conservation and Reclamation Act (35 P. S. §§ 3301—3326).

(ix) The Dam Safety and Encroachments Act (32 P. S. §§ 693.1—693.27).

(x) The Solid Waste Management Act (35 P. S. §§ 6018.101—6018.1003).

(xi) Other State or Federal statutes relating to environmental protection or the protection of public health.

Habitats of concern—A habitat defined as one of the following:

(i) Typical wetlands with identifiable function and value, except for exceptional value wetlands as defined in § 105.17 (relating to wetlands).

(ii) Breeding areas for species of concern.

(iii) Migratory stopover areas for species of concern.

(iv) Wintering areas for species of concern.

(v) Habitat for State endangered plant and animal species.

(vi) Federal, State and local parks and wilderness areas, and areas designated as wild, scenic or recreational.

(vii) Areas otherwise designated as critical or of concern by the Game Commission, the Fish and Boat Commission or the Department of Conservation and Natural Resources.

Heterogeneity—Nonhomogeneous structure, composition and physical properties.

MCL—Maximum contaminant level.

MSC—Medium-specific concentration.

NIR—Notice of Intent to Remediate.

NPDES—National Pollutant Discharge Elimination System.

PQL—Practical quantitation limit.

Property—A parcel of land defined by the metes and bounds set forth in the deed for that land.

Regulated discharge—A point or nonpoint source discharge subject to the permit or approval requirements of Chapters 91—97 and 102—105 and any diffuse surface or groundwater discharge to surface waters which has the potential to cause an exceedance of the water quality standards in Chapter 93 (relating to water quality standards).

Risk assessment—A process to quantify the risk posed by exposure of a human or ecological receptor to regulated substances. The term includes baseline risk assessment, development of site-specific standards and risk assessment of the remedial alternatives.

SIA—special industrial area—Property where there is no financially viable responsible person to perform remediation or property located within an enterprise zone, and where the property was used for industrial activity.

Secondary contaminants—A regulated substance for which a secondary MCL exists, and no lifetime health advisory level exists.

Site—The extent of contamination originating within the property boundaries and all areas in close proximity to the contamination necessary for the implementation of remediation activities to be conducted under the act.

Species of concern—Species designated as of special concern, rare, endangered, threatened or candidate by the Game Commission, the Fish and Boat Commission or the Department of Conservation and Natural Resources, if the species has not also been designated threatened or endangered by the Federal government.

TF—Transfer factor.

Volatile compound—A chemical compound with a boiling point less than 200° centigrade at 1 atmosphere.

§ 250.5. Public notice by applicant.

(a) Public notice under the background, Statewide health or site-specific standard and under a special industrial area cleanup shall be initiated by the applicant through an NIR. For remediations proposing the use of a site-specific standard or, for remediations under an SIA agreement, the public and the municipality where the site is located shall be provided a 30-day period, in the NIR, in which the municipality may request to be involved in the development of the remediation and reuse plans for the site.

(b) The remedial investigation report, the risk assessment report and the cleanup plan, prepared under a site-specific remediation, may not be submitted to the Department until after the initial 30-day public and municipal comment period following the submission of the NIR has expired.

(c) The baseline environmental report, prepared under an SIA remediation, shall be submitted after the initial 30-day public and municipal comment period has expired.

(d) For areas not covered entirely by a nonuse aquifer areawide certification granted under § 250.303(f) (relating to aquifer determination; current use and currently planned use of aquifer groundwater), at the same time a request for a nonuse aquifer designation under the Statewide health standard is made to the Department, the remediator shall send notice to every municipality and community water supplier servicing the area requested for designation as nonuse under § 250.303(b). The notice shall include a copy of the request for determination of nonuse aquifer submitted to the Department.

(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.

§ 250.6. Public participation.

(a) The publication date of the summary of the NIR in a newspaper of general circulation in the area of the site shall initiate the 30-day public and municipal comment period during which the municipality can request to be involved in the development of the remediation and reuse plans for a site being remediated to a site-specific standard or for remediation at an SIA.

(b) The person proposing remediation shall be responsible for developing and implementing a public involvement plan if both of the following circumstances exist:

(1) The remediation involves a site-specific standard or an SIA cleanup.

(2) A municipality, through its official representatives, has requested, in writing, to be involved in the development of the remediation and reuse plans within the 30-day public and municipal comment period identified in the notice to the municipality and the newspaper notice.

(c) If a public involvement plan has been initiated, the person proposing remediation shall, at a minimum, provide:

(1) Public access at convenient locations for document review.

(2) Designation of a single contact person to address questions from the community.

(3) A location near the remediation site for any public hearings and meetings that may be part of the public involvement plan.

(d) If a public involvement plan has been requested, it shall be submitted with one of the following:

(1) A remedial investigation report under a site-specific remediation.

(2) A baseline environmental report under an SIA cleanup.

Subchapter C. STATEWIDE HEALTH STANDARDS

§ 250.303. Aquifer determination; current use and currently planned use of aquifer groundwater.

(a) With the exception of seasonal, localized and hydrologically isolated perched systems under a property, all geologic formations or parts or groups of formations in this Commonwealth which are saturated are presumed to be aquifers for the purpose of applying the Statewide health standards. The term includes saturated residuum such as saprolite and other weathered rock strata or intervals developed from underlying bedrock and other saturated deposits overlying these formations to which the geologic formations are hydrologically connected.

(b) All groundwater in aquifers is presumed to be used or currently planned for use, unless determined otherwise by the Department under this section.

(1) The Department may determine, in writing, based on a demonstration by the person remediating a site identified in an NIR, that groundwater is not used or currently planned to be used, if:

(i) The public participation requirements of § 250.5 (relating to public notice by applicant) are met.

(ii) The requirements in subsection (c) are met within the site on the property and within a radius of 1,000 feet downgradient of the points of compliance plus any additional areas to which the contamination has migrated and might reasonably migrate at concentrations that exceed the MSC for groundwater used or currently planned to be used.

(2) Methods appropriate for determining current or currently planned future use may include door-to-door surveys, verifying community water system billing records and interviewing community water system suppliers with regard to their currently planned future groundwater use.

(c) The following requirements shall be met within the area described in subsection (b):

(1) No groundwater derived from wells or springs is used for drinking water or agricultural purposes.

(2) All downgradient properties are connected to a community water system.

(3) The area described in subsection (b) does not intersect a radius of 1/2 mile from a community water supply well source or does not intersect an area designated by the Department as a zone 2 wellhead protection area under Chapter 109 (relating to safe drinking water).

(4) At the time the nonuse aquifer determination request under subsection (b) is submitted to the Department, there are no existing documents developed by political subdivisions or community water system suppliers detailing the implementation of groundwater resources development (that is, no currently planned future uses) in the area specified in subsection (b)(1)(ii).

(d) If the Department determines that groundwater is not used or currently planned to be used, the following requirements apply within the area identified in subsection (b):

(1) The requirements in § 250.309 (relating to MSCs for surface water).

(2) The ecological screening process identified in § 250.311 (relating to evaluation of ecological receptors).

(3) The remediator shall establish institutional controls to maintain the integrity of the nonuse aquifer determination, or include a postremediation care plan in the final report detailing the process of routinely assessing and reporting to the Department compliance with subsection (c).

(i) Postremediation care plan provisions shall be acknowledged within the deed to the remediated property upon transfer of ownership to insure compliance with subsection (c).

(ii) Postremediation assessment and reporting requirements shall continue until the property owner can demonstrate that the MSC for groundwater in aquifers used or currently planned for use is not exceeded at the point of compliance, and fate and transport analysis shows that the MSC will not be exceeded at that point in the future.

(e) The MSCs for groundwater in an aquifer that is not used or currently planned for use, under § 250.304(d) (relating to MSCs for groundwater), shall be met at the points of compliance identified in § 250.302 (relating to point of compliance)

(f) A nonuse aquifer areawide certification obtained under this subsection may be used by the remediator to demonstrate that the requirements of subsection (c) are met.

(1) With or without the presence of an associated NIR, the Department may determine, in writing, based on a demonstration by a municipal authority or political subdivision, that groundwater is not used or currently planned to be used in a specific geographic area, if the following conditions exist:

(i) The municipal authority or political subdivision demonstrates that the requirements of subsection (c) are met in the specific geographic area.

(ii) Municipal ordinances are in effect that prohibit the use of groundwater from wells or springs for drinking water or agricultural purposes.

(iii) Municipal ordinances are in effect that require all water users to connect to a community water supply system.

(2) If the municipal ordinances relied upon to make the demonstration in paragraph (1) are amended or repealed, the political subdivision or municipal authority who requested the areawide designation shall notify the Department in writing within 30 days of the effective date of the amendment or repeal.

§ 250.304. MSCs for groundwater.

(a) A person shall implement a remedy under the Statewide health standard that is protective of human health and the environment.

(b) The MSCs for regulated substances in groundwater are presented in Appendix A, Tables 1 and 2. The methodology used by the Department for calculating MSCs in groundwater is detailed in subsections (c)—(f).

(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 as established by the Department or the EPA (U. S. EPA, 1996. Drinking Water Regulations and Health Advisories. Office of Water. EPA 822-R-96-001). For a regu-

lated substance where no MCL has been established, the MSC is the lifetime health advisory level (HAL) for that compound. For a regulated substance where neither an MCL nor a lifetime HAL is established, the MSC is 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).

(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:

(1) For volatile organic regulated substances with an attenuation factor of less than 20, as calculated by the methodology in paragraph (7), ten times the appropriate residential or nonresidential MSC for groundwater in aquifers used or currently planned to be used containing less than 2,500 mg/l total dissolved solids.

(2) For volatile organic regulated substances with an attenuation factor of greater than or equal to 20, as calculated by the methodology in paragraph (7), 100 times the appropriate residential or nonresidential MSC for groundwater in aquifers used or currently planned to be used containing less than 2,500 mg/l total dissolved solids.

(3) For semivolatile organic and inorganic regulated substances, regardless of the attenuation factor, 1,000 times the appropriate residential or nonresidential MSC for groundwater in aquifers used or currently planned to be used containing less than 2,500 mg/l total dissolved solids.

(4) For benzene, 100 times the appropriate residential or nonresidential MSC for groundwater in aquifers used or currently planned to be used containing less than 2,500 mg/l total dissolved solids.

(5) For regulated substances with no calculated attenuation factor because of a lack of data in Howard, P. H., R. S. Boethling, W. F. Jarais, W. M. Meylan and E. M. Michalenko. 1991. *Handbook of Environmental Degradation Rates.* Lewis Publishers, Inc., Chelsea, MI., the appropriate residential or nonresidential MSC for groundwater in aquifers used or currently planned to be used containing less than 2,500 mg/l total dissolved solids.

(6) For minimum threshold MSCs, 5 micrograms per liter in groundwater shall be used.

(7) The attenuation factor (AF) for an organic regulated substance shall be calculated according to the following formula:

$$AF = K \times KOC$$

Where:

$$K = \text{degradation coefficient} = \frac{0.693}{T_{1/2}}$$

T1/2—half-life of organic regulated substance in groundwater as reported in Howard, P. H., R. S. Boethling, W. F. Jarais, W. M. Meylan and E. M. Michalenko, 1991. *Handbook of Environmental Degradation Rates.* Lewis Publishers, Inc., Chelsea, MI.

KOC—organic carbon partitioning coefficient (See Appendix A Table 5).

(e) If the groundwater in aquifers used or currently planned for use at the site has naturally occurring background total dissolved solids concentrations greater than 2,500 milligrams per liter, the Statewide health standard for a regulated substance dissolved in the groundwater may be adjusted by multiplying the MSC for groundwater in aquifers by 100. The adjusted Statewide health standard shall then be used in calculating the soil to groundwater pathway numeric value as specified in § 250.308 (relating to soil to groundwater pathway numeric values).

(f) In addition to the requirements in this section, the MSCs are further limited by solubility as identified in Appendix A, Table 5. The solubility limits are derived from the references in subsection (g), which are keyed to the numbers in Table 5. The following procedure was used to determine the appropriate solubility value for each regulated substance: where multiple sources are cited in Table 5, the value for the solubility limit is the median of the values in the indicated references.

(1) Using the hierarchy established in subsection (g), the first two references were consulted. If the solubility values agreed within 5%, the selected value is the lower of the two values.

(2) If the values in step (1) did not agree within 5%, the next references in order were consulted until two values that did agree within 5% were found. The selected value is then the median of all the values consulted.

(3) If none of the values in all of the references in subsection (g) agreed within 5%, the selected value is the median of all values in all references.

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

(1) Lide, D. R., ed. 1996. *CRC Handbook of Chemistry and Physics*, 77th Edition. CRC Press.

(2) Budavari, S., ed. 1996. *The Merck Index*, 12th Ed. Merck and Co.

(3) Perry, R. H., et al. 1997. *Perry's Chemical Engineer's Handbook*, 7th ed. McGraw-Hill, New York.

(4) Howard, P. H. 1991. *Handbook of Environmental Fate and Exposure Data for Organic Chemicals. Vol. III Pesticides*, Lewis Publishers.

(5) Verschueren, K. 1977, *Handbook of Environmental Data on Organic Chemicals*, Van Nostrand Reinhold.

(6) MacKay, D., et al. 1997, *Illustrated Handbook of Physical-Chemical Properties and Environmental Fate for Organic Chemicals*, 5 Volumes. Lewis Publishers, New York.

(7) Montgomery, J. H. 1991, *Groundwater Chemicals Desk Reference*, Vol. II. Lewis Publishers and Montgomery, J. H., and L. M. Welkom. 1990, *Groundwater Chemicals Desk Reference Vol I*, Louis Publishers.

(8) Milne, G.W.A., ed. 1995, *CRC Handbook of Pesticides*, CRC Press, Inc.

(9) National Library of Medicine (Grateful Med), *Hazardous Substances Databank.*

(10) EPA. 1994, *Superfund Chemical Data Matrix. Office of Solid Waste and Emergency Response*, EPA 540-R-94-009.

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

§ 250.311. Evaluation of ecological receptors.

(a) In addition to any protection afforded under other requirements for meeting surface water and air quality standards and MSCs under this chapter, based on the screening process in this section, direct impacts from regulated substances to the following receptors shall be

assessed and addressed to implement a remedy that is protective of the environment:

(1) Individuals of threatened or endangered species as designated by the United States Fish and Wildlife Service under the Endangered Species Act (16 U.S.C.A. §§ 1531—1544).

(2) Exceptional value wetlands as defined in § 105.17 (relating to wetlands).

(3) Habitats of concern.

(4) Species of concern.

(b) For purposes of determining impacts on ecological receptors, no additional evaluation is required if the remediation attains a level equal to 1/10th of the value in Appendix A, Tables 3 and 4, except for constituents of potential ecological concern identified in Table 8, or if the criteria in paragraph (1), (2) or (3) are met. Information that supports a determination that no additional evaluation is required shall be documented in the final report.

(1) Jet fuel, gasoline, kerosene, number two fuel oil or diesel fuel are the only constituents detected onsite.

(2) The area of contaminated soil is less than 2 acres and the area of contaminated sediment is less than 1,000 square feet.

(3) The site has features, such as buildings, parking lots or graveled paved areas, which would obviously eliminate the specific exposure pathways, such as soils exposure.

(c) If none of the criteria in subsection (b) are met and if no Constituents of Potential Ecological Concern (CPECs) associated with the release being addressed as part of an NIR at the site, as identified in Appendix A, Table 8, are detected onsite, an onsite evaluation shall be conducted to document any indications of ecological impact. Ecological impacts requiring more detailed evaluation exist if there are differences of greater than 50% in the density or diversity of species or habitats of concern when compared with nearby reference areas representing equivalent ecological areas without contamination, if available. This evaluation shall also document the presence of threatened and endangered species and exceptional value wetlands. If no ecological impacts requiring further evaluation are identified, and no threatened and endangered species exist within a 2,500-foot radius of the site and no exceptional value wetlands exist on the site, no further evaluation is required and that determination shall be documented in the final report.

(d) If none of the criteria in subsection (b) are met and if CPECs associated with the release being addressed as part of an NIR at the site are detected onsite or ecological impacts requiring more detailed evaluation, threatened and endangered species, or exceptional value wetlands as identified in subsection (c) exist, a detailed onsite evaluation shall be conducted by a person qualified to perform environmental risk assessments to document any substantial ecological impacts. Substantial ecological impacts exist if there are differences of greater than 20% in the density of species of concern or greater than 50% in the diversity and extent of habitats of concern when compared with nearby reference areas representing equivalent ecological areas without contamination, if available. If there are no substantial ecological impacts identified and there are no threatened or endangered species on or within a 2,500-foot radius of the site and no exceptional value wetlands on the site, that determination shall be provided in the final report.

(e) If the person cannot demonstrate that they meet the criteria in subsection (b), and cannot demonstrate that the evaluation performed under subsection (c) identified no ecological impacts requiring more detailed evaluation under subsection (d), or cannot demonstrate that the evaluation performed under subsection (d) identified no substantial ecological impacts, or threatened or endangered species or exceptional value wetlands, one of the following shall be met:

(1) A person shall demonstrate in the final report that attainment of the Statewide health standard MSCs are protective of the ecological receptors.

(2) If a demonstration cannot be made that the Statewide health standard MSCs are protective of ecological receptors, a person shall demonstrate in the final report that postremedy use will eliminate complete exposure pathways at the time of the final report or in accordance with a postremediation care plan, or that mitigative measures identified in subsection (f) have been instituted and are subject to postremediation care plan requirements as described in § 250.312(b) (relating to final report).

(3) A person shall demonstrate attainment of the background standard.

(4) A person shall follow the procedures in §§ 250.402(c) and 250.409 (relating to human health and environmental protection goals; and risk assessment report) and demonstrate attainment of the site-specific standard for protection of ecological receptors.

(f) Mitigation measures to restore or replace equivalent ecological resources in the local area of the site may be applied if the following are met:

(1) No exceptional value wetlands have been identified by the screening process.

(2) No Federal or State laws and regulations prohibit or restrict the elimination of habitats or species identified by the screening process.

(3) A mitigation measure is selected based on the following hierarchy:

(i) Restoration onsite of species and habitats identified in the screening process.

(ii) Replacement onsite of species and habitats identified in the screening process.

(iii) Replacement on an adjacent area to the site of species and habitats identified in the screening process.

(iv) Replacement at a location within the municipality where the site is located of species and habitats identified in the screening process.

(4) The Department will review and approve mitigation measures prior to implementation to ensure that the proposed remedy and intended use of the property minimize the impacts to ecological receptors identified in the screening procedure.

(5) The postremediation care plan requirements in § 250.312(e) or § 250.411(f) (relating to final report) are implemented.

Subchapter G. DEMONSTRATION OF ATTAINMENT

§ 250.703. General attainment requirements for soil.

(a) For any standard selected, the attainment demonstration for the soil media shall be made at the point of

compliance as defined in Subchapters B—D (relating to background standards; Statewide health standards; and site-specific standards)

(b) The soil to which the attainment criteria are applied shall be determined by circumscribing with an irregular surface those concentrations detected during characterization which exceed the selected standard. Where this soil is to be removed from the site, the attainment demonstration applies to the base of the excavation defined by the limit of excavation.

(c) Sampling points for demonstration of attainment of soils shall be selected to be random and representative both horizontally and vertically based on a systematic random sampling as set forth in a Department approved reference. If exceedances of a standard occur in a localized area, the Department may require additional characterization and remediation if three or more adjacent samples exceed the standard by more than ten times.

(d) For statistical methods under § 250.707(b)(1)(i) (relating to statistical tests), the number of sample points required for each distinct area of contamination to demonstrate attainment shall be determined in the following way:

(1) For soil volumes equal to or less than 125 cubic yards, at least eight samples.

(2) For soil volumes up to 3,000 cubic yards, at least 12 sample points.

(3) For each additional soil volume of up to 3,000 cubic yards, an additional 12 sample points.

(4) Additional sampling points may be required based on site-specific conditions.

(e) For statistical methods under § 250.707(b)(1)(ii) and (c), the minimum number of samples required for demonstrating attainment shall be as specified by the documentation of the chosen method.

§ 250.707. Statistical tests.

(a) For regulated substances which are naturally occurring, the person shall compare the analytical results of background reference samples, that are representative of naturally occurring concentrations of regulated substances on the site, with the analytical results of the medium of concern onsite. For nonnaturally occurring regulated substances for which a known background condition exists, the person shall compare the analytical results of background reference samples, which are related to the migration of contaminants onto the site, with the analytical results of the medium of concern onsite. In addition, application of statistical tests for the background standard shall be as follows:

(1) Soil. For soil, a person shall use one of the following statistical methods in subparagraphs (i)—(iii) and conditions relating to subparagraphs (i)—(iii) as described in subparagraphs (iv)—(vi) to demonstrate attainment of the background standard:

(i) The person shall demonstrate that the highest measurement from the area of concern is not greater than the highest measurement from the background area. The Department may accept insignificant variances in numbers. The minimum number of samples to be collected is ten from the background reference population and ten from each distinct area of contamination.

(ii) The Department may accept the use of a combination of the Wilcoxon rank-sum test (equivalent to the Mann-Whitney U test) and the quantile test for data from two populations. The application of these tests shall meet the criteria in subparagraphs (iv) and (vi).

(iii) The Department may accept other appropriate statistical methods that meet the requirements of subparagraphs (iv)—(vi).

(iv) For nonparametric and parametric methods under subparagraphs (ii) and (iii), the false-positive rate for a set of data applied to a statistical test may not be greater than 0.20. The minimum number of samples to be collected is ten from the background population and ten from each distinct area of contamination.

(v) For parametric methods under subparagraph (iii), the censoring level for each nondetect (ND) shall be the assigned value randomly generated that is between zero and the limit related to the PQL.

(vi) For nonparametric and parametric methods under subparagraphs (ii) and (iii), the application of a statistical method shall meet the criteria in subsection (d).

(2) Groundwater for known upgradient release of a regulated substance.

(i) The Department may accept the use of the nonparametric tolerance intervals that are applied in accordance with the procedures in subparagraphs (ii)—(vi) and (viii)—(x).

(ii) The upgradient concentration shall be determined by sampling in a background reference well shown on the basis of characterization to exhibit the highest concentration and by demonstrating that the groundwater is representative of concentrations in groundwater that are migrating onto the site.

(iii) The background reference well shall be sampled over a period of eight quarters to provide eight samples.

(iv) From these eight samples, the highest concentration for each regulated substance shall be selected as the upper tolerance limit.

(v) In each onsite well, eight samples shall also be collected during the same eight-quarter period.

(vi) The upper tolerance limit shall be met in each onsite well. The maximum of data collected from each onsite well shall be at or below the upper tolerance limit.

(vii) In lieu of subparagraphs (iv)—(vi), the Department may accept a retesting strategy using nonparametric prediction limit in accordance with current EPA guidance (EPA, Office of Solid Waste Management Division. "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities;" Addendum to Interim Final Guidance, EPA, Washington, D. C. June 1992). For each regulated substance, the highest concentration of the eight background reference samples shall be selected as the upper prediction limit, as determined by the most current EPA guidance.

(viii) The application of a statistical method for groundwater background standard shall meet the criteria in subsection (d).

(ix) For parametric methods, the censoring level for each nondetect (ND) shall be the assigned value randomly generated that is between zero and the limit related to the PQL.

(x) In lieu of eight-quarter sampling in subparagraphs (iii) and (v), the Department may allow the eight samples to be taken during a period of four quarters, or less with written approval from the Department if the following criteria can be met:

(A) There is adequate spatial monitoring of the plume upgradient of the property on which the release occurred which indicates a stable plume condition.

(B) Parameters affecting the fate and transport of regulated substances within the plume have been fully evaluated.

(C) Coefficient of variation for the eight samples collected over a 4-quarter period may not exceed 1.0 for metals and 2.0 for organic compounds.

(D) The age of the plume is sufficiently well known to permit a judgment to be made regarding its stability and remediation of the source associated with the upgradient contamination is not currently or has not recently occurred.

(3) Background groundwater conditions due to naturally occurring or areawide contamination.

(i) To use this subparagraph for areawide contamination, the person performing remediation shall demonstrate to the Department, in writing, that the site conditions are due to areawide contamination and shall obtain the Department's approval to use this subsection.

(ii) A minimum of 12 samples shall be collected from any combination of monitoring wells, including upgradient locations, if all data collected is used in determination of background concentrations.

(iii) The same number of samples shall be collected within and representative of the area of groundwater contamination (plume) onsite as were collected in the upgradient sampling for each sampling event.

(iv) The samples from the upgradient wells and the wells in the plume onsite shall be collected during the same sampling event.

(v) Sampling may be accelerated so that all sampling events occur in as short a period of time as possible so as not to result in serial correlation in the data.

(vi) The resulting values may be used with appropriate nonparametric or parametric methods to compare the two populations.

(vii) The sampling results in the plume onsite may not exceed the sum of the background arithmetic average and three times the standard deviation calculated for the background area.

(viii) The application of a statistical method for groundwater background standard shall meet the criteria in subsection (d).

(ix) For parametric methods, the censoring level for each nondetect (ND) shall be the assigned value randomly generated that is between zero and the limit related to the PQL.

(b) The following statistical tests may be accepted by the Department to demonstrate attainment of the Statewide health standard. The statistical test for soil shall apply to each distinct area of contamination. The statistical test for groundwater will apply to each compliance monitoring well. Testing shall be performed individually for each regulated substance identified in the final report site investigation as being present at the site for which a person wants relief from liability under the act. The application of a statistical method shall meet the criteria in subsection (d).

(1) For soil attainment determination at each distinct area of contamination, subparagraph (i), (ii) or (iii) shall be met in addition to the attainment requirements in §§ 250.702 and 250.703 (relating to attainment requirements; and general attainment requirements for soil).

(i) Seventy-five percent of all samples, which shall be randomly collected in a single event from the site, shall be equal to or less than the Statewide health standard or the limit related to PQLs with no individual sample exceeding ten times the Statewide health standard.

(ii) As applied in accordance with EPA approved methods on statistical analysis of environmental data, as identified in subsection (e), the 95% UCL of the arithmetic mean shall be at or below the Statewide health standard.

(iii) For sites with a petroleum release where full site characterization, as defined in § 250.204(b) (relating to final report), has not been done in association with an excavation remediation, attainment of the Statewide health standard shall be demonstrated using the following procedure:

(A) For sites regulated under Chapter 245 (relating to administration of the storage tank and spill prevention program) where there is localized contamination as defined in the document "Closure Requirements for Underground Storage Tank Systems" (DEP technical document 2530-BK-DEP2008), samples shall be taken in accordance with that document.

(B) For sites not covered by clause (A), including all sites being remediated under an NIR under this chapter, samples shall be taken from the bottom and sidewalls of the excavation in a biased fashion that concentrates on areas where any remaining contamination above the Statewide health standard would most likely be found. The samples shall be taken from these suspect areas based on visual observation and the use of field instruments. If a sufficient number of samples has been collected from all suspect locations and the minimum number of samples has not been collected, or if there are no suspect areas, the locations to meet the minimum number of samples shall be based on a random procedure. The number of sample points required shall be determined in the following way:

(I) For 250 cubic yards or less of excavated contaminated soil, five samples shall be collected.

(II) For each additional 100 cubic yards of excavated contaminated soil, one sample shall be collected.

(III) For excavations involving more than 1,000 cubic yards of contaminated soil, the remediator shall identify the number and locations of samples in a confirmatory sampling plan submitted to the Department. The remediator shall obtain the Department's approval of the confirmatory sampling plan prior to conducting attainment sampling.

(IV) Where water is encountered in the excavation and obvious contamination is observed or indicated, soil samples collected just above the soil/water interface shall be equal to or less than the applicable Statewide health MSC determined by § 250.308(a)(2)(ii) (relating to soil to groundwater pathway numeric values).

(V) Where water is encountered in the excavation and no obvious contamination is observed or indicated, a minimum of two samples shall be collected from the water surface in the excavation.

(C) All sample results shall be equal to or less than the applicable Statewide health MSC as determined using Tables 1—4 and 6 in Appendix A.

(iv) For sites where there is a release to surface soils resulting in excavation of 50 cubic yards or less of contaminated soil, samples shall be collected as described in subparagraph (iii)(B), except that two samples shall be collected.

(2) For groundwater attainment determination at each compliance monitoring well, subparagraph (i) or (ii) shall be met in addition to the attainment requirements in § 250.702 and § 250.704 (relating to general attainment requirements for groundwater).

(i) Seventy-five percent of all samples collected within each monitoring well over time shall be equal to or less than the Statewide health standard or the limit related to PQLs with no individual sample exceeding both of the following:

(A) Ten times the Statewide health standard on the property.

(B) Two times the Statewide health standard beyond the property boundary.

(ii) As applied in accordance with EPA approved methods on statistical analysis of environmental data, as identified in subsection (e), the 95% UCL level of the arithmetic mean shall be at or below the Statewide health standard.

(3) In addition to the statistical tests identified in paragraphs (1) and (2), a person may use a statistical test that meets the requirements of subsection (d) to demonstrate attainment.

(c) To demonstrate attainment of the site-specific standard, a person may use a statistical test identified in subsection (b)(1)(ii) and (2)(ii) where the 95% UCL of the arithmetic mean is below the site-specific standard or a statistical test that meets the requirements of subsection (d). The attainment test and the methodology used in the risk assessment to evaluate exposure concentrations shall be the same.

(d) Except for the statistical methods identified in subsections (a)(1)(i) and (b)(1)(i) and (2)(i), a demonstration of attainment of one or a combination of remediation standards shall comply with the following:

(1) When statistical methods are to be used for demonstration of attainment of Statewide health or site-specific standards, the null hypotheses (Ho) shall be that the true site arithmetic average concentration is at or above the cleanup standard, and the alternative hypothesis (Ha) shall be that the true site arithmetic average concentration is below the cleanup standard. When statistical methods are to be used to determine that the background standard is exceeded, the null hypothesis (Ho) shall be that the background standard is achieved and the alternative hypothesis (Ha) shall be that the background standard is not achieved.

(2) A statistical method chosen shall comply with the following performance standards:

(i) The underlying assumptions of the statistical method shall be met, such as data distribution.

(ii) The statistical method shall be recommended for this use in Department-approved guidance or regulation and shall be generally recognized as appropriate for the particular remediation implemented at the site.

(iii) Compositing cannot be used with nonparametric methods or for volatile organic compounds.

(iv) For parametric methods, the censoring level for each nondetect shall be the assigned value randomly generated that is between zero and the limit related to the PQL.

(v) Tests shall account for seasonal and spatial variability as well as temporal correlation of data, unless otherwise approved by the Department.

(vi) Tests used to determine that the background standard is exceeded shall maintain adequate power to detect contamination in accordance with current EPA guidances, regulations or protocols.

(vii) For the limits relating to the PQLs, Statewide health and site-specific standards, the false-positive rate for a statistical test may not be greater than 0.20 for nonresidential and 0.05 for residential.

(viii) Statistical testing shall be done individually for each regulated substance present at the site.

(3) The following information shall be documented in a final report when a statistical method is applied:

(i) A description of the statistical method.

(ii) A clear statement of the applicable decision rule in the form of statistical hypotheses for each spatial unit and temporal boundary including the applicable statistical parameter of interest and the specific cleanup standard.

(iii) A description of the underlying assumptions of the method.

(iv) Documentation showing that the sample data set meets the underlying assumptions of the method and demonstrating that the method is appropriate to apply to the data.

(v) Specification of false positive rates and, in addition for the background standard, specification of false negative rates.

(vi) Documentation of input and output data for the statistical test, presented in tables or figures, or both, as appropriate.

(vii) An interpretation and conclusion of the statistical test.

(e) The references identified in subsection (b)(1)(ii) and (2)(ii) are as follows:

(1) EPA, Office of Policy, Planning and Evaluation, *Methods for Evaluating the Attainment of Cleanup Standards*, Volume 1: Soils and Solid Media, EPA 230/02-89-042, Washington, D. C. 1989.

(2) EPA, Office of Solid Waste Management Division, *Test Methods for Evaluating Solid Waste*, SW-846 Volume II: Field Methods, EPA, November 1985, Third Edition.

(3) EPA, Office of Solid Waste Management Division, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities*, Interim Final Guidance, EPA, Washington, D.C., April, 1989.

(4) EPA, Office of Solid Waste Management Division, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities*, Addendum to Interim Final Guidance, EPA, Washington, D.C., June, 1992.

(5) 40 CFR 264 and 265 (relating to standards for owners and operators of hazardous waste treatment, storage, and disposal facilities; and interim status standards for owners and operators of hazardous waste treatment, storage, and disposal facilities).

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 G	3,800 S	3,800 S	3,800 S	3,800 S	3,800 S
ACENAPHTHYLENE	208-96-8	2,200 G	6,100 G	16,000 S	16,000 S	16,000 S	16,000 S
ACEPHATE	30560-19-1	76 G	300 G	7,600 G	30,000 G	76 G	300 G
ACETALDEHYDE	75-07-0	19 N	52 N	1,900 N	5,200 N	19 N	52 N
ACETONE	67-64-1	3,700 G	10,000 G	370,000 G	1,000,000 G	37,000 G	100,000 G
ACETONITRILE	75-05-8	170 N	350 N	17,000 N	35,000 N	1,700 N	3,500 N
ACETOPHENONE	98-86-2	3,700 G	10,000 G	370,000 G	1,000,000 G	3,700 G	10,000 G
ACETYLAMINOFLUORENE, 2- (2AAF)	53-96-3	0.17 G	0.68 G	17 G	68 G	170 G	680 G
ACROLEIN	107-02-8	0.055 N	0.12 N	5.5 N	12 N	0.55 N	1.2 N
ACRYLAMIDE	79-06-1	0.033 N	0.14 N	3.3 N	14 N	0.033 N	0.14 N
ACRYLIC ACID	79-10-7	2.8 N	5.8 N	280 N	580 N	280 N	580 N
ACRYLONITRILE	107-13-1	0.63 N	2.7 N	63 N	270 N	63 N	270 N
ALACHLOR	15972-60-8	2 M	2 M	200 M	200 M	2 M	2 M
ALDICARB	116-06-3	7 M	7 M	700 M	700 M	7,000 M	7,000 M
ALDRIN	309-00-2	0.0087 N	0.037 N	0.87 N	3.7 N	0.87 N	3.7 N
ALLYL ALCOHOL	107-18-6	49 N	100 N	4,900 N	10,000 N	4,900 N	10,000 N
AMINOBIPHENYL, 4-	92-67-1	0.031 G	0.12 G	3.1 G	12 G	31 G	120 G
AMITROLE	61-82-5	0.7 G	2.8 G	70 G	280 G	700 G	2,800 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	2.8 N	5.8 N	280 N	580 N	2.8 N	5.8 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
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 G	2,000 S	2,000 S	2,000 S	1,800 G	2,000 S
BENTAZON	25057-89-0	1,100 G	3,100 G	110,000 G	310,000 G	1,100 G	3,100 G
BENZENE	71-43-2	5 M	5 M	500 M	500 M	500 M	500 M
BENZIDINE	92-87-5	0.0029 G	0.011 G	0.29 G	1.1 G	2.9 G	11 G
BENZO(A)ANTHRACENE	56-55-3	0.9 G	3.6 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	0.9 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 G	410,000 G	2,700,000 S	2,700,000 S	150,000 G	410,000 G

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

REGULATED SUBSTANCE	CASRN	USED AQUIFERS				NON-USE AQUIFERS	
		TDS ≤ 2500		TDS > 2500			
		R	NR	R	NR	R	NR
BENZOTRICHLORIDE	98-07-7	0.051 G	0.2 G	5.1 G	20 G	51 G	200 G
BENZYL ALCOHOL	100-51-6	11,000 G	31,000 G	1,100,000 G	3,100,000 G	11,000 G	31,000 G
BENZYL CHLORIDE	100-44-7	0.87 N	3.7 N	87 N	370 N	87 N	370 N
BHC, ALPHA-	319-84-6	0.1 G	0.41 G	10 G	41 G	100 G	410 G
BHC, BETA-	319-85-7	0.37 G	1.4 G	37 G	100 S	100 S	100 S
BHC, DELTA-	319-86-8	22 G	61 G	2,200 G	6,100 G	8,000 S	8,000 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 G	5,100 G	7,200 S	7,200 S	7,200 S	7,200 S
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.13 N	0.55 N	13 N	55 N	13 N	55 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	0.00069 N	0.0029 N	0.069 N	0.29 N	0.069 N	0.29 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 G	5,100 G	120,000 S	120,000 S	120,000 S	120,000 S
BROMACIL	314-40-9	80 H	80 H	8,000 H	8,000 H	80 H	80 H
BROMOCHLOROMETHANE	74-97-5	90 H	90 H	9,000 H	9,000 H	90 H	90 H
BROMODICHLOROMETHANE	75-27-4	100 M	100 M	10,000 M	1,0000 M	100 M	100 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 G	2,000 G	73,000 G	130,000 S	730 G	2,000 G
BROMOXYNIL OCTANOATE	1689-99-2	80 S	80 S	80 S	80 S	80 S	80 S
BUTADIENE, 1,3-	106-99-0	0.15 N	0.65 N	15 N	65 N	15 N	65 N
BUTYL ALCOHOL, N-	71-36-3	970 N	2,000 N	97,000 N	200,000 N	9,700 N	20,000 N
BUTYLATE	2008-41-5	350 H	350 H	35,000 H	35,000 H	350 H	350 H
BUTYLBENZENE, N-	104-51-8	1,500 G	4,100 G	15,000 S	15,000 S	1,500 G	4,100 G
BUTYLBENZENE, SEC-	135-98-8	1,500 G	4,100 G	17,000 S	17,000 S	1,500 G	4,100 G
BUTYLBENZENE, TERT-	98-06-6	1,500 G	4,100 G	30,000 S	30,000 S	1,500 G	4,100 G
BUTYLBENZYL PHTHALATE	85-68-7	2,700 S	2,700 S	2,700 S	2,700 S	2,700 S	2,700 S
CAPTAN	13-36-2	190 G	500 S	500 S	500 S	500 S	500 S
CARBARYL	63-25-2	700 H	700 H	70,000 H	70,000 H	120,000 S	120,000 S
CARBAZOLE	86-74-8	33 G	130 G	1,200 S	1,200 S	1,200 S	1,200 S
CARBOFURAN	1563-66-2	40 M	40 M	4,000 M	4,000 M	40 M	40 M
CARBON DISULFIDE	75-15-0	1,900 N	4,100 N	190,000 N	410,000 N	1,900 N	4,100 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

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

REGULATED SUBSTANCE	CASRN	USED AQUIFERS				NON-USE AQUIFERS	
		TDS ≤ 2500		TDS > 2500			
		R	NR	R	NR	R	NR
CHLORDANE	57-74-9	2 M	2 M	56 S	56 S	56 S	56 S
CHLORO-1,1-DIFLUOROETHANE, 1-	75-68-3	140,000 N	290,000 N	1,400,000 S	1,400,000 S	140,000 N	290,000 N
CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE)	107-05-1	2.8 N	5.8 N	280 N	580 N	280 N	580 N
CHLOROACETOPHENONE, 2-	532-27-4	0.31 G	0.88 G	31 G	88 G	310 G	880 G
CHLOROANILINE, P-	106-47-8	150 G	410 G	15,000 G	41,000 G	150 G	410 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	2.4 G	9.6 G	240 G	960 G	2,400 G	9,600 G
CHLOROBUTANE, 1-	109-69-3	15,000 G	41,000 G	680,000 S	680,000 S	15,000 G	41,000 G
CHLORODIBROMOMETHANE	124-48-1	100 M	100 M	10000 M	10000 M	10000 M	10000 M
CHLORODIFLUOROMETHANE	75-45-6	100 H	100 H	10,000 H	10,000 H	100 H	100 H
CHLOROETHANE	75-00-3	230 G	900 G	23,000 G	90,000 G	23,000 G	90,000 G
CHLOROFORM	67-66-3	100 M	100 M	10,000 M	10,000 M	1,000 M	1,000 M
CHLORONAPHTHALENE, 2-	91-58-7	2,900 G	8,200 G	12,000 S	12,000 S	2,900 G	8,200 G
CHLORONITROBENZENE, P-	100-00-5	37 G	140 G	3,700 G	14,000 G	37 G	140 G
CHLOROPHENOL, 2-	95-57-8	40 H	40 H	4,000 H	4,000 H	40 H	40 H
CHLOROPRENE	126-99-8	19 N	41 N	1,900 N	4,100 N	1,900 N	4,100 N
CHLOROPROPANE, 2-	75-29-6	280 N	580 N	28,000 N	58,000 N	280 N	580 N
CHLOROTHALONIL	1897-45-6	60 G	240 G	600 S	600 S	60 G	240 G
CHLOROTOLUENE, O-	95-49-8	100 H	100 H	10,000 H	10,000 H	100 H	100 H
CHLORPYRIFOS	2921-88-2	20 H	20 H	1,100 S	1100 S	20 H	20 H
CHLORSULFURON	64902-72-3	1,800 G	5,100 G	130,000 S	130,000 S	1,800 G	5,100 G
CHLORTHAL-DIMETHYL (DACTHAL) (DCPA)	1861-32-1	400 H	400 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
CRESOL	1319-77-3	180 G	510 G	18,000 G	51,000 G	18,000 G	51,000 G
CRESOL, 0- (METHYLPHENOL, 2-)	95-48-7	1,800 G	5,100 G	180,000 G	510,000 G	180,000 G	510,000 G
CRESOL, M (METHYLPHENOL, 3-)	108-39-4	1,800 G	5,100 G	180,000 G	510,000 G	1,800,000 G	2,500,000 S
CRESOL, P (METHYLPHENOL, 4-)	106-44-5	180 G	510 G	18,000 G	51,000 G	180,000 G	510,000 G
CRESOL, P-CHLORO-M-	59-50-7	180 G	510 G	18,000 G	51,000 G	180 G	510 G
CROTONALDEHYDE	4170-30-3	0.079 N	0.34 N	7.9 N	34 N	7.9 N	34 N
CROTONALDEHYDE, TRANS-	123-73-9	0.079 G	0.34 G	7.9 G	34 G	7.9 G	34 G
CUMENE	98-82-8	1,100 N	2,300 N	50,000 S	50,000 S	50,000 S	50,000 S
CYCLOHEXANONE	108-94-1	49,000 N	100,000 N	4,900,000 N	10,000,000 N	49,000 N	100,000 N
CYFLUTHRIN	68359-37-5	1 S	1 S	1 S	1 S	1 S	1 S
CYROMAZINE	66215-27-8	270 G	770 G	27,000 G	77,000 G	270 G	770 G

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

REGULATED SUBSTANCE	CASRN	USED AQUIFERS				NON-USE AQUIFERS	
		TDS ≤ 2500		TDS > 2500			
		R	NR	R	NR	R	NR
DDD, 4,4'-	72-54-8	0.62 N	2.7 N	62 N	160 S	62 N	160 S
DDE, 4,4'-	72-55-9	1.9 G	7.6 G	40 S	40 S	40 S	40 S
DDT, 4,4'-	50-29-3	1.9 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	2.5 N	10 N	250 N	1,000 N	250 N	1,000 N
DIAMINOTOLUENE, 2,4-	95-80-7	0.21 G	0.81 G	21 G	81 G	210 G	810 G
DIAZINON	333-41-5	0.6 H	0.6 H	60 H	60 H	0.6 H	0.6 H
DIBENZO(A,H)ANTHRACENE	53-70-3	0.09 G	0.36 G	0.6 S	0.6 S	0.6 S	0.6 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 G	1,000 G	20,000 S	20,000 S	370 G	1,000 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	97 N	200 N	9,700 N	20,000 N	9,700 N	20,000 N
DIBUTYL PHTHALATE, N-	84-74-2	3,700 G	10,000 G	370,000 G	400,000 S	400,000 S	400,000 S
DICHLORO-2-BUTENE, 1,4-	764-41-0	0.016 N	0.069 N	1.6 N	6.9 N	0.016 N	0.069 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	6,0000 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 G	5.8 G	150 G	580 G	1,500 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	27 N	110 N	2700 N	11,000 N	270 N	1,100 N
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	7,000 M	7,000 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 G	26 G	660 G	2,600 G	660 G	2,600 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	0.52 N	2.2 N	52 N	220 N	0.52 N	2.2 N
DICYCLOPENTADIENE	77-73-6	0.55 N	1.2 N	55 N	120 N	0.55 N	1.2 N

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

REGULATED SUBSTANCE	CASRN	USED AQUIFERS				NON-USE AQUIFERS	
		TDS ≤ 2500		TDS > 2500			
		R	NR	R	NR	R	NR
DIELDRIN	60-57-1	0.041 G	0.16 G	4.1 G	16 G	41 G	160 G
DIETHYL PHTHALATE	84-66-2	5,000 H	5,000 H	500,000 H	500,000 H	1,100,000 S	1,100,000 S
DIFLUBENZURON	35367-38-5	200 S	200 S	200 S	200 S	200 S	200 S
DIMETHOATE	60-51-5	7.3 G	20 G	730 G	2,000 G	7,300 G	20,000 G
DIMETHOXYBENZIDINE, 3,3-	119-90-4	47 G	190 G	4,700 G	19,000 G	47,000 G	60,000 S
DIMETHYLAMINOAZOBENZENE, P-	60-11-7	0.14 G	0.57 G	14 G	57 G	140 G	570 G
DIMETHYLANILINE, N,N-	121-69-7	73 G	200 G	7,300 G	20,000 G	7,300 G	20,000 G
DIMETHYLBENZIDINE, 3,3-	119-93-7	0.072 G	0.28 G	7.2 G	28 G	72 G	280 G
DIMETHYLPHENOL, 2,4-	105-67-9	730 G	2,000 G	73,000 G	200,000 G	730,000 G	2,000,000 G
DINITROBENZENE, 1,3-	99-65-0	1 H	1 H	100 H	100 H	1,000 H	1,000 H
DINITROPHENOL, 2,4-	51-28-5	19 N	41 N	1,900 N	4,100 N	190 N	410 N
DINITROTOLUENE, 2,4-	121-14-2	2.1 G	8.4 G	210 G	840 G	2,100 G	8,400 G
DINITROTOLUENE, 2,6- (2,6-DNT)	606-20-2	37 G	100 G	3,700 G	10,000 G	37,000 G	100,000 G
DINOSEB	88-85-7	7 M	7 M	700 M	700 M	700 M	700 M
DIOXANE, 1,4-	123-91-1	5.6 N	24 N	560 N	2,400 N	56 N	240 N
DIPHENAMID	957-51-7	200 H	200 H	20,000 H	20,000 H	200 H	200 H
DIPHENYLAMINE	122-39-4	200 H	200 H	20,000 H	20,000 H	200,000 H	200,000 H
DIPHENYLHYDRAZINE, 1,2-	122-66-7	0.83 G	3.3 G	83 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	0.3 H	0.3 H	30 H	30 H	30 H	30 H
DIURON	330-54-1	10 H	10 H	1,000 H	1,000 H	10 H	10 H
ENDOSULFAN	115-29-7	58 N	120 N	480 S	480 S	480 S	480 S
ENDOSULFAN I (ALPHA)	959-98-8	220 G	500 S	500 S	500 S	220 G	500 S
ENDOSULFAN II (BETA)	33213-65-9	220 G	450 S	450 S	450 S	220 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	2.8 N	5.8 N	280 N	580 N	280 N	580 N
ETHEPHON	16672-87-0	180 G	510 G	18,000 G	51,000 G	180 G	510 G
ETHION	563-12-2	18 G	51 G	850 S	850 S	18 G	51 G
ETHOXYETHANOL, 2- (EGEE)	110-80-5	550 N	1,200 N	55,000 N	120,000 N	55,000 N	120,000 N
ETHYL ACETATE	141-78-6	8,700 N	18,000 N	870,000 N	1,800,000 N	870,000 N	1,800,000 N
ETHYL ACRYLATE	140-88-5	3.1 N	13 N	310 N	1,300 N	310 N	1,300 N
ETHYL BENZENE	100-41-4	700 M	700 M	70,000 M	70,000 M	70,000 M	70,000 M

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

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 G	2,600 G	91,000 G	260,000 G	910 G	2,600 G
ETHYL ETHER	60-29-7	1,900 N	4,100 N	190,000 N	410,000 N	1,900 N	4,100 N
ETHYL METHACRYLATE	97-63-2	870 N	1,800 N	87,000 N	180,000 N	870 N	1,800 N
ETHYLENE GLYCOL	107-21-1	14,000 H	14,000 H	1,400,000 H	14,000,000 H	1,400,000 H	1,400,000 H
ETHYLENE THIOUREA (ETU)	96-45-7	3 H	3 H	300 H	300 H	3,000 H	3,000 H
ETHYLP-NITROPHENYL PHENYLPHOSPHOROTHIOATE	2104-64-5	0.37 G	1 G	37 G	100 G	0.37 G	1 G
FENAMIPHOS	22224-92-6	2 H	2 H	200 H	200 H	2 H	2 H
FENVALERATE (PYDRIN)	51630-58-1	85 S	85 S	85 S	85 S	85 S	85 S
FLUOMETURON	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 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	19,000 N	41,000 N	1,900,000 N	4,100,000 N	190,000 N	410,000 N
FOSETYL-AL	39148-24-8	110,000 G	310,000 G	11,000,000 G	31,000,000 G	110,000 G	310,000 G
FURAN	110-00-9	9.7 N	20 N	970 N	2,000 N	970 N	2,000 N
FURFURAL	98-01-1	110 G	290 N	11,000 G	29,000 N	110 G	290 N
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	1 H	1 H	100 H	100 H	1,000 H	1,000 H
HEXACHLOROCYCLOPENTADIENE	77-47-4	50 M	50 M	1,800 S	1,800 S	1,800 S	1,800 S
HEXACHLOROETHANE	67-72-1	1 H	1 H	100 H	100 H	100 H	100 H
HEXANE	110-54-3	550 N	1,200 N	9,500 S	9,500 S	550 N	1,200 N
HEXYTHIAZOX (SAVEY)	78587-05-0	500 S	500 S	500 S	500 S	500 S	500 S
HYDRAZINE/HYDRAZINE SULFATE	302-01-2	0.0088 N	0.038 N	0.88 N	3.8 N	0.088 N	0.38 N
HYDROQUINONE	123-31-9	1,500 G	4,100 G	150,000 G	410,000 G	1,500,000 G	4,100,000 G
INDENO(1,2,3-CD)PYRENE	193-39-5	0.9 G	3.6 G	62 S	62 S	62 S	62 S
IPRODIONE	36734-19-7	1,500 G	4,100 G	13,000 S	13,000 S	1,500 G	4,100 G
ISOBUTYL ALCOHOL	78-83-1	2,900 N	6,100 N	290,000 N	610,000 N	290,000 N	610,000 N

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

REGULATED SUBSTANCE	CASRN	USED AQUIFERS				NON-USE AQUIFERS	
		TDS ≤ 2500		TDS > 2500			
		R	NR	R	NR	R	NR
ISOPHORONE	78-59-1	100 H	100 H	10,000 H	10,000 H	100,000 H	100,000 H
KEPONE	143-50-0	0.041 G	0.16 G	4.1 G	16 G	41 G	160 G
MALATHION	121-75-5	100 H	100 H	10000 H	10000 H	10,000 H	10,000 H
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 G	510 G	18,000 G	23,000 S	180 G	510 G
MERPHOS OXIDE	78-48-8	1.1 G	3.1 G	110 G	310 G	1.1 G	3.1 G
METHACRYLONITRILE	126-98-7	1.9 N	4.1 N	190 N	410 N	1.9 N	4.1 N
METHAMIDOPHOS	10265-92-6	1.8 G	5.1 G	180 G	510 G	1.8 G	5.1 G
METHANOL	67-56-1	4,900 N	10,000 N	490,000 N	1,000,000 N	490,000 N	1,000,000 N
METHOMYL	16752-77-5	200 H	200 H	20000 H	20000 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	37 G	100 G	3,700 G	10,000 G	37 G	100 G
METHYL ACETATE	79-20-9	37,000 G	100,000 G	3,700,000 G	10,000,000 G	37,000 G	100,000 G
METHYL ACRYLATE	96-33-3	1,100 G	3,100 G	110,000 G	310,000 G	110,000 G	310,000 G
METHYL CHLORIDE	74-87-3	3 H	3 H	300 H	300 H	300 H	300 H
METHYL ETHYL KETONE	78-93-3	2,800 N	5,800 N	280,000 N	580,000 N	280,000 N	580,000 N
METHYL ISOBUTYL KETONE	108-10-1	190 N	410 N	19,000 N	41,000 N	19,000 N	41,000 N
METHYL METHACRYLATE	80-62-6	1,900 N	4,100 N	190,000 N	410,000 N	190,000 N	410,000 N
METHYL METHANESULFONATE	66-27-3	6.7 G	26 G	670 G	2600 G	6.7 G	26 G
METHYL PARATHION	298-00-0	2 H	2 H	200 H	200 H	200 H	200 H
METHYL STYRENE (MIXED ISOMERS)	25013-15-4	220 G	610 G	22,000 G	61,000 G	220 G	610 G
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	20 H	20 H	2,000 H	2,000 H	200 H	200 H
METHYLENE BIS(2-CHLOROANILINE), 4,4'-	101-14-4	5.1 G	20 G	510 G	2,000 G	5.1 G	20 G
METHYLNAPHTHALENE, 2-	91-57-6	730 G	2,000 G	25,000 S	25,000 S	730 G	2000 G
METHYLSTYRENE, ALPHA	98-83-9	680 N	1,400 N	68,000 N	140,000 N	680 N	1,400 N
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 G	1.4 G	37 G	140 G	370 G	1,400 G
NAPHTHYLAMINE, 2-	91-59-8	0.37 G	1.4 G	37 G	140 G	370 G	1,400 G
NAPROPAMIDE	15299-99-7	3,700 G	10,000 G	70,000 S	70,000 S	3,700 G	10,000 G
NITROANILINE, M-	99-09-2	2.1 G	5.8 G	210 G	580 G	2.1 G	5.8 G
NITROANILINE, O-	88-74-4	2.1 G	5.8 G	210 G	580 G	2.1 G	5.8 G
NITROANILINE, P-	100-01-6	2.1 G	5.8 G	210 G	580 G	2.1 G	5.8 G
NITROBENZENE	98-95-3	18 G	51 G	1,800 G	5,100 G	18,000 G	51,000 G
NITROPHENOL, 2-	88-75-5	290 G	820 G	29,000 G	82,000 G	290,000 G	820,000 G

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

REGULATED SUBSTANCE	CASRN	USED AQUIFERS				NON-USE AQUIFERS	
		TDS ≤ 2500		TDS > 2500			
		R	NR	R	NR	R	NR
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	0.016 N	0.068 N	1.6 N	6.8 N	0.16 N	0.68 N
NITROSODIETHYLAMINE, N-	55-18-5	0.001 N	0.0043 N	0.1 N	0.43 N	0.01 N	0.043 N
NITROSODIMETHYLAMINE, N-	62-75-9	0.0031 N	0.013 N	0.31 N	1.3 N	0.031 N	0.13 N
NITROSO-DI-N-BUTYLAMINE, N-	924-16-3	0.027 N	0.11 N	2.7 N	11 N	2.7 N	11 N
NITROSODI-N-PROPYLAMINE, N-	621-64-7	0.094 G	0.37 G	9.4 G	37 G	94 G	370 G
NITROSODIPHENYLAMINE, N-	86-30-6	130 G	530 G	13,000 G	35,000 S	35,000 S	35,000 S
NITROSO-N-ETHYLUREA, N-	759-73-9	0.0047 G	0.019 G	0.47 G	1.9 G	0.47 G	1.9 G
OCTYL PHTHALATE, DI-N-	117-84-0	730 G	2,000 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
PARATHION	56-38-2	220 G	610 G	20,000 S	20,000 S	220 G	610 G
PCB-1016 (AROCLOR)	12674-11-2	2.6 G	7.2 G	250 S	250 S	2.6 G	7.2 G
PCB-1221 (AROCLOR)	11104-28-2	1.3 G	5.2 G	130 G	520 G	1.3 G	5.2 G
PCB-1232 (AROCLOR)	11141-16-5	1.3 G	5.2 G	130 G	520 G	1.3 G	5.2 G
PCB-1242 (AROCLOR)	53469-21-9	1.3 G	5.2 G	100 S	100 S	1.3 G	5.2 G
PCB-1248 (AROCLOR)	12672-29-6	0.37 G	1.4 G	37 G	37 G	0.37 G	1.4 G
PCB-1254 (AROCLOR)	11097-69-1	0.37 G	1.4 G	37 G	37 G	0.37 G	1.4 G
PCB-1260 (AROCLOR)	11096-82-5	1.1 G	4.3 G	80 S	80 S	1.1 G	4.3 G
PEBULATE	1114-71-2	1,800 G	5,100 G	92,000 S	92,000 S	1,800 G	5,100 G
PENTACHLOROBENZENE	608-93-5	29 G	82 G	740 S	740 S	740 S	740 S
PENTACHLORONITROBENZENE	82-68-8	2.5 G	10 G	250 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 G	1,200 G	30,000 G	120,000 G	300,000 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
PHENOL	108-95-2	4,000 H	4,000 H	400,000 H	400,000 H	400,000 H	400,000 H
PHENYLENEDIAMINE, M-	108-45-2	220 G	610 G	22,000 G	61,000 G	220,000 G	610,000 G
PHENYLPHENOL, 2-	90-43-7	340 G	1,300 G	34,000 G	130,000 G	340,000 G	700,000 G
PHORATE	298-02-2	1.9 N	4.1 N	190 N	410 N	1.9 N	4.1 N
PHTHALIC ANHYDRIDE	85-44-9	73,000 G	200,000 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 (AROCLORS) (PCBS)	1336-36-3	0.5 M	0.5 M	50 M	50 M	0.5 M	0.5 M
PRONAMIDE	23950-58-5	50 H	50 H	5,000 H	5,000 H	50 H	50 H
PROPANIL	709-98-8	180 G	510 G	18,000 G	51,000 G	180 G	510 G

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

REGULATED SUBSTANCE	CASRN	USED AQUIFERS				NON-USE AQUIFERS	
		TDS ≤ 2500		TDS > 2500			
		R	NR	R	NR	R	NR
PROPHAM	122-42-9	730 G	2,000 G	73,000 G	200,000 G	730 G	2,000 G
PROPYLBENZENE, N-	103-65-1	1,500 G	4,100 G	52,000 S	52,000 S	1,500 G	4,100 G
PROPYLENE OXIDE	75-56-9	2.8 G	11 G	280 G	1,100 G	2.8 G	11 G
PYRENE	129-00-0	130 S	130 S	130 S	130 S	130 S	130 S
PYRIDINE	110-86-1	9.7 N	20 N	970 N	2,000 N	97 N	200 N
QUINOLINE	91-22-5	0.055 G	0.22 G	5.5 G	22 G	55 G	220 G
QUIZALOFOP (ASSURE)	76578-14-8	300 S	300 S	300 S	300 S	300 S	300 S
RONNEL	299-84-3	1,800 G	5,100 G	40,000 S	40,000 S	1,800 G	5,100 G
SIMAZINE	122-34-9	4 M	4 M	400 M	400 M	4 M	4 M
STRYCHNINE	57-24-9	11 G	31 G	1,100 G	3,100 G	11,000 G	31,000 G
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	0.9 H	0.9 H	90 H	90 H	0.9 H	0.9 H
TETRACHLOROBENZENE, 1,2,4,5-	95-94-3	11 G	31 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, 1,2,2,2-	79-34-5	0.3 N	0.3 N	30 N	30 N	30 N	30 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	290 N	610 N	29,000 N	61,000 N	29,000 N	61,000 N
TETRAETHYL LEAD	78-00-2	0.0037 G	0.01 G	0.37 G	1 G	3.7 G	10 G
TETRAETHYLDITHIOPYROPHOSPHATE	3689-24-5	4.9 N	10 N	490 N	1,000 N	4.9 N	10 N
THIOFANOX	39196-18-4	11 G	31 G	1,100 G	3,100 G	11 G	31 G
THIRAM	137-26-8	180 G	510 G	18,000 G	30,000 S	180 G	510 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	2.8 G	11 G	280 G	1,100 G	2.8 G	11 G
TOLUIDINE, O	95-53-4	2.8 G	11 G	280 G	1,100 G	2,800 G	11,000 G
TOLUIDINE, P-	106-49-0	3.5 G	14 G	350 G	1,400 G	3.5 G	14 G
TOXAPHENE	8001-35-2	3 M	3 M	300 M	300 M	3 M	3 M
TRIALLATE	2303-17-5	470 G	1,300 G	4,000 S	4,000 S	470 G	1,300 G
TRIBROMOMETHANE (BROMOFORM)	75-25-2	100 M	100 M	10,000 M	10,000 M	1,000 M	1,000 M
TRICHLORO-1,2,2-TRIFLUOROETHANE, 1,1,2-	76-13-1	83,000 N	170,000 S	170,000 S	170,000 S	170,000 N	170,000 S
TRICHLOROBENZENE, 1,2,4-	120-82-1	70 M	70 M	7,000 M	7,000 M	44,000 S	44,000 S

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

REGULATED SUBSTANCE	CASRN	USED AQUIFERS				NON-USE AQUIFERS	
		TDS ≤ 2500		TDS > 2500			
		R	NR	R	NR	R	NR
TRICHLOROBENZENE, 1,3,5-	108-70-3	40 H	40 H	4,000 H	4000 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
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 G	10,000 G	370,000 G	1,000,000 G	100,000 S	1,000,000 S
TRICHLOROPHENOL, 2,4,6-	88-06-2	11 G	31 G	1,100 G	3,100 G	11,000 G	31,000 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 G	510 G	18,000 G	51,000 G	180 G	510 G
TRICHLOROPROPANE, 1,2,3-	96-18-4	40 H	40 H	4,000 H	4000 H	4,000 H	4,000 H
TRICHLOROPROPENE, 1,2,3-	96-19-5	180 G	510 G	18,000 G	51,000 G	180 G	510 G
TRIFLURALIN	1582-09-8	5 H	5 H	500 H	500 H	5 H	5 H
TRIMETHYLBENZENE, 1,3,4- (TRIMETHYLBENZENE, 1,2,4-)	95-63-6	16 N	35 N	1,600 N	3,500 N	1,600 N	3,500 N
TRIMETHYLBENZENE, 1,3,5-	108-67-8	16 N	35 N	1,600 N	3,500 N	16 N	35 N
TRINITROTOLUENE, 2,4,6-	118-96-7	2 H	2 H	200 H	200 H	2 H	2 H
VINYL ACETATE	108-05-4	550 N	1200 N	55,000 N	120,000 N	550 N	1,200 N
VINYL BROMIDE (BROMOETHENE)	593-60-2	1.4 N	5.8 N	140 N	580 N	14 N	58 N
VINYL CHLORIDE	75-01-4	2 M	2 M	200 M	200 M	20 M	20 M
WARFARIN	81-81-2	11 G	31 G	1,100 G	3,100 G	11,000 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 G	5,100 G	10,000 S	10,000 S	1,800 G	5,100 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

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

REGULATED SUBSTANCE	CASRN	USED AQUIFERS				NON-USE AQUIFERS	
		TDS ≤ 2,500		TDS > 2,500			
		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	50 M	50 M	5,000 M	5,000 M	50,000 M	50,000 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	600 H	600 H	60,000 H	60,000 H	600,000 H	600,000 H
CADMIUM	7440-43-9	5 M	5 M	500 M	500 M	5,000 M	5,000 M
CHROMIUM, TOTAL	16065-83-1	100 M	100 M	10,000 M	10,000 M	100,000 M	100,000 M
COBALT	7440-48-4	730 G	2,000 G	73,000 G	200,000 G	73,000 G	200,000 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
LEAD	7439-92-1	5 M	5 M	500 M	500 M	5,000 M	5,000 M
MERCURY	7439-97-6	2 M	2 M	200 M	200 M	2,000 M	2,000 M
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
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
SULFATE		500,000 M	500,000 M	50,000,000 M	50,000,000 M	500,000,000 M	500,000,000 M
THALLIUM	7440-28-0	2 M	2 M	200 M	200 M	2,000 M	2,000 M
TIN	7440-31-5	22,000 G	61,000 G	2,200,000 G	6,100,000 G	22,000,000 G	61,000,000 G
VANADIUM	7440-62-2	260 G	720 G	26,000 G	72,000 G	260,000 G	720,000 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	*SMCL*
ALUMINUM	200
CHLORIDE	250,000
FLUORIDE	2,000
IRON	300
MANGANESE	50

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

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		Non-Residential Subsurface Soil 2-15 feet	
ACENAPHTHENE	83-32-9	13,000	G	170,000	G	190,000	C
ACENAPHTHYLENE	208-96-8	13,000	G	170,000	G	190,000	C
ACEPHATE	30560-19-1	880	G	9,100	G	190,000	C
ACETALDEHYDE	75-07-0	140	N	480	N	560	N
ACETONE	67-64-1	10,000	C	10,000	C	10,000	C
ACETONITRILE	75-05-8	1,100	N	3,200	N	3,600	N
ACETOPHENONE	98-86-2	10,000	C	10,000	C	10,000	C
ACETYLAMINOFLUORENE, 2- (2AAF)	53-96-3	4.7	G	21	G	190,000	C
ACROLEIN	107-02-8	0.38	N	1.1	N	1.2	N
ACRYLAMIDE	79-06-1	4	G	18	G	190,000	C
ACRYLIC ACID	79-10-7	19	N	53	N	60	N
ACRYLONITRILE	107-13-1	4.7	N	24	N	28	N
ALACHLOR	15972-60-8	220	G	990	G	190,000	C
ALDICARB	116-06-3	220	G	2,800	G	190,000	C
ALDRIN	309-00-2	1.1	G	4.7	G	190,000	C
ALLYL ALCOHOL	107-18-6	330	N	930	N	1,100	N
AMINOBIPHENYL, 4-	92-67-1	0.85	G	3.8	G	190,000	C
AMITROLE	61-82-5	19	G	84	G	190,000	C
AMMONIA	7664-41-7	1,900	N	5,300	N	6,100	N
AMMONIUM SULFAMATE	7773-06-0	44,000	G	190,000	C	190,000	C
ANILINE	62-53-3	19	N	53	N	60	N
ANTHRACENE	120-12-7	66,000	G	190,000	C	190,000	C
ATRAZINE	1912-24-9	81	G	360	G	190,000	C
BAYGON (PROPOXUR)	114-26-1	880	G	11,000	G	190,000	C
BENOMYL	17804-35-2	11,000	G	140,000	G	190,000	C
BENTAZON	25057-89-0	6,600	G	84,000	G	190,000	C
BENZENE	71-43-2	41	N	210	N	240	N
BENZIDINE	92-87-5	0.078	G	0.34	G	190,000	C
BENZO[A]ANTHRACENE	56-55-3	25	G	110	G	190,000	C
BENZO[A]PYRENE	50-32-8	2.5	G	11	G	190,000	C
BENZO[B]FLUORANTHENE	205-99-2	25	G	110	G	190,000	C
BENZO[GHI]PERYLENE	191-24-2	13,000	G	170,000	G	190,000	C

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

A. Direct Contact Numeric Values

REGULATED SUBSTANCE	CASRN	Residential 0-15 feet		Non-Residential Surface Soil 0-2 feet		Non-Residential Subsurface Soil 2-15 feet	
BENZO[K]FLUORANTHENE	207-08-9	250	G	1100	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	G	10,000	C
BENZYL ALCOHOL	100-51-6	10,000	C	10,000	C	10,000	C
BENZYL CHLORIDE	100-44-7	6.4	N	33	N	38	N
BHC, ALPHA	319-84-6	2.8	G	13	G	190,000	C
BHC, BETA-	319-85-7	9.9	G	44	G	190,000	C
BHC, DELTA-	319-86-8	130	G	1,700	G	190,000	C
BHC, GAMMA (LINDANE)	58-89-9	14	G	61	G	190,000	C
BIPHENYL, 1,1-	92-52-4	11,000	G	140,000	G	190,000	C
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.96	N	5	N	5.7	N
BIS(2-CHLORO-ISOPROPYL)ETHER	108-60-1	32	N	160	N	190	N
BIS(CHLOROMETHYL)ETHER	542-88-1	0.0051	N	0.027	N	0.031	N
BIS[2-ETHYLHEXYL] PHTHALATE	117-81-7	1,300	G	5,700	G	10,000	C
BISPHENOL A	80-05-7	11,000	G	140,000	G	190,000	C
BROMACIL	314-40-9	22,000	G	190,000	C	190,000	C
BROMOCHLOROMETHANE	74-97-5	2,200	G	10,000	C	10,000	C
BROMODICHLOROMETHANE	75-27-4	8.6	N	45	N	51	N
BROMOMETHANE	74-83-9	95	N	270	N	300	N
BROMOXYNIL	1689-84-5	4,400	G	56,000	G	190,000	C
BROMOXYNIL OCTANOATE	1689-99-2	4,400	G	56,000	G	190,000	C
BUTADIENE, 1,3-	106-99-0	5.3	G	23	G	190,000	C
BUTYL ALCOHOL, N-	71-36-3	6,600	N	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	G	10,000	C	10,000	C
BUTYLBENZENE, SEC-	135-98-8	8,800	G	10,000	C	10,000	C
BUTYLBENZENE, TERT-	98-06-6	8,800	G	10,000	C	10,000	C
BUTYLBENZYL PHTHALATE	85-68-7	10,000	C	10,000	C	10,000	C
CAPTAN	133-06-2	5,100	G	23,000	G	190,000	C
CARBARYL	63-25-2	22,000	G	190,000	C	190,000	C
CARBAZOLE	86-74-8	900	G	4,000	G	190,000	C
CARBOFURAN	1563-66-2	1,100	G	14,000	G	190,000	C

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

A. Direct Contact Numeric Values

REGULATED SUBSTANCE	CASRN	Residential 0-15 feet		Non-Residential Surface Soil 0-2 feet		Non-Residential Subsurface Soil 2-15 feet	
CARBON DISULFIDE	75-15-0	10,000	C	10,000	C	10,000	C
CARBON TETRACHLORIDE	56-23-5	21	N	110	N	120	N
CARBOXIN	5234-68-4	22,000	G	190,000	C	190,000	C
CHLORAMBEN	133-90-4	3,300	G	42,000	G	190,000	C
CHLORDANE	57-74-9	51	G	230	G	190,000	C
CHLORO-1,1-DIFLUOROETHANE, 1-	75-68-3	190,000	C	190,000	C	190,000	C
CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE)	107-05-1	19	N	53	N	61	N
CHLOROACETOPHENONE, 2-	532-27-4	1.9	G	24	G	190,000	C
CHLOROANILINE, P-	106-47-8	880	G	11,000	G	190,000	C
CHLOROBENZENE	108-90-7	4,400	G	10,000	C	10,000	C
CHLOROBENZILATE	510-15-6	66	G	290	G	10,000	C
CHLOROBUTANE, 1-	109-69-3	10,000	C	10,000	C	10,000	C
CHLORODIBROMOMETHANE	124-48-1	12	N	61	N	70	N
CHLORODIFLUOROMETHANE	75-45-6	190,000	C	190,000	C	190,000	C
CHLOROETHANE	75-00-3	6,200	G	10,000	C	10,000	C
CHLOROFORM	67-66-3	6	N	17	N	19	N
CHLORONAPHTHALENE, 2-	91-58-7	18,000	G	190,000	C	190,000	C
CHLORONITROBENZENE, P-	100-00-5	990	G	4,400	G	190,000	C
CHLOROPHENOL, 2-	95-57-8	330	N	920	N	1,100	N
CHLOROPRENE	126-99-8	130	N	370	N	430	N
CHLOROPROPANE, 2-	75-29-6	1,900	N	5,400	N	6,100	N
CHLOROTHALONIL	1897-45-6	1,600	G	7,200	G	190,000	C
CHLOROTOLUENE, O-	95-49-8	4,400	G	10,000	C	10,000	C
CHLORPYRIFOS	2921-88-2	660	G	8,400	G	190,000	C
CHLORSULFURON	64902-72-3	11,000	G	140,000	G	190,000	C
CHLORTHAL-DIMETHYL (DACTHAL) (DCPA)	1861-32-1	2,200	G	28,000	G	190,000	C
CHRYSENE	218-01-9	2,500	G	11,000	G	190,000	C
CRESOL	1319-77-3	1,100	G	10,000	G	10,000	G
CRESOL, 0- (METHYLPHENOL, 2-)	95-48-7	10,000	C	10,000	C	10,000	C
CRESOL, M (METHYLPHENOL, 3-)	108-39-4	10,000	C	10,000	C	10,000	C
CRESOL, P (METHYLPHENOL, 4-)	106-44-5	1,100	G	14,000	G	190,000	C
CRESOL, P-CHLORO-M-	59-50-7	1,100	G	14,000	G	190,000	C

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

A. Direct Contact Numeric Values

REGULATED SUBSTANCE	CASRN	Residential 0-15 feet		Non-Residential Surface Soil 0-2 feet		Non-Residential Subsurface Soil 2-15 feet	
CROTONALDEHYDE	4170-30-3	9.4	G	42	G	10,000	C
CROTONALDEHYDE, TRANS-	123-73-9	9.4	G	42	G	10,000	C
CUMENE	98-82-8	7,300	N	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	10,000	C	10,000	C
CYROMAZINE	66215-27-8	1,700	G	21,000	G	190,000	C
DDD, 4,4'-	72-54-8	75	G	330	G	190,000	C
DDE, 4,4'-	72-55-9	53	G	230	G	190,000	C
DDT, 4,4'-	50-29-3	53	G	230	G	190,000	C
DI(2-ETHYLHEXYL)ADIPATE	103-23-1	10,000	C	10,000	C	10,000	C
DIALLATE	2303-16-4	18	N	93	N	110	N
DIAMINOTOLUENE, 2,4-	95-80-7	5.6	G	25	G	190,000	C
DIAZINON	333-41-5	200	G	2,500	G	190,000	C
DIBENZO[A,H]ANTHRACENE	53-70-3	2.5	G	11	G	190,000	C
DIBROMO-3-CHLOROPROPANE, 1,2-	96-12-8	3.8	N	11	N	12	N
DIBROMOBENZENE, 1,4-	106-37-6	2,200	G	28,000	G	190,000	C
DIBROMOETHANE, 1,2- (ETHYLENE DIBROMIDE)	106-93-4	0.21	G	0.93	G	8.6	N
DIBROMOMETHANE	74-95-3	670	N	1,900	N	2,100	N
DIBUTYL PHTHALATE, N-	84-74-2	10,000	C	10,000	C	10,000	C
DICHLORO-2-BUTENE, 1,4-	764-41-0	91,000	N	190,000	C	190,000	C
DICHLOROBENZENE, 1,2-	95-50-1	3,800	N	10,000	C	10,000	C
DICHLOROBENZENE, 1,3-	541-73-1	6,600	G	10,000	C	10,000	C
DICHLOROBENZENE, P-	106-46-7	750	G	3,300	G	190,000	C
DICHLOROBENZIDINE, 3,3'-	91-94-1	40	G	180	G	190,000	C
DICHLORODIFLUOROMETHANE (FREON 12)	75-71-8	3,800	N	10,000	C	10,000	C
DICHLOROETHANE, 1,1-	75-34-3	200	N	1,000	N	1,200	N
DICHLOROETHANE, 1,2-	107-06-2	12	N	63	N	73	N
DICHLOROETHYLENE, 1,1-	75-35-4	6.4	N	33	N	38	N
DICHLOROETHYLENE, CIS-1,2-	156-59-2	670	N	1,900	N	2,100	N
DICHLOROETHYLENE, TRANS-1,2-	156-60-5	1,300	N	3,700	N	4,300	N
DICHLOROMETHANE (METHYLENE CHLORIDE)	75-09-2	680	N	3,500	N	4,000	N
DICHLOROPHENOL, 2,4-	120-83-2	660	G	8,400	G	190,000	C

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

A. Direct Contact Numeric Values

REGULATED SUBSTANCE	CASRN	Residential 0-15 feet		Non-Residential Surface Soil 0-2 feet		Non-Residential Subsurface Soil 2-15 feet	
DICHLOROPHENOXYACETIC ACID, 2,4- (2,4-D)	94-75-7	2,200	G	28,000	G	190,000	C
DICHLOROPROPANE, 1,2-	78-87-5	31	N	160	N	180	N
DICHLOROPROPENE, 1,3-	542-75-6	80	N	410	N	470	N
DICHLOROPROPIONIC ACID (DALAPON), 2,2-	75-99-0	2,000	N	5,500	N	6,300	N
DICHLORVOS	62-73-7	62	G	270	G	190,000	C
DICYCLOPENTADIENE	77-73-6	6,600	G	84,000	G	190,000	C
DIELDRIN	60-57-1	1.1	G	5	G	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	G	190,000	C
DIMETHOATE	60-51-5	44	G	560	G	190,000	C
DIMETHOXYBENZIDINE, 3,3-	119-90-4	1,300	G	5,700	G	190,000	C
DIMETHYLAMINOAZOBENZENE, P-	60-11-7	3.9	G	17	G	190,000	C
DIMETHYLANILINE, N,N-	121-69-7	440	G	5,600	G	10,000	C
DIMETHYLBENZIDINE, 3,3-	119-93-7	1.9	G	8.6	G	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	G	190,000	C
DINITROPHENOL, 2,4-	51-28-5	440	G	5,600	G	190,000	C
DINITROTOLUENE, 2,4-	121-14-2	58	G	260	G	190,000	C
DINITROTOLUENE, 2,6- (2,6-DNT)	606-20-2	220	G	2,800	G	190,000	C
DINOSEB	88-85-7	220	G	2,800	G	190,000	C
DIOXANE, 1,4-	123-91-1	41	N	210	N	240	N
DIPHENAMID	957-51-7	6,600	G	84,000	G	190,000	C
DIPHENYLAMINE	122-39-4	5,500	G	70,000	G	190,000	C
DIPHENYLHYDRAZINE, 1,2-	122-66-7	22	G	99	G	190,000	C
DIQUAT	85-00-7	480	G	6,200	G	190,000	C
DISULFOTON	298-04-4	2.7	N	7.6	N	8.7	N
DIURON	330-54-1	440	G	5,600	G	190,000	C
ENDOSULFAN	115-29-7	1,300	G	17,000	G	190,000	C
ENDOSULFAN I (ALPHA)	959-98-8	1,300	G	17,000	G	190,000	C
ENDOSULFAN II (BETA)	33213-65-9	1,300	G	17,000	G	190,000	C
ENDOSULFAN SULFATE	1031-07-8	1,300	G	17,000	G	190,000	C
ENDOTHALL	145-73-3	4,400	G	56,000	G	190,000	C

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

A. Direct Contact Numeric Values

REGULATED SUBSTANCE	CASRN	Residential 0-15 feet		Non-Residential Surface Soil 0-2 feet		Non-Residential Subsurface Soil 2-15 feet	
ENDRIN	72-20-8	66	G	840	G	190,000	C
EPICHLOROHYDRIN	106-89-8	19	N	53	N	60	N
ETHEPHON	16672-87-0	1,100	G	14,000	G	190,000	C
ETHION	563-12-2	110	G	1,400	G	10,000	C
ETHOXYETHANOL, 2- (EGEE)	110-80-5	3,800	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	23	N	120	N	140	N
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	20,000	G	190,000	C	190,000	C
ETHYLENE GLYCOL	107-21-1	10,000	C	10,000	C	10,000	C
ETHYLENE THIOUREA (ETU)	96-45-7	18	G	220	G	190,000	C
ETHYLP-NITROPHENYL PHENYLPHOSPHOROTHIOATE	2104-64-5	2.2	G	28	G	190,000	C
FENAMIPHOS	22224-92-6	55	G	700	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	G	190,000	C
FLUORANTHENE	206-44-0	8,800	G	110,000	G	190,000	C
FLUORENE	86-73-7	8,800	G	110,000	G	190,000	C
FLUOROTRICHLOROMETHANE (FREON 11)	75-69-4	10,000	C	10,000	C	10,000	C
FONOFOS	944-22-9	140	N	380	N	440	N
FORMALDEHYDE	50-00-0	24	N	130	N	150	N
FORMIC ACID	64-18-6	10,000	C	10,000	C	10,000	C
FOSETYL-AL	39148-24-8	190,000	C	190,000	C	190,000	C
FURAN	110-00-9	220	G	2,800	G	10,000	C
FURFURAL	98-01-1	660	G	2,600	N	3,000	N
GLYPHOSATE	1071-83-6	22,000	G	190,000	C	190,000	C
HEPTACHLOR	76-44-8	4	G	18	G	190,000	C
HEPTACHLOR EPOXIDE	1024-57-3	2	G	8.7	G	190,000	C
HEXACHLOROBENZENE	118-74-1	11	G	50	G	190,000	C
HEXACHLOROBUTADIENE	87-68-3	44	G	560	G	10,000	C
HEXACHLOROCYCLOPENTADIENE	77-47-4	1,300	G	10,000	C	10,000	C

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

A. Direct Contact Numeric Values

REGULATED SUBSTANCE	CASRN	Residential 0-15 feet		Non-Residential Surface Soil 0-2 feet		Non-Residential Subsurface Soil 2-15 feet	
HEXACHLOROETHANE	67-72-1	220	G	2800	G	190,000	C
HEXANE	110-54-3	3,800	N	10,000	C	10,000	C
HEXYTHIAZOX (SAVEY)	78587-05-0	5,500	G	70,000	G	190,000	C
HYDRAZINE/HYDRAZINE SULFATE	302-01-2	0.065	N	0.34	N	0.39	N
HYDROQUINONE	123-31-9	8,800	G	110,000	G	190,000	C
INDENO[1,2,3-CD]PYRENE	193-39-5	25	G	110	G	190,000	C
IPRODIONE	36734-19-7	8,800	G	110,000	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
KEPONE	143-50-0	1.1	G	5	G	190,000	C
MALATHION	121-75-5	1,400	N	4,000	N	4,600	N
MALEIC HYDRAZIDE	123-33-1	110,000	G	190,000	C	190,000	C
MANEB	12427-38-2	1,100	G	14,000	G	190,000	C
MERPHOS OXIDE	78-48-8	6.6	G	84	G	10,000	C
METHACRYLONITRILE	126-98-7	13	N	37	N	43	N
METHAMIDOPHOS	10265-92-6	11	G	140	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	G	190,000	C
METHOXYCHLOR	72-43-5	1,100	G	14,000	G	190,000	C
METHOXYETHANOL, 2-	109-86-4	220	G	1,100	N	1,200	N
METHYL ACETATE	79-20-9	10,000	C	10,000	C	10,000	C
METHYL ACRYLATE	96-33-3	6,600	G	10,000	C	10,000	C
METHYL CHLORIDE	74-87-3	180	N	920	N	1,000	N
METHYL ETHYL KETONE	78-93-3	10,000	C	10,000	C	10,000	C
METHYL ISOBUTYL KETONE	108-10-1	1,500	N	4,300	N	4,900	N
METHYL METHACRYLATE	80-62-6	10,000	C	10,000	C	10,000	C
METHYL METHANESULFONATE	66-27-3	180	G	800	G	190,000	C
METHYL PARATHION	298-00-0	17	N	48	N	55	N
METHYL STYRENE (MIXED ISOMERS)	25013-15-4	1,300	G	17,000	G	190,000	C
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	620	G	3,200	N	3,700	N
METHYLENE BIS(2-CHLOROANILINE), 4,4'-	101-14-4	140	G	610	G	190,000	C
METHYLNAPHTHALENE, 2-	91-57-6	4,400	G	10,000	C	10,000	C

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

A. Direct Contact Numeric Values

REGULATED SUBSTANCE	CASRN	Residential 0-15 feet		Non-Residential Surface Soil 0-2 feet		Non-Residential Subsurface Soil 2-15 feet	
METHYLSTYRENE, ALPHA	98-83-9	15,000	G	190,000	C	190,000	C
NAPHTHALENE	91-20-3	4,400	G	56,000	G	190,000	C
NAPHTHYLAMINE, 1-	134-32-7	9.9	G	44	G	190,000	C
NAPHTHYLAMINE, 2-	91-59-8	9.9	G	44	G	190,000	C
NAPROPAMIDE	15299-99-7	22,000	G	190,000	C	190,000	C
NITROANILINE, M-	99-09-2	13	G	160	G	190,000	C
NITROANILINE, O-	88-74-4	13	G	160	G	190,000	C
NITROANILINE, P-	100-01-6	13	G	160	G	190,000	C
NITROBENZENE	98-95-3	110	G	1,400	G	10,000	C
NITROPHENOL, 2-	88-75-5	1,800	G	22,000	G	190,000	C
NITROPHENOL, 4-	100-02-7	1,800	G	22,000	G	190,000	C
NITROPROPANE, 2-	79-46-9	0.12	N	0.61	N	0.70	N
NITROSODIETHYLAMINE, N-	55-18-5	0.0073	N	0.038	N	0.044	N
NITROSODIMETHYLAMINE, N-	62-75-9	0.023	N	0.12	N	0.13	N
NITROSO-DI-N-BUTYLAMINE, N-	924-16-3	3.3	G	15	G	10,000	C
NITROSODI-N-PROPYLAMINE, N-	621-64-7	2.6	G	11	G	10,000	C
NITROSODIPHENYLAMINE, N-	86-30-6	3,700	G	16,000	G	190,000	C
NITROSO-N-ETHYLUREA, N-	759-73-9	0.13	G	0.57	G	190,000	C
OCTYL PHTHALATE, DI-N-	117-84-0	4,400	G	10,000	C	10,000	C
OXAMYL (VYDATE)	23135-22-0	5,500	G	70,000	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	G	10,000	C
PCB-1221 (AROCLOR)	11104-28-2	36	G	160	G	10,000	C
PCB-1232 (AROCLOR)	11141-16-5	36	G	160	G	10,000	C
PCB-1242 (AROCLOR)	53469-21-9	36	G	160	G	10,000	C
PCB-1248 (AROCLOR)	12672-29-6	9.9	G	44	G	10,000	C
PCB-1254 (AROCLOR)	11097-69-1	4.4	G	44	G	10,000	C
PCB-1260 (AROCLOR)	11096-82-5	30	G	130	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	G	190,000	C
PENTACHLORONITROBENZENE	82-68-8	69	G	310	G	190,000	C
PENTACHLOROPHENOL	87-86-5	150	G	660	G	190,000	C

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

A. Direct Contact Numeric Values

REGULATED SUBSTANCE	CASRN	Residential 0-15 feet		Non-Residential Surface Soil 0-2 feet		Non-Residential Subsurface Soil 2-15 feet	
PHENACETIN	62-44-2	8,100	G	36,000	G	190,000	C
PHENANTHRENE	85-01-8	66,000	G	190,000	C	190,000	C
PHENOL	108-95-2	130,000	G	190,000	C	190,000	C
PHENYLENEDIAMINE, M-	108-45-2	1,300	G	17,000	G	190,000	C
PHENYLPHENOL, 2-	90-43-7	9,200	G	41,000	G	190,000	C
PHORATE	298-02-2	13	N	37	N	43	N
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
PRONAMIDE	23950-58-5	17,000	G	190,000	C	190,000	C
PROPANIL	709-98-8	1,100	G	14,000	G	190,000	C
PROPHAM	122-42-9	4,400	G	56,000	G	190,000	C
PROPYLBENZENE, N-	103-65-1	8,800	G	10,000	C	10,000	C
PROPYLENE OXIDE	75-56-9	75	G	330	G	510	N
PYRENE	129-00-0	6,600	G	84,000	G	190,000	C
PYRIDINE	110-86-1	67	N	190	N	210	N
QUINOLINE	91-22-5	1.5	G	6.6	G	10,000	C
QUIZALOFOP (ASSURE)	76578-14-8	2,000	G	25,000	G	190,000	C
RONNEL	299-84-3	11,000	G	140,000	G	190,000	C
SIMAZINE	122-34-9	150	G	660	G	190,000	C
STRYCHNINE	57-24-9	66	G	840	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	G	190,000	C
TERBUFOS	13071-79-9	1.7	N	4.6	N	5.3	N
TETRACHLOROBENZENE, 1,2,4,5-	95-94-3	66	G	840	G	190,000	C
TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8- (TCDD)	1746-01-6	0.00012	G	0.00053	G	190,000	C
TETRACHLOROETHANE, 1,1,1,2-	630-20-6	690	G	3,100	G	190,000	C
TETRACHLOROETHANE, 1,1,2,2-	79-34-5	5.5	N	28	N	33	N
TETRACHLOROETHYLENE (PCE)	127-18-4	340	G	1,500	G	3,300	N
TETRACHLOROPHENOL, 2,3,4,6-	58-90-2	6,600	G	84,000	G	190,000	C
TETRAETHYL LEAD	78-00-2	0.022	G	0.28	G	10,000	C
TETRAETHYLDITHIOPYROPHOSPHATE	3689-24-5	33	N	92	N	110	N

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

A. Direct Contact Numeric Values

REGULATED SUBSTANCE	CASRN	Residential 0-15 feet		Non-Residential Surface Soil 0-2 feet		Non-Residential Subsurface Soil 2-15 feet	
THIOFANOX	39196-18-4	66	G	840	G	190,000	C
THIRAM	137-26-8	1,100	G	14,000	G	190,000	C
TOLUENE	108-88-3	7,600	N	10,000	C	10,000	C
TOLUIDINE, M-	108-44-1	75	G	330	G	10,000	C
TOLUIDINE, O-	95-53-4	75	G	330	G	10,000	C
TOLUIDINE, P-	106-49-0	94	G	420	G	190,000	C
TOXAPHENE	8001-35-2	16	G	72	G	190,000	C
TRIALLATE	2303-17-5	2,900	G	36,000	G	190,000	C
TRIBROMOMETHANE (BROMOFORM)	75-25-2	290	N	1,500	N	1,700	N
TRICHLORO- 1,2,2- TRIFLUOROETHANE, 1,1,2-	76-13-1	190,000	C	190,000	C	190,000	C
TRICHLOROBENZENE, 1,2,4-	120-82-1	2,200	G	10,000	C	10,000	C
TRICHLOROBENZENE, 1,3,5-	108-70-3	1,300	G	17,000	G	190,000	C
TRICHLOROETHANE, 1,1,1-	71-55-6	10,000	G	10,000	C	10,000	C
TRICHLOROETHANE, 1,1,2-	79-00-5	20	N	100	N	120	N
TRICHLOROETHYLENE (TCE)	79-01-6	190	N	970	N	1,100	N
TRICHLOROPHENOL, 2,4,5-	95-95-4	22,000	G	190,000	C	190,000	C
TRICHLOROPHENOL, 2,4,6-	88-06-2	66	G	840	G	190,000	C
TRICHLOROPHENOXYACETIC ACID, 2,4,5- (2,4,5-T)	93-76-5	2,200	G	28,000	G	190,000	C
TRICHLOROPHENOXYPROPIONIC ACID, 2,4,5- (2,4,5-TP)(SILVEX)	93-72-1	1,800	G	22,000	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	0.16	N	0.82	N	0.95	N
TRICHLOROPROPENE, 1,2,3-	96-19-5	1,100	G	10,000	C	10,000	C
TRIFLURALIN	1582-09-8	1,700	G	10,000	G	190,000	C
TRIMETHYLBENZENE, 1,3,4- (TRIMETHYLBENZENE, 1,2,4-)	95-63-6	110	N	320	N	360	N
TRIMETHYBENZENE, 1,3,5-	108-67-8	110	N	320	N	360	N
TRINITROTOLUENE, 2,4,6-	118-96-7	110	G	1,400	G	190,000	C
VINYL ACETATE	108-05-4	3,800	N	10,000	C	10,000	C
VINYL BROMIDE (BROMOETHENE)	593-60-2	160	G	720	G	190,000	C
VINYL CHLORIDE	75-01-4	12	G	53	G	220	N

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

A. Direct Contact Numeric Values

REGULATED SUBSTANCE	CASRN	Residential 0-15 feet		Non-Residential Surface Soil 0-2 feet		Non-Residential Subsurface Soil 2-15 feet	
WARFARIN	81-81-2	66	G	840	G	190,000	C
XYLENES (TOTAL)	1330-20-7	8,000	N	10,000	C	10,000	C
ZINEB	12122-67-7	11,000	G	140,000	G	190,000	C

All concentrations in mg/kg
G - Ingestion
H - Inhalation
C - Cap

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	2,700 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	2,500 E	610	6,900 E	1,600	1,8000 E	1600	18,000 E	1,600	18,000 E	1,600	18,000 E	15
ACEPHATE	30560-19-1	7.6	0.9 E	30	3.6 E	760	90 E	3,000	360 E	7.6	0.9 E	30	3.6 E	NA
ACETALDEHYDE	75-07-0	1.9	0.23 E	5.2	0.63 E	190	23 E	520	63 E	1.9	0.23 E	5.2	0.63 E	NA
ACETONE	67-64-1	370	41 E	1,000	110 E	10,000	4,100 E	10,000	10,000 C	3,700	410 E	10,000	1,100 E	NA
ACETONITRILE	75-05-8	17	1.9 E	35	3.9 E	1,700	190 E	3,500	390 E	170	19 E	350	39 E	NA
ACETOPHENONE	98-86-2	370	200 E	1,000	540 E	10,000	10,000 C	10,000	10,000 C	370	200 E	1,000	540 E	NA
ACETYLAMINOFLUORENE, 2- (2AAF)	53-96-3	0.017	0.07 E	0.068	0.28 E	1.7	7 E	6.8	28 E	17	70 E	68	280 E	20
ACROLEIN	107-02-8	0.0055	0.00062 E	0.012	0.0014 E	0.55	0.062 E	1.2	0.14 E	0.055	0.0062 E	0.12	0.014 E	NA
ACRYLAMIDE	79-06-1	0.0033	0.00057 E	0.014	0.0024 E	0.33	0.057 E	1.4	0.24 E	0.0033	0.00057 E	0.014	0.0024 E	NA
ACRYLIC ACID	79-10-7	0.28	0.051 E	0.58	0.11 E	28	5.1 E	58	11 E	28	5.1 E	58	11 E	NA
ACRYLONITRILE	107-13-1	0.063	0.0087 E	0.27	0.037 E	6.3	0.87 E	27	3.7 E	6.3	0.87 E	27	3.7 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	0.7	0.12 E	0.7	0.12 E	70	12 E	70	12 E	700	120 E	700	120 E	NA
ALDRIN	309-00-2	0.00087	0.1 E	0.0037	0.44 E	0.087	10 E	0.37	44 E	0.087	10 E	0.37	44 E	10
ALLYL ALCOHOL	107-18-6	4.9	0.58 E	10	1.2 E	490	58 E	1,000	120 E	490	58 E	1,000	120 E	NA
AMINOBIPHENYL, 4-	92-67-1	0.0031	0.0012 E	0.012	0.0046 E	0.31	0.12 E	1.2	0.46 E	3.1	1.2 E	12	4.6 E	NA
AMITROLE	61-82-5	0.07	0.029 E	0.28	0.12 E	7	2.9 E	28	12 E	70	29 E	280	120 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	0.28	0.16 E	0.58	0.34 E	28	16 E	58	34 E	0.28	0.16 E	0.58	0.34 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
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	880 E	200	970 E	200	970 E	200	970 E	180	880 E	200	970 E	20
BENTAZON	25057-89-0	110	16 E	310	45 E	11,000	1,600 E	31,000	4,500 E	110	16 E	310	45 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	0.00029	0.38 E	0.0011	1.5 E	0.029	38 E	0.11	150 E	0.29	380 E	1.1	1,500 E	5
BENZO[A]ANTHRACENE	56-55-3	0.09	79 E	0.36	320 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	0.09	120 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	2,900 E	41,000	7,800 E	190,000	52,000 E	190,000	52,000 E	15,000	2,900 E	41,000	7,800 E	NA
BENZOTRICHLORIDE	98-07-7	0.0051	0.012 E	0.02	0.048 E	0.51	1.2 E	2	4.8 E	5.1	12 E	20	48 E	30
BENZYL ALCOHOL	100-51-6	1,100	400 E	3,100	1,100 E	10,000	10,000 C	10,000	10,000 C	1,100	400 E	3,100	1,100 E	NA
BENZYL CHLORIDE	100-44-7	0.087	0.051 E	0.37	0.22 E	8.7	5.1 E	37	22 E	8.7	5.1 E	37	22 E	NA
BHC, ALPHA	319-84-6	0.01	0.046 E	0.041	0.19 E	1	4.6 E	4.1	19 E	10	46 E	41	190 E	20
BHC, BETA-	319-85-7	0.037	0.22 E	0.14	0.82 E	3.7	22 E	10	59 E	10	59 E	10	59 E	15
BHC, DELTA-	319-86-8	2.2	11 E	6.1	30 E	220	1100 E	610	3,000 E	800	3,900 E	800	3,900 E	20
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	790 E	510	2,200 E	720	3,100 E	720	3,100 E	720	3,100 E	720	3,100 E	20
BIS(2-CHLOROETHYL)ETHER	111-44-4	0.013	0.0039 E	0.055	0.017 E	1.3	0.39 E	5.5	1.7 E	1.3	0.39 E	5.5	1.7 E	NA
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	0.000069	0.00001 E	0.00029	0.000044 E	0.0069	0.001 E	0.029	0.0044 E	0.0069	0.001 E	0.029	0.0044 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	700 E	510	2,000 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	8	2 E	8	2 E	800	200 E	800	200 E	8	2 E	8	2 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
BROMODICHLOROMETHANE	75-27-4	10	3.4 E	10	3.4 E	1,000	340 E	1,000	340 E	10	3.4 E	10	3.4 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	63 E	200	170 E	7,300	6,300 E	13,000	11,000 E	73	63 E	200	170 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	0.015	0.0062 E	0.065	0.027 E	1.5	0.62 E	6.5	2.7 E	1.5	0.62 E	6.5	2.7 E	NA
BUTYL ALCOHOL, N-	71-36-3	97	12 E	200	24 E	9,700	1,200 E	10,000	2,400 E	970	120 E	2,000	240 E	NA
BUTYLATE	2008-41-5	35	51 E	35	51 E	3,500	5,100 E	3,500	5,100 E	35	51 E	35	51 E	30
BUTYLBENZENE, N-	104-51-8	150	950 E	410	2,600 E	1,500	9,500 E	1,500	9,500 E	150	950 E	410	2,600 E	15

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

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	
BUTYLBENZENE, SEC-	135-98-8	150	350 E	410	960 E	1,700	4,000 E	1,700	4,000 E	150	350 E	410	960 E	30
BUTYLBENZENE, TERT-	98-06-6	150	270 E	410	740 E	3,000	5,400 E	3,000	5,400 E	150	270 E	410	740 E	30
BUTYLBENZYL PHTHALATE	85-68-7	270	10,000 C	270	10,000 C	270	10,000 C	270	10,000 C	270	10,000 C	270	10,000 C	10
CAPTAN	133-06-2	19	12 E	50	31 E	50	31 E	50	31 E	50	31 E	50	31 E	NA
CARBARYL	63-25-2	70	41 E	70	41 E	7,000	4,100 E	7,000	4,100 E	12,000	7,000 E	12,000	7,000 E	NA
CARBAZOLE	86-74-8	3.3	21 E	13	83 E	120	760 E	120	760 E	120	760 E	120	760 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	190	160 E	410	350 E	10,000	10,000 C	10,000	10,000 C	190	160 E	410	350 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
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	14,000	2,300 E	29,000	4,800 E	140,000	23,000 E	140,000	23,000 E	14,000	2,300 E	29,000	4,800 E	NA
CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE)	107-05-1	0.28	0.065 E	0.58	0.13 E	28	6.5 E	58	13 E	28	6.5 E	58	13 E	NA
CHLOROACETOPHENONE, 2-	532-27-4	0.031	0.0093 E	0.088	0.026 E	3.1	0.93 E	8.8	2.6 E	31	9.3 E	88	26 E	NA
CHLOROANILINE, P-	106-47-8	15	19 E	41	52 E	1,500	1,900 E	4,100	5,200 E	15	19 E	41	52 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	0.24	1.6 E	0.96	6.3 E	24	160 E	96	630 E	240	1600 E	960	6,300 E	15
CHLOROBUTANE, 1-	109-69-3	1,500	2,300 E	4,100	6,400 E	10,000	10,000 C	10,000	10,000 C	1,500	2,300 E	4,100	6,400 E	30
CHLORODIBROMOMETHANE	124-48-1	10	3.2 E	10	3.2 E	1,000	320 E	1,000	320 E	1,000	320 E	1,000	320 E	NA
CHLORODIFLUOROMETHANE	75-45-6	10	2.6 E	10	2.6 E	1,000	260 E	1,000	260 E	10	3 E	10	3 E	NA
CHLOROETHANE	75-00-3	23	5 E	90	19 E	2,300	500 E	9,000	1,900 E	2,300	500 E	9,000	1,900 E	NA
CHLOROFORM	67-66-3	10	2.5 E	10	2.5 E	1,000	250 E	1,000	250 E	100	25 E	100	25 E	NA
CHLORONAPHTHALENE, 2-	91-58-7	290	6,200 E	820	18,000 E	1,200	26,000 E	1,200	26,000 E	290	6,200 E	820	18,000 E	15
CHLORONITROBENZENE, P-	100-00-5	3.7	4.9 E	14	18 E	370	490 E	1,400	1,800 E	4	5 E	14	18 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	1.9	0.45 E	4.1	0.97 E	190	45 E	410	97 E	190	45 E	410	97 E	NA
CHLOROPROPANE, 2-	75-29-6	28	21 E	58	44 E	2,800	2,100 E	5,800	4,400 E	28	21 E	58	44 E	NA
CHLOROTHALONIL	1897-45-6	6	15 E	24	61 E	60	150 E	60	150 E	6	15 E	24	61 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
CHLORPYRIFOS	2921-88-2	2	23 E	2	23 E	110	1,300 E	110	1,300 E	2	23 E	2	23 E	15
CHLORSULFURON	64902-72-3	180	25 E	510	71 E	13,000	1,800 E	13,000	1,800 E	180	25 E	510	71 E	NA
CHLORTHAL-DIMETHYL (DACTHAL) (DCPA)	1861-32-1	40	650 E	40	650 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	3.1 E	51	8.9 E	1,800	310 E	5,100	890 E	1,800	310 E	5,100	890 E	NA
CRESOL, 0- (METHYLPHENOL, 2-)	95-48-7	180	64 E	510	180 E	10,000	6,400 E	10,000	10,000 C	10,000	6,400 E	10,000	10,000 C	NA
CRESOL, M (METHYLPHENOL, 3-)	108-39-4	180	36 E	510	100 E	10,000	3,600 E	10,000	10,000 C	10,000	10,000 C	10,000	10,000 C	NA
CRESOL, P (METHYLPHENOL, 4-)	106-44-5	18	4.2 E	51	12 E	1,800	420 E	5,100	1,200 E	18,000	4,200 E	51,000	12,000 E	NA
CRESOL, P-CHLORO-M-	59-50-7	18	37 E	51	110 E	1,800	3,700 E	5,100	11,000 E	18	37 E	51	110 E	30
CROTONALDEHYDE	4170-30-3	0.0079	0.00099 E	0.034	0.0043 E	0.79	0.099 E	3.4	0.43 E	0.79	0.099 E	3.4	0.43 E	NA
CROTONALDEHYDE, TRANS-	123-73-9	0.0079	0.00099 E	0.034	0.0043 E	0.79	0.099 E	3.4	0.43 E	0.79	0.10 E	3.4	0.43 E	NA
CUMENE	98-82-8	110	780 E	230	1,600 E	5,000	10,000 C	5,000	10,000 C	5,000	10,000 C	5,000	10,000 C	15
CYCLOHEXANONE	108-94-1	4,900	1,400 E	10,000	2,800 E	10,000	10,000 C	10,000	10,000 C	4,900	1,400 E	10,000	2,800 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	84 E	77	240 E	2,700	8,400 E	7,700	24,000 E	27	84 E	77	240 E	20
DDD, 4,4'-	72-54-8	0.062	6.8 E	0.27	30 E	6.2	680 E	16	1,800 E	6.2	680 E	16	1,800 E	10
DDE, 4,4'-	72-55-9	0.19	41 E	0.76	170 E	4	870 E	4	870 E	4	870 E	4	870 E	10
DDT, 4,4'-	50-29-3	0.19	110 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	0.25	0.15 E	1	0.59 E	25	15 E	100	59 E	25	15 E	100	59 E	NA
DIAMINOTOLUENE, 2,4-	95-80-7	0.021	0.0042 E	0.081	0.016 E	2.1	0.42 E	8.1	1.6 E	21	4.2 E	81	16 E	NA
DIAZINON	333-41-5	0.06	0.082 E	0.06	0.082 E	6	8.2 E	6	8.2 E	0.06	0.082 E	0.06	0.082 E	30
DIBENZO[A,H]ANTHRACENE	53-70-3	0.009	41 E	0.036	160 E	0.06	270 E	0.06	270 E	0.06	270 E	0.06	270 E	5
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	150 E	100	410 E	2,000	8,200 E	2,000	8,200 E	37	150 E	100	410 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

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

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	
DIBROMOMETHANE	74-95-3	9.7	3.7 E	20	7.7 E	970	370 E	2,000	770 E	970	370 E	2,000	770 E	NA
DIBUTYL PHTHALATE, N-	84-74-2	370	1,500 E	1,000	4100 E	10,000	10,000 C	10,000	10,000 C	10,000	10,000 C	10,000	10,000 C	20
DICHLORO-2-BUTENE, 1,4-	764-41-0	0.0016	0.0009 E	0.0069	0.0039 E	0.16	0.09 E	0.69	0.39 E	0.0016	0.0009 E	0.0069	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	8.3 E	0.58	32 E	15	830 E	58	3,200 E	150	8,300 E	310	17,000 E	10
DICHLORODIFLUOROMETHANE (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	2.7	0.65 E	11	2.7 E	270	65 E	1,100	270 E	27	6.5 E	110	27 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
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
DICHLOROPHENOXYACETIC ACID, 2,4- (2,4-D)	94-75-7	7	1.8 E	7	1.8 E	700	180 E	700	180 E	700	180 E	700	180 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	0.12 E	2.6	0.46 E	66	12 E	260	46 E	66	12 E	260	46 E	NA
DICHLOROPROPIONIC ACID (DALAPON), 2,2-	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	0.052	0.012 E	0.22	0.052 E	5.2	1.2 E	22	5.2 E	0.052	0.012 E	0.22	0.052 E	NA
DICYCLOPENTADIENE	77-73-6	0.055	0.12 E	0.12	0.26 E	5.5	12 E	12	26 E	0.055	0.12 E	0.12	0.26 E	30
DIELDRIN	60-57-1	0.0041	0.11 E	0.016	0.44 E	0.41	11 E	1.6	44 E	4.1	110 E	16	440 E	15
DIETHYL PHTHALATE	84-66-2	500	160 E	500	160 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
DIMETHOATE	60-51-5	0.73	0.28 E	2	0.77 E	73	28 E	200	77 E	730	280 E	2,000	770 E	NA
DIMETHOXYBENZIDINE, 3,3-	119-90-4	4.7	16 E	19	64 E	470	1,600 E	1,900	6,400 E	4,700	16,000 E	6,000	20,000 E	20
DIMETHYLAMINOAZOBENZENE, P-	60-11-7	0.014	0.037 E	0.057	0.15 E	1.4	3.7 E	5.7	15 E	14	37 E	57	150 E	20
DIMETHYLANILINE, N,N-	121-69-7	7.3	4.1 E	20	11 E	730	410 E	2,000	1,100 E	730	410 E	2,000	1,100 E	NA
DIMETHYLBENZIDINE, 3,3-	119-93-7	0.0072	0.4 E	0.028	1.5 E	0.72	40 E	2.8	150 E	7.2	400 E	28	1,500 E	10
DIMETHYLPHENOL, 2,4-	105-67-9	73	32 E	200	87 E	7,300	3,200 E	10,000	8,700 E	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	1.9	0.21 E	4.1	0.46 E	190	21 E	410	46 E	19	2.1 E	41	4.6 E	NA
DINITROTOLUENE, 2,4-	121-14-2	0.21	0.05 E	0.84	0.2 E	21	5 E	84	20 E	210	50 E	840	200 E	NA
DINITROTOLUENE, 2,6- (2,6-DNT)	606-20-2	3.7	1.1 E	10	3 E	370	110 E	1,000	300 E	3,700	1,100 E	10,000	3,000 E	NA
DINOSEB	88-85-7	0.7	0.29 E	0.7	0.29 E	70	29 E	70	29 E	70	29 E	70	29 E	NA
DIOXANE, 1,4-	123-91-1	0.56	0.073 E	2.4	0.31 E	56	7.3 E	240	31 E	5.6	0.73 E	24	3.1 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	20	12 E	20	12 E	2,000	1,200 E	2,000	1,200 E	20,000	12,000 E	20,000	12,000 E	NA
DIPHENYLHYDRAZINE, 1,2-	122-66-7	0.083	0.15 E	0.33	0.58 E	8.3	15 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	0.03	0.078 E	0.03	0.078 E	3	7.8 E	3	7.8 E	3	7.8 E	3	8 E	20
DIURON	330-54-1	1	0.86 E	1	0.86 E	100	86 E	100	86 E	1	0.86 E	1	0.86 E	NA
ENDOSULFAN	115-29-7	5.8	30 E	12	61 E	48	250 E	48	250 E	48	250 E	48	250 E	15
ENDOSULFAN I (ALPHA)	959-98-8	22	110 E	50	260 E	50	260 E	50	260 E	22	110 E	50	260 E	15
ENDOSULFAN II (BETA)	33213-65-9	22	130 E	45	260 E	45	260 E	45	260 E	22	130 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	0.28	0.056 E	0.58	0.12 E	28	5.6 E	58	12 E	28	5.6 E	58	12 E	NA
ETHEPHON	16672-87-0	18	2.1 E	51	5.9 E	1,800	210 E	5,100	590 E	18	2.1 E	51	5.9 E	NA
ETHION	563-12-2	1.8	39 E	5.1	110 E	85	1,900 E	85	1,900 E	1.8	39 E	5.1	110 E	15
ETHOXYETHANOL, 2- (EGEE)	110-80-5	55	7.8 E	120	17 E	5,500	780 E	10,000	1,700 E	5,500	780 E	10,000	1,700 E	NA
ETHYL ACETATE	141-78-6	870	220 E	1,800	470 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	0.31	0.12 E	1.3	0.5 E	31	12 E	130	50 E	31	12 E	130	50 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

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B. Soil to Groundwater Numeric Values[1]

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		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 DIPROPYLTHIOCARBAMATE, S- (EPTC)	759-94-4	91	65 E	260	180 E	9,100	6,500 E	10,000	10,000 C	91	65 E	260	180 E	NA
ETHYL ETHER	60-29-7	190	53 E	410	120 E	10,000	5,300 E	10,000	10,000 C	190	53 E	410	120 E	NA
ETHYL METHACRYLATE	97-63-2	87	14 E	180	30 E	8,700	1,400 E	18,000	3,000 E	87	14 E	180	30 E	NA
ETHYLENE GLYCOL	107-21-1	1,400	170 E	1,400	170 E	10,000	10,000 E	10,000	10,000 E	10,000	10,000 E	10,000	10,000 E	NA
ETHYLENE THIOUREA (ETU)	96-45-7	0.3	0.034 E	0.3	0.034 E	30	3.4 E	30	3.4 E	300	34 E	300	34 E	NA
ETHYLP-NITROPHENYL PHENYLPHOSPHOROTHIOATE	2104-64-5	0.037	0.12 E	0.1	0.31 E	3.7	12 E	10	31 E	0.037	0.12 E	0.1	0.31 E	20
FENAMIPHOS	22224-92-6	0.2	0.17 E	0.2	0.17 E	20	17 E	20	17 E	0.2	0.17 E	0.2	0.17 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	3,000 E	190	3,800 E	190	3,800 E	190	3,800 E	190	3,800 E	190	3,800 E	15
FLUOROTRICHLOROMETHANE (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	1,900	210 E	4,100	460 E	10,000	10,000 C	10,000	10,000 C	10,000	2,100 E	10,000	4,600 E	NA
FOSETYL-AL	39148-24-8	11,000	9,700 E	31,000	27,000 E	190,000	190,000 C	190,000	190,000 C	11,000	9,700 E	31,000	27,000 E	NA
FURAN	110-00-9	0.97	0.42 E	2	0.87 E	97	42 E	200	87 E	97	42 E	200	87 E	NA
FURFURAL	98-01-1	11	1.4 E	29	3.7 E	1,100	140 E	2,900	370 E	11	1.4 E	29	3.7 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	0.1	1.2 E	0.1	1.2 E	10	120 E	10	120 E	100	1,200 E	100	1,200 E	15
HEXACHLOROCYCLOPENTADIENE	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	55	500 E	120	1,100 E	950	8,700 E	950	8,700 E	55	500 E	120	1,100 E	15
HEXYTHIAZOX (SAVEY)	78587-05-0	50	820 E	50	820 E	50	820 E	50	820 E	50	820 E	50	820 E	15
HYDRAZINE/HYDRAZINE SULFATE	302-01-2	0.00088	0.000098 E	0.0038	0.00042 E	0.088	0.0098 E	0.38	0.042 E	0.0088	0.00098 E	0.038	0.0042 E	NA
HYDROQUINONE	123-31-9	150	20 E	410	55 E	15,000	2,000 E	41,000	5,500 E	150,000	20,000 E	190,000	55,000 E	NA
INDENO1,2,3-CDPYRENE	193-39-5	0.09	7,000 E	0.36	28,000 E	6.2	190,000 C	6.2	190,000 C	6.2	190,000 C	6.2	190,000 C	5
IPRODIONE	36734-19-7	150	430 E	410	1,200 E	1,300	3,700 E	1,300	3,700 E	150	430 E	410	1,200 E	20
ISOBUTYL ALCOHOL	78-83-1	290	76 E	610	160 E	10,000	7,600 E	10,000	10,000 C	10,000	7,600 E	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
KEPONE	143-50-0	0.0041	0.56 E	0.016	2.2 E	0.41	56 E	1.6	220 E	4.1	560 E	16	2,200 E	10
MALATHION	121-75-5	10	34 E	10	34 E	1,000	3,400 E	1,000	3,400 E	1,000	3,400 E	1,000	3,400 E	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	2 E	51	5.8 E	1,800	200 E	2,300	260 E	18	2 E	51	6 E	NA
MERPHOS OXIDE	78-48-8	0.11	15 E	0.31	41 E	11	1,500 E	31	4,100 E	0.11	15 E	0.31	41 E	10
METHACRYLONITRILE	126-98-7	0.19	0.031 E	0.41	0.067 E	19	3.1 E	41	6.7 E	0.19	0.031 E	0.41	0.067 E	NA
METHAMIDOPHOS	10265-92-6	0.18	0.022 E	0.51	0.063 E	18	2.2 E	51	6.3 E	0.18	0.022 E	0.51	0.063 E	NA
METHANOL	67-56-1	490	58 E	1,000	120 E	10,000	5,800 E	10,000	10,000 C	10,000	5,800 E	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
METHOXYETHANOL, 2-	109-86-4	3.7	0.41 E	10	1.1 E	370	41 E	1,000	110 E	3.7	0.41 E	10	1.1 E	NA
METHYL ACETATE	79-20-9	3700	690 E	10,000	1,900 E	10,000	10,000 C	10,000	10,000 C	3,700	690 E	10,000	1,900 E	NA
METHYL ACRYLATE	96-33-3	110	27 E	310	77 E	10,000	2,700 E	10,000	7,700 E	10,000	2700 E	10,000	7,700 E	NA
METHYL CHLORIDE	74-87-3	0.3	0.038 E	0.3	0.038 E	30	3.8 E	30	3.8 E	30	3.8 E	30	3.8 E	NA
METHYL ETHYL KETONE	78-93-3	280	54 E	580	110 E	10,000	5,400 E	10,000	10,000 C	10,000	5,400 E	10,000	10,000 C	NA
METHYL ISOBUTYL KETONE	108-10-1	19	2.9 E	41	6.3 E	1,900	290 E	4,100	630 E	1,900	290 E	4,100	630 E	NA
METHYL METHACRYLATE	80-62-6	190	26 E	410	56 E	10,000	2,600 E	10,000	5,600 E	10,000	2,600 E	10,000	5,600 E	NA
METHYL METHANESULFONATE	66-27-3	0.67	0.083 E	2.6	0.32 E	67	8.3 E	260	32 E	0.67	0.083 E	2.6	0.32 E	NA
METHYL PARATHION	298-00-0	0.2	0.42 E	0.2	0.42 E	20	42 E	20	42 E	20	42 E	20	42 E	30
METHYL STYRENE (MIXED ISOMERS)	25013-15-4	22	120 E	61	340 E	2,200	12,000 E	6,100	34,000 E	22	120 E	61	340 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

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

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	
METHYLENE BIS(2-CHLOROANILINE), 4,4'-	101-14-4	0.51	3.9 E	2	15 E	51	390 E	200	1,500 E	0.51	3.9 E	2	15 E	15
METHYLNAPHTHALENE, 2-	91-57-6	73	2,900 E	200	8,000 E	2,500	10,000 C	2,500	10,000 C	73	2,900 E	200	8,000 E	15
METHYLSTYRENE, ALPHA	98-83-9	68	120 E	140	250 E	6,800	12,000 E	14,000	25,000 E	68	120 E	140	250 E	30
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	0.3 E	0.14	1.1 E	3.7	30 E	14	110 E	37	300 E	140	1,100 E	15
NAPHTHYLAMINE, 2-	91-59-8	0.037	0.012 E	0.14	0.046 E	3.7	1.2 E	14	4.6 E	37	12 E	140	46 E	NA
NAPROPAMIDE	15299-99-7	370	860 E	1,000	2,300 E	7,000	16,000 E	7,000	16,000 E	370	860 E	1,000	2,300 E	30
NITROANILINE, M-	99-09-2	0.21	0.033 E	0.58	0.091 E	21	3.3 E	58	9.1 E	0.21	0.033 E	0.58	0.091 E	NA
NITROANILINE, O-	88-74-4	0.21	0.038 E	0.58	0.1 E	21	3.8 E	58	10 E	0.21	0.038 E	0.58	0.1 E	NA
NITROANILINE, P-	100-01-6	0.21	0.031 E	0.58	0.086 E	21	3.1 E	58	8.6 E	0.21	0.031 E	0.58	0.086 E	NA
NITROBENZENE	98-95-3	1.8	0.79 E	5.1	2.2 E	180	79 E	510	220 E	1,800	790 E	5,100	2,200 E	NA
NITROPHENOL, 2-	88-75-5	29	5.9 E	82	17 E	2,900	590 E	8,200	1,700 E	29,000	5,900 E	8,2000	17,000 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	0.0016	0.00026 E	0.0068	0.0011 E	0.16	0.026 E	0.68	0.11 E	0.016	0.0026 E	0.068	0.011 E	NA
NITROSODIETHYLAMINE, N-	55-18-5	0.0001	0.000018 E	0.00043	0.000076 E	0.01	0.0018 E	0.043	0.0076 E	0.001	0.00018 E	0.0043	0.00076 E	NA
NITROSODIMETHYLAMINE, N-	62-75-9	0.00031	0.000041 E	0.0013	0.00017 E	0.031	0.0041 E	0.13	0.017 E	0.0031	0.00041 E	0.013	0.0017 E	NA
NITROSO-DI-N-BUTYLAMINE, N-	924-16-3	0.0027	0.0033 E	0.011	0.014 E	0.27	0.33 E	1.1	1.4 E	0.27	0.33 E	1.1	1.4 E	NA
NITROSODI-N-PROPYLAMINE, N-	621-64-7	0.0094	0.0013 E	0.037	0.0051 E	0.94	0.13 E	3.7	0.51 E	9.4	1.3 E	37	5.1 E	NA
NITROSODIPHENYLAMINE, N-	86-30-6	13	20 E	53	83 E	1,300	2,000 E	3,500	5,500 E	3,500	5,500 E	3,500	5,500 E	30
NITROSO-N-ETHYLUREA, N-	759-73-9	0.00047	0.000054 E	0.0019	0.00022 E	0.047	0.0054 E	0.19	0.022 E	0.047	0.0054 E	0.19	0.022 E	NA
OCTYL PHTHALATE, DI-N-	117-84-0	73	10,000 C	200	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
PARATHION	56-38-2	22	130 E	61	360 E	2,000	10,000 C	2000	10,000 C	22	130 E	61	360 E	15
PCB-1016 (AROCLOR)	12674-11-2	0.26	72 E	0.72	200 E	25	6,900 E	25	6,900 E	0.26	72 E	0.72	200 E	10
PCB-1221 (AROCLOR)	11104-28-2	0.13	0.63 E	0.52	2.5 E	13	63 E	52	250 E	0.13	0.63 E	0.52	2.5 E	20
PCB-1232 (AROCLOR)	11141-16-5	0.13	0.5 E	0.52	2 E	13	50 E	52	200 E	0.13	0.5 E	0.52	2 E	20
PCB-1242 (AROCLOR)	53469-21-9	0.13	16 E	0.52	62 E	10	1,200 E	10	1,200 E	0.13	16 E	0.52	62 E	10
PCB-1248 (AROCLOR)	12672-29-6	0.037	18 E	0.14	67 E	4	1,800 E	5	2,600 E	0.04	18 E	0.14	67 E	10
PCB-1254 (AROCLOR)	11097-69-1	0.037	75 E	0.14	280 E	4	7,500 E	6	10,000 C	0.04	75 E	0.14	280 E	5
PCB-1260 (AROCLOR)	11096-82-5	0.11	500 E	0.43	1,900 E	8	36,000 E	8	36,000 E	0.11	500 E	0.43	1,900 E	5
PEBULATE	1114-71-2	180	300 E	510	860 E	9,200	10,000 C	9,200	10,000 C	180	300 E	510	860 E	30
PENTACHLOROBENZENE	608-93-5	2.9	230 E	8.2	660 E	74	5,900 E	74	5,900 E	74	5,900 E	74	5,900 E	10
PENTACHLORONITROBENZENE	82-68-8	0.25	5 E	1	20 E	25	500 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	12 E	120	46 E	3,000	1,200 E	12,000	4,600 E	30,000	12,000 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	400	66 E	400	66 E	40,000	6,600 E	40,000	6,600 E	40,000	6,600 E	40,000	6,600 E	NA
PHENYLENEDIAMINE, M-	108-45-2	22	3.1 E	61	8.6 E	2,200	310 E	6,100	860 E	22,000	3,100 E	61,000	8,600 E	NA
PHENYLPHENOL, 2-	90-43-7	34	490 E	130	1900 E	3,400	49,000 E	13,000	190,000 E	34,000	190,000 C	70,000	190,000 C	15
PHORATE	298-02-2	0.19	0.41 E	0.41	0.88 E	19	41 E	41	88 E	0.19	0.41 E	0.41	0.88 E	30
PHTHALIC ANHYDRIDE	85-44-9	7,300	2,300 E	20,000	6,200 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
PRONAMIDE	23950-58-5	5	3.1 E	5	3.1 E	500	310 E	500	310 E	5	3.1 E	5	3.1 E	NA
PROPANIL	709-98-8	18	9.2 E	51	26 E	1,800	920 E	5,100	2,600 E	18	9 E	51	26 E	NA
PROPHAM	122-42-9	73	17 E	200	48 E	7,300	1,700 E	20,000	4,800 E	73	17 E	200	48 E	NA
PROPYLBENZENE, N-	103-65-1	150	290 E	410	780 E	5,200	9,900 E	5,200	9,900 E	150	290 E	410	780 E	30
PROPYLENE OXIDE	75-56-9	0.28	0.049 E	1.1	0.19 E	28	4.9 E	110	19 E	0.28	0.049 E	1.1	0.19 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	0.97	0.11 E	2	0.22 E	97	11 E	200	22 E	9.7	1.1 E	20	2.2 E	NA
QUINOLINE	91-22-5	0.0055	0.018 E	0.022	0.074 E	0.55	1.8 E	2.2	7.4 E	5.5	18 E	22	74 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
RONNEL	299-84-3	180	280 E	510	800 E	4,000	6,200 E	4,000	6,200 E	180	280 E	510	800 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	0.89 E	3.1	2.5 E	110	89 E	310	250 E	1,100	890 E	3,100	2,500 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	0.09	0.12 E	0.09	0.12 E	9	12 E	9	12 E	0.09	0.12 E	0.09	0.12 E	30

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

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	
TETRACHLOROBENZENE, 1,2,4,5-	95-94-3	1.1	5.1 E	3.1	14 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	0.03	0.0093 E	0.03	0.0093 E	3	0.93 E	3	0.93 E	3	0.93 E	3	0.93 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
TETRACHLOROPHENOL, 2,3,4,6-	58-90-2	29	450 E	61	950 E	2,900	45,000 E	6,100	95,000 E	2,900	45,000 E	6,100	95,000 E	15
TETRAETHYL LEAD	78-00-2	0.00037	0.0046 E	0.001	0.012 E	0.037	0.46 E	0.1	1.2 E	0.37	4.6 E	1	12 E	15
TETRAETHYLDITHIOPYRO-PHOSPHATE	3689-24-5	0.49	0.73 E	1	1.5 E	49	73 E	100	150 E	0.49	0.73 E	1	1.5 E	30
THIOFANOX	39196-18-4	1.1	0.12 E	3.1	0.34 E	110	12 E	310	34 E	1.1	0.12 E	3.1	0.34 E	NA
THIRAM	137-26-8	18	47 E	51	130 E	1,800	4,700 E	3,000	7,800 E	18	47 E	51	130 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	0.28	0.13 E	1.1	0.51 E	28	13 E	110	51 E	0.28	0.13 E	1.1	0.5 E	NA
TOLUIDINE, O-	95-53-4	0.28	0.32 E	1.1	1.2 E	28	32 E	110	120 E	280	320 E	1,100	1,200 E	NA
TOLUIDINE, P-	106-49-0	0.35	0.32 E	1.4	1.3 E	35	32 E	140	130 E	0.35	0.32 E	1.4	1.3 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	240 E	130	660 E	400	2,000 E	400	2,000 E	47	240 E	130	660 E	15
TRIBROMOMETHANE (BROMOFORM)	75-25-2	10	4.4 E	10	4.4 E	1,000	440 E	1,000	440 E	1,000	440 E	1,000	440 E	NA
TRICHLORO-1,2,2-TRIFLUOROETHANE, 1,1,2-	76-13-1	8,300	26,000 E	17,000	53,000 E	17,000	53,000 E	17,000	53,000 E	17,000	53,000 E	17,000	53,000 E	20
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	2,300 E	1,000	6,100 E	37,000	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	1.1	3.1 E	3.1	8.9 E	110	310 E	310	890 E	1,100	3,100 E	3,100	8,900 E	20
TRICHLOROPHENOXYACETIC 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
TRICHLOROPHENOXYPROPIONIC 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	3.1 E	51	8.7 E	1,800	310 E	5,100	870 E	18	3.1 E	51	8.7 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	18	11 E	51	30 E	1,800	1,100 E	5,100	3,000 E	18	11 E	51	30 E	NA
TRIFLURALIN	1582-09-8	0.5	0.96 E	0.5	0.96 E	50	96 E	50	96 E	0.5	0.96 E	0.5	0.96 E	30
TRIMETHYLBENZENE, 1,3,4- (TRIMETHYLBENZENE, 1,2,4-)	95-63-6	1.6	9 E	3.5	20 E	160	900 E	350	2,000 E	160	900 E	350	2,000 E	15
TRIMETHYLBENZENE, 1,3,5-	108-67-8	1.6	2.8 E	3.5	6.2 E	160	280 E	350	620 E	1.6	2.8 E	3.5	6.2 E	30
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
VINYLACETATE	108-05-4	55	6.5 E	120	14 E	5,500	650 E	10,000	1,400 E	55	6.5 E	120	14 E	NA
VINYL BROMIDE (BROMOETHENE)	593-60-2	0.14	0.068 E	0.58	0.28 E	14	6.8 E	58	28 E	1.4	0.68 E	5.8	2.8 E	NA
VINYL CHLORIDE	75-01-4	0.2	0.027 E	0.2	0.027 E	20	2.7 E	20	2.7E	2	0.27 E	2	0.27 E	NA
WARFARIN	81-81-2	1.1	2.6 E	3.1	7.4 E	110	260 E	310	740	1,100	2,600	1,700	4,100	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	29 E	510	81 E	1,000	160 E	1,000	160 E	180	29 E	510	81 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

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

A. Direct Contract 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 G	190,000 C
ARSENIC	7440-38-2	12 G	53 G	190,000 C
BARIUM AND COMPOUNDS	7440-39-3	15,000 G	190,000 C	190,000 C
BERYLLIUM	7440-41-7	440 G	5,600 G	190,000 C
BORON AND COMPOUNDS	7440-42-8	20,000 G	190,000 C	190,000 C
CADMIUM	7440-43-9	47 G	210 G	190,000 C
CHROMIUM III	16065-83-1	190,000 C	190,000 C	190,000 C
CHROMIUM VI	18540-29-9	94 G	420 G	190,000 C
COBALT	7440-48-4	4,400 G	56,000 G	190,000 C
COPPER	7440-50-8	8,200 G	100,000 G	190,000 C
CYANIDE, FREE	57-12-5	4,400 G	56,000 G	190,000 C
IRON	7439-89-6	66,000 G	190,000 C	190,000 C
LEAD	7439-92-1	500 U	1,000 S	190,000 C
MANGANESE	7439-96-5	31,000 G	190,000 G	190,000 C
MERCURY	7439-97-6	66 G	840 G	190,000 C
NICKEL	7440-02-0	4,400 G	56,000 G	190,000 C
SELENIUM	7782-49-2	1,100 G	14,000 G	190,000 C
SILVER	7440-22-4	1,100 G	14,000 G	190,000 C
THALLIUM	7440-28-0	15 G	200 G	190,000 C
TIN	7440-31-5	130,000 G	190,000 C	190,000 C
VANADIUM	7440-62-2	1,500 G	20,000 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 - Inhalation
C - Cap
U - UBK Model
S - SEGH Model
NA - Not Applicable

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		N		R		N		R		N		
		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	5	150	5	150	500	15,000	500	15,000	5,000	150,000	5,000	150,000	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	60	6.7	60	6.7	6,000	670	6,000	670	60,000	6,700	60,000	6,700	NA
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	73	8.1	200	22	7,300	810	20,000	2,200	73,000	8,100	190,000	22,000	NA
COPPER	7440-50-8	100	36,000	100	36,000	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
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
MANGANESE	7439-96-5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	7439-97-6	0.2	10	0.2	10	20	1,000	20	1,000	200	10,000	200	10,000	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
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
THALLIUM	7440-28-0	0.2	14	0.20	14	20	1,400	20	1,400	200	14,000	200	14,000	15
TIN	7440-31-5	2,200	240	6,100	680	190,000	24,000	190,000	68,000	190,000	190,000	190,000	190,000	NA
VANADIUM	7440-62-2	26	26,000	72	72,000	2,600	190,000	7,200	190,000	26,000	190,000	72,000	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
G - Ingestion
H - Inhalation
C - Cap
U - UBK Model
S - SEGH Model
NA - Not Applicable

TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES

A. Organic Regulated Substances

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d)-1	RfDi (mg/kg-d)	CSFi (mg/kg-d)-1	Koc	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		0.06 Ir		4900		3.8	1,5,6				279	1.24
ACENAPHTHYLENE	208-96-8	0.06 S		0.06 S		4500		16.1	5,6,7				280	2.11
ACEPHATE	30560-19-1	0.004	0.0087			3		818000	6					
ACETALDEHYDE	75-07-0		0.0077 Ir	0.0026 I	0.0077 I	4.1	X	1000000	1	13100	15100	X	20	
ACETONE	67-64-1	0.1 I		8.86 D		0.31	X	1000000	1	13100	15000	X	56	18.07
ACETONITRILE	75-05-8			0.017 I		0.5	X	1000000	1	13100	15000	X	82	4.50
ACETOPHENONE	98-86-2	0.1 I		0.1 Ir		170		5500	1			X	203	
ACETYLAMINO-FLUORENE, 2- (2AAF)	53-96-3		3.8 C		3.8 C	1600		10.13	7				303	0.69
ACROLEIN	107-02-8	0.02 H		0.0000057 I		0.56	X	208000	1,2,4	13100	15100	X	53	4.50
ACRYLAMIDE	79-06-1	0.0002 I	4.5 Ir	0.0002 Ir	4.55 I	25	X	2151000	4			X	192.6	
ACRYLIC ACID	79-10-7	0.5 I		0.000286 I		29	X	1000000	2	13000	14900	X	141	1.39
ACRYLONITRILE	107-13-1	0.001 H	0.54 I	0.000571 I	0.238 I	11	X	73500	1	13100	15100	X	77	5.50
ALACHLOR	15972-60-8	0.01 I	0.08 H	0.01	0.08 Hr	110		140	2				100	
ALDICARB	116-06-3	0.001 I		0.001 Ir		22		6000	2				287	0.40
ALDRIN	309-00-2	0.00003 I	17 I	0.00003 Ir	17.15 I	48000		0.02	4,5,6				145	0.22
ALLYL ALCOHOL	107-18-6	0.005 I		0.005 Ir		3.2	X	1000000	2	13100	15000	X	97	18.07
AMINOBIPHENYL, 4-	92-67-1		21 C		21 C	110		1200	5				302	18.07
AMITROLE	61-82-5		0.94 C		0.945 C	120		280000	4				200	0.69
AMMONIA	7664-41-7	0.97 H		0.0286 I		3	X	310000	2,5,7	13100	15000	X	-33.3	
AMMONIUM SULFAMATE	7773-06-0	0.2 I		0.2		3		2160000	10				200	
ANILINE	62-53-3	0.007 N	0.0057 I	0.000286 I	0.0056 C	190	X	33800	1	13000	14900	X	184	
ANTHRACENE	120-12-7	0.3 I		0.3		21000		0.066	1,5,6,7,8,9				340	0.28
ATRAZINE	1912-24-9	0.035 I	0.222 H	0.035	0.222 Hr	130		70	2,4,5				200	
BAYGON (PROPOXUR)	114-26-1	0.004 I		0.004		31		2000	2,4,5				decomp.	4.50
BENOMYL	17804-35-2	0.05 I				1,900		2	5					
BENTAZON	25057-89-0	0.03 I				13		500	2					
BENZENE	71-43-2	0.003 N	0.029 I	0.0017 N	0.027 I	58	X	1780.5	1,2,3,4	13100	15000	X	81	0.35
BENZIDINE	92-87-5	0.003 I	230 I	0.003	230 I	530,000		520	1,2,4				400	15.81
BENZO[A]ANTHRACENE	56-55-3		0.73 N		0.31 T	350000		0.011	1,5,6				438	0.19
BENZO[A]PYRENE	50-32-8		7.3 I		3.1 N	910000		0.0038	1,5,6				495	0.24
BENZO[B]FLUOR-ANTHENE	205-99-2		0.73 N		0.31 T	550000		0.0012	5,6,7				357	0.21
BENZO[GH]IPERYLENE	191-24-2	0.06 S		0.06 S		2800000		0.00026	1,5,6				500	0.19
BENZOK[F]LUOR-ANTHENE	207-08-9		0.073 N		0.031 T	4400000		0.00055	5,6,7				480	0.06
BENZOIC ACID	65-85-0	4 I		4 Ir		32		2700	2,3,4,5				249	
BENZOTRICHLORIDE	98-07-7		13 I			920		53	1,5,13			X	220.8	121413.60
BENZYL ALCOHOL	100-51-6	0.3 H		0.3 Hr		100		40000	1,2,3			X	205	
BENZYL CHLORIDE	100-44-7		0.17 I		0.1715 C	190	X	493	1	13000	15000	X	179	20.90

TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES (Continued)

A. Organic Regulated Substances

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d)-1	RfDi (mg/kg-d)	CSFi (mg/kg-d)-1	Koc	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})
BHC, ALPHA	319-84-6	0.008 D	6.3 I	0.0006 S	6.3 I	1800		1.7	4,5,6,7				288	0.94
BHC, BETA-	319-85-7	0.0006 D	1.8 I	0.0006 Dr	1.855 I	2300		0.1	6				60	1.02
BHC, DELTA-	319-86-8	0.0006 S		0.0006 S		1900		8	6				60	1.26
BHC, GAMMA (LINDANE)	58-89-9	0.0003 I	1.3 H	0.0003 Ir	1.085 C	1400		7.3	4,5,6				323	1.05
BIPHENYL, 1,1-	92-52-4	0.05 I		0.05 Ir		1,700		7.2	1				255	18.07
BIS(2-CHLOROETHYL) ETHER	111-44-4		1.1 I		1.155 I	76	X	10200	1,4,5	13000	14900	X	179	0.69
BIS(2-CHLORO-ISO-PROPYL)ETHER	108-60-1	0.04 I	0.07 H	0.04 Ir	0.035 H	62	X	1700	5	13000	14900	X	189	0.69
BIS(CHLOROMETHYL) ETHER	542-88-1		220 I		217 I	16	X	22000	6	13100	15100	X	105	57270.57
BIS[2-ETHYLHEXYL] PHTHALATE	117-81-7	0.02 I	0.014 I	0.02 Ir	0.014 N	87000		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					
BROMOCHLORO-METHANE	74-97-5	0.01 M				27	X	16700	4	13100	15000	X	68	
BROMODICHLORO-METHANE	75-27-4	0.02 I	0.062 I	0.02 Ir	0.1295 C	93	X	4500	6	13100	15000	X	87	
BROMOMETHANE	74-83-9	0.0014 I		0.0014 I		170	X	17500	2	13100	15000	X	4	6.66
BROMOXYNIL	1689-84-5	0.02 I				300		130	2					
BROMOXYNIL OCTANOATE	1689-99-2	0.02 I				18,000		0.08	12					5.75
BUTADIENE, 1,3-	106-99-0		3.4 C		0.98 I	120		735	1				-4.5	4.50
BUTYL ALCOHOL, N-	71-36-3	0.1 I		0.1 Ir		3.2	X	74000	1	13000	14900	X	118	4.68
BUTYLATE	2008-41-5	0.05 I				540	X	45	2	13200	15200	X	138 N	
BUTYLBENZENE, N-	104-51-8	0.04 N				2,500	X	15	1,6,7	13100	15100	X	183.1	
BUTYLBENZENE, SEC-	135-98-8	0.04 N				890	X	17	1,6,7	13100	15000	X	173.5	
BUTYLBENZENE, TERT-	98-06-6	0.04 N				680	X	30	1,6,7	13100	15000	X	169	
BUTYLBENZYL PHTHALATE	85-68-7	0.2 I		0.2 Ir		34000		2.69	4,5,6			X	370	1.39
CAPTAN	133-06-2	0.13 I	0.0035 H	0.13 Ir	0.00231 C	200		0.5	4				259	589.39
CARBARYL	63-25-2	0.1 I		0.1 Ir		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		0.005 Ir		43		700	2				200	
CARBON DISULFIDE	75-15-0	0.1 I		0.2 I		300	X	2100	1,2,3	13100	15100	X	46	
CARBON TETRACHLORIDE	56-23-5	0.0007 I	0.13 I	0.00057 N	0.0525 I	160	X	795	1,2,3	13100	15000	X	77	0.07
CARBOXIN	5234-68-4	0.1 I				260		170	5,6,8					
CHLORAMBEN	133-90-4	0.015 I		0.015 Ir		20		700	2				210	
CHLORDANE	57-74-9	0.0005 I	0.35 I	0.0002 I	0.35 I	98000		0.056	4,5,7				175	0.091
CHLORO-1,1-DIFLUOROE-THANE, 1-	75-68-3			14.3 I		22		1400	4				-9.2	

TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES (Continued)

A. Organic Regulated Substances

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d)-1	RfDi (mg/kg-d)	CSFi (mg/kg-d)-1	Koc	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})
CHLORO-1-PROPENE, 3- (ALLYL CHLORIDE)	107-05-1	0.000286 Ir	0.021 C	0.000286 I	0.021 C	48	X	3300	1,3,5,7,10	13100	15000	X	45	18.07
CHLOROACETOPHE-NONE, 2-	532-27-4	0.00000857 Ir		0.00000857 I		76		1100	3				247	4.50
CHLOROANILINE, P-	106-47-8	0.004 I		0.004 Ir		460		3900	1				232	
CHLOROBENZENE	108-90-7	0.02 I		0.00571 H		200	X	490	3			X	132	0.84
CHLOROBENZILATE	510-15-6	0.02 I	0.27 H	0.02 Ir	0.273 H	2600		13	4			X	415	3.60
CHLOROBUTANE, 1-	109-69-3	0.4 H				580	X	680	1,2,3,4	13200	15000	X	78.5	
CHLORODIBROMO-METHANE	124-48-1	0.02 I	0.084 I	0.02 Ir	0.0945 C	83	X	4200	4,6,7,9	13100	15100	X	116	1.39
CHLORODIFLUORO-METHANE	75-45-6			14 I		59	X	2899	4	13200	15000		-40.8	
CHLOROETHANE	75-00-3	0.4 Ir	0.0029 N	2.86 I		42	X	5700	1	13100	15000	X	12	4.50
CHLOROFORM	67-66-3	0.01 I	0.0061 I	0.00009 N	0.0805 I	56	X	8000	1,2,3	13100	15000	X	61	0.01
CHLORONAPHTHALENE, 2-	91-58-7	0.08 I		0.08 Ir		8500		11.7	1				256	
CHLORONITROBENZENE, P-	100-00-5		0.018 H			480		220	1				242	
CHLOROPHENOL, 2-	95-57-8	0.005 I		0.005 Ir		400	X	24000	1,3,4	12900	14900	X	175	
CHLOROPRENE	126-99-8	0.02 H		0.002 H		50	X	1736	9	13100	15000	X	59	0.69
CHLOROPROPANE, 2-	75-29-6			0.0286 H		260	X	3100	1,3,5	13200	15000	X	47.2	
CHLOROTHALONIL	1897-45-6	0.015 I	0.011 H		0.0031 C	980		0.6	2				350	
CHLOROTOLUENE, O-	95-49-8	0.02 I				760	X	422	14,15	13100	15000	X	158.97	
CHLORPYRIFOS	2921-88-2	0.003 I		0.003 Ir		4600		1.12	2,4,6,7				200	
CHLORSULFURON	64902-72-3	0.05 I				11		192	2,5,6,8,9				152	
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		0.0031 T	490000		0.0019	1				448	0.126
CRESOL(S)	1319-77-3	0.005 S				25	X	20000	2	13000	14900	X	139	5.16
CRESOL, 0- (METHYLPHENOL, 2-)	95-48-7	0.05 I				97	X	2500	3,5,6	12900	14800	X	191	18.07
CRESOL, M (METHYLPHENOL, 3-)	108-39-4	0.05 I				35		2500	2			X	202	5.16
CRESOL, P (METHYLPHENOL, 4-)	106-44-5	0.005 H				49		22000	6				202	9.03
CRESOL, P-CHLORO-M-	59-50-7	0.005 S				780		3846	2				235	
CROTONALDEHYDE	4170-30-3		1.9 S		1.9 Sr	5.6	X	180000	3			X	104	18.07
CROTONALDEHYDE, TRANS-	123-73-9		1.9 H		1.9 Hr	6.1	X	156000	1	13100	15100	X	104	18.07
CUMENE	98-82-8	0.1 I		0.11		2800	X	50	1,5,6	13100	15100	X	152	15.81
CYCLOHEXANONE	108-94-1	5 I		5 Ir		66	X	36500	1,2,4,5	13000	14900	X	157	
CYFLUTHRIN	68359-37-5	0.025 I				130,000	X	0.001	2	13000	15000	X		
CYROMAZINE	66215-27-8	0.0075 I				1,200		11000	12				222	
DDD, 4,4'-	72-54-8		0.24 I		0.2415 C	44000		0.16	5,6,7				193	0.02

TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES (Continued)

A. Organic Regulated Substances

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d)-1	RfDi (mg/kg-d)	CSFi (mg/kg-d)-1	Koc	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})
DDE, 4,4'-	72-55-9		0.34 I		0.34 C	87000		0.04	5				348	0.02
DDT, 4,4'-	50-29-3	0.0005 I	0.34 I	0.0005 Ir	0.34 I	240000		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	13000	14900	X	214	4.50
DIALLATE	2303-16-4		0.061 H		0.061 Hr	190	X	40	2,4,6,8	12900	14900	X	150	1.39
DIAMINOTOLUENE, 2,4-	95-80-7		3.2 H		4 C	36		7470	4				292	0.69
DIAZINON	333-41-5	0.0009 H		0.0009 Hr		500		50	2,4,6,8				306	
DIBENZO[A,H]ANTHRACENE	53-70-3		7.3 N		3.1 T	1800000		0.0006	1,5,6				524	0.13
DIBROMO-3-CHLOROPROPANE, 1,2-	96-12-8	0.0000571 Ir	1.4 H	0.0000571 I	0.00242 H	140	X	1000	4	13000	15000	X	196	0.69
DIBROMOBENZENE, 1,4-	106-37-6	0.01 I				1,600		20	1				220.4	
DIBROMOETHANE, 1,2-(ETHYLENE DIBROMIDE)	106-93-4	0.0000571 Hr	85 I	0.0000571 H	0.77 I	54	X	4150	1,2,3,5	13100	15100	X	131	2.11
DIBROMOMETHANE	74-95-3	0.01 H		0.01 Hr		110	X	11400	1	13100	15100	X	96	4.50
DIBUTYL PHTHALATE, N-	84-74-2	0.1 I		0.1 Ir		1600		400	1,2,3			X	340	11.00
DICHLORO-2-BUTENE, 1,4-	764-41-0				9.3 H	180		850	9				156	
DICHLOROBENZENE, 1,2-	95-50-1	0.09 I		0.0571 H		350	X	147	1,4,5,6,7	13100	15100	X	180	0.69
DICHLOROBENZENE, 1,3-	541-73-1	0.03 N				360	X	106	1	13100	15100	X	173	0.69
DICHLOROBENZENE, P-	106-46-7	0.03 N	0.024 H	0.229 I	0.022 N	510		82.9	1				174	0.69
DICHLOROBENZIDINE, 3,3'-	91-94-1		0.45 I		1.19 C	22000		3.11	4,5,6				368	0.69
DICHLORODIFLUOROMETHANE (FREON 12)	75-71-8	0.2 I		0.0571 H		360	X	280	1	13200	15000	X	-30	0.69
DICHLOROETHANE, 1,1-	75-34-3	0.1 H	0.0057 C	0.143 H	0.0056 C	52	X	5000	2	13100	15000	X	57	0.16
DICHLOROETHANE, 1,2-	107-06-2	0.03 N	0.091 I	0.23 D	0.091 I	38	X	8412	1,2,3,4	13100	15000	X	83	0.69
DICHLOROETHYLENE, 1,1-	75-35-4	0.009 I	0.6 I	0.009 Ir	0.175 I	65	X	2500	1,4,5	13100	15000	X	32	0.19
DICHLOROETHYLENE, CIS-1,2-	156-59-2	0.01 I		0.01 Ir		49	X	3500	1	13100	15000	X	60	0.01
DICHLOROETHYLENE, TRANS-1,2-	156-60-5	0.02 I		0.02 Ir		47	X	6300	1	13100	15000	X	48	0.01
DICHLOROMETHANE (METHYLENE CHLORIDE)	75-09-2	0.06 I	0.0075 I	0.857 H	0.00165 I	16	X	20000	1,2,3	13100	15000	X	40	4.50
DICHLOROPHENOL, 2,4-	120-83-2	0.003 I		0.003 Ir		160		4500	1				210	5.88
DICHLOROPHENOXYACETIC ACID, 2,4-(2,4-D)	94-75-7	0.01 I		0.01 Ir		59		677	4,5,6,7,10				215	1.39
DICHLOROPROPANE, 1,2-	78-87-5	0.09 D	0.068 H	0.0011 I	0.036 C	47	X	2700	1,3,4	13100	15000	X	96	0.10
DICHLOROPROPENE, 1,3-	542-75-6	0.03 I	0.1 I	0.0057 I	0.014 I	27	X	2700	6	13100	15000	X	108	22.38
DICHLOROPROPIONIC ACID (DALAPON), 2,2-	75-99-0	0.03 I		0.03 Ir		62	X	500000	5	13000	14900	X	190	2.11
DICHLORVOS	62-73-7	0.0005 I	0.29 I	0.000143 I	0.291 C	50		10000	2,4,5				140	
DICYCLOPENTADIENE	77-73-6	0.03 H		0.0000571 H		810	X	40	5			X	167	

TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES (Continued)

A. Organic Regulated Substances

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d)-1	RfDi (mg/kg-d)	CSFi (mg/kg-d)-1	Koc	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})
DIELDRIN	60-57-1	0.00005 I	16 I	0.00005 Ir	16.1 I	11000		0.17	4,5,6			X	385	0.12
DIETHYL PHTHALATE	84-66-2	0.8 I		0.8 Ir		81		1080	4,5,6			X	298	2.25
DIFLUBENZURON	35367-38-5	0.02 I				1,000		0.2	2				201	
DIMETHOATE	60-51-5	0.0002 I		0.0002 Ir		110		25000	4				200	2.26
DIMETHOXYBENZIDINE, 3,3-	119-90-4		0.014 H			1,300		60	9				331	0.69
DIMETHYLAMINOAZO-BENZENE, P-	60-11-7		4.6 C		4.55 C	1000		13.6	7				200	4.50
DIMETHYLANILINE,,N-	121-69-7	0.002 I				180	X	1200	5,6,7,9	13000	14900	X	192	0.69
DIMETHYLBENZIDINE, 3,3-	119-93-7		9.2 I		9.2 Hr	22,000		1300	10			X	300	18.07
DIMETHYLPHENOL,2,4-	105-67-9	0.02 I		0.02 Ir		130		7869	1,4,6,7			X	211	18.07
DINITROBENZENE,1,3-	99-65-0	0.0001 I		0.0001 Ir		150		523	3,5,6,7				300	0.69
DINITROPHENOL,,4-	51-28-5	0.002 I		0.002 Ir		0.79		5600	2,4,5,6,7					0.48
DINITROTOLUENE,,4-	121-14-2	0.002 I	0.31 C	0.002 Ir	0.31 C	51		270	4,5,6				300	0.69
DINITROTOLUENE,,6-(2,6-DNT)	606-20-2	0.001 H		0.001 Hr		74		200	6				300	0.69
DINOSEB	88-85-7	0.001 I		0.001 Ir		120		50	5				223	1.03
DIOXANE,,4-	123-91-1		0.011 I		0.027 C	7.8	X	1000000	5	13000	14900	X	101	0.69
DIPHENAMID	957-51-7	0.03 I				200		260	5				210	
DIPHENYLAMINE	122-39-4	0.025 I		0.025 Ir		190		300	3				302	4.50
DIPHENYLHYDRAZINE, 1,2-	122-66-7		0.8 I		0.77 I	660		0.252	6				309	0.69
DIQUAT	85-00-7	0.0022 I		0.0022 Ir		2.6		700000	5				355	
DISULFOTON	298-04-4	0.00004 I		0.00004 Ir		1000	X	25	4,5,6	13400	15400	X	133	6.02
DIURON	330-54-1	0.002 I		0.002 Ir		300		42	2,4,5					
ENDOSULFAN	115-29-7	0.006 I		0.006 Ir		2,000		0.48	4				106	2.78
ENDOSULFANI 1 (ALPHA)	959-98-8	0.006 S		0.006 Sr		2000		0.5	6				200	
ENDOSULFANI 1 (BETA)	33213-65-9	0.006 S		0.006 Sr		2300		0.45	6				390	
ENDOSULFAN SULFATE	1031-07-8	0.006 S		0.006 Sr		2300		0.117	7,9				200	
ENDOTHALL	145-73-3	0.02 I		0.02 Ir		120		100000	2				200	
ENDRIN	72-20-8	0.0003 I		0.0003 Ir		11000		0.23	4,6,7,9				245	
EPICHLOROHYDRIN	106-89-8	0.002 H	0.0099 I	0.000286 Ir	0.0042 I	35	X	65800	1,3,4	13000	14900	X	116	4.50
ETHEPHON	16672-87-0	0.005 I				2		1240000	12				201	
ETHION	563-12-2	0.0005 I		0.0005 Ir		8700		0.85	4,6,9,10			X	200	
ETHOXYETHANOL,2-(EGEE)	110-80-5	0.4 H		0.057 I		12	X	1000000	2	13200	15000	X	136	4.50
ETHYL ACETATE	141-78-6	0.9 I		0.9 Ir		59	X	80800	1,2,3,4,5,6	13100	15000	X	77	18.07
ETHYL ACRYLATE	140-88-5		0.048 H		0.048 Hr	110	X	15000	1,2,6	13100	15100	X	100	18.07
ETHYL BENZENE	100-41-4	0.1 I		0.286 I		220	X	161	1,3,4	13100	15000	X	136	1.11
ETHYL DIPROPYLTHIOCARBA-MATE, ES-(EPTC)	759-94-4	0.025 I				240	X	365	2	12900	14900	X	127	

TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES (Continued)

A. Organic Regulated Substances

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d)-1	RfDi (mg/kg-d)	CSFi (mg/kg-d)-1	Koc	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})
ETHYL ETHER	60-29-7	0.2 I		0.2 Ir		68	X	60400	1	13100	15100	X	35	
ETHYL METHACRYLATE	97-63-2	0.09 H		0.09 Hr		22		4635.5	9,10				117	
ETHYL GENELYCOL	107-21-1	2 I		2 Ir		4.4	X	1000000	2	13100	15100	X	198	10.54
ETHYLENE THIOUREA (ETU)	96-45-7	0.00008 I	0.11 I	0.00008 Ir	0.045 C	0.23		20000	2					4.50
ETHYLP-NITROPHENYL PHENYLPHOSPHORO-THIOATE	2104-64-5	0.00001 I				1,200		3.1	4				215	
FENAMIPHOS	22224-92-6	0.00025 I		0.00025 Ir		300		329	2				200	
FENVALERATE (PYDRIN)	51630-58-1	0.025 I				4,400		0.085	5	20500	25800	X	300	
FLUOMETURON	2164-17-2	0.013 I				68		97.5	2,5,6,8					
FLUORANTHENE	206-44-0	0.04 I		0.04 Ir		49000		0.26	1,5,6				375	0.29
FLUORENE	86-73-7	0.04 I		0.04 Ir		7900		1.9	1				298	2.11
FLUOROTRICHLORO-METHANE (FREON1)	75-69-4	0.3 I		0.2 H		130	X	1090	1,4,5,6	13100	15000	X	24	0.35
FONOFOS	944-22-9	0.002 I		0.002 Ir		1100	X	13	5,6,8	13400	15500	X	130	
FORMALDEHYDE	50-00-0	0.2 I	0.0455 Ir	0.0011 D	0.0455 I	3.6	X	55000	1	13100	15100	X	-21	18.07
FORMIC ACID	64-18-6	2 H		2 Hr		0.54	X	1000000	2	13000	14900	X	101	18.07
FOSETYL-AL	39148-24-8	3 I				310		120000	2					
FURAN	110-00-9	0.001 I				130	X	10000	1	13100	15000	X	31.36	2.25
FURFURAL	98-01-1	0.003 I		0.0143 H		6.3	X	91000	1,2,3	13000	14900	X	162	
GLYPHOSATE	1071-83-6	0.1 I		0.1 Hr		3500		12000	1,5,6				186	
HEPTACHLOR	76-44-8	0.0005 I	4.5 I	0.0005 Ir	4.55 I	6800		0.18	4,6,7				310	46.84
HEPTACHLOR EPOXIDE	1024-57-3	0.000013 I	9.1 I	0.000013 Ir	9.1 I	21000				4,6,7,9			200	0.23
HEXACHLOROBENZENE	118-74-1	0.0008 I	1.6 I	0.0008 Ir	1.61 I	3800		0.006	1,4,5				319	0.06
HEXACHLOROBUTA-DIENE	87-68-3	0.0002 H	0.078 I	0.0002 Hr	0.077 I	4700		2.89	4,5,6,7			X	215	0.69
HEXACHLOROCYCLO-PENTADIENE	77-47-4	0.006 I		0.00006 H		7200		1.8	5,6,7			X	239	4.50
HEXACHLOROETHANE	67-72-1	0.001 I	0.014 I	0.001 Ir	0.014 I	2200		50	1				187	0.69
HEXANE	110-54-3	0.06 H		0.0571 I		3600	X	9.5	1,5,6	13100	15000	X	69	
HEXYTHIAZOX (SAVEY)	78587-05-0	0.025 I					6,500		0.5	2				
HYDRAZINE/HYDRAZINE SULFATE	302-01-2		3 I		17 I	0.0053	X	1000000	2	13000	15000	X	113.5	18.07
HYDROQUINONE	123-31-9	0.04 H		0.04 Hr		10		70000	2,3,5				285	18.07
INDENO[1,2,3-CD]PYRENE	193-39-5		0.73 N		0.31 T	31000000		0.062	5				536	0.17
IPRODIONE	36734-19-7	0.04 I				1,100		13	2					
ISOBUTYL ALCOHOL	78-83-1	0.3 I		0.3 Ir		60	X	81000	1,2,3,4,5	13000	14900	X	108	17.57
ISOPHORONE	78-59-1	0.2 I	0.00095 I	0.2 Ir	0.00095 Ir	31		12000	2,4,5			X	215	4.50
KEPONE	143-50-0	0.0005 D	16 C		16.1 C	55000		7.6	4				350	0.17
MALATHION	121-75-5	0.02 I		0.02 Ir		1300	X	143	4	14000	16300	X	157	2.46
MALEIC HYDRAZIDE	123-33-1	0.5 I		0.5 Ir		2.8		6000	4				260	

TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES (Continued)

A. Organic Regulated Substances

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d)-1	RfDi (mg/kg-d)	CSFi (mg/kg-d)-1	Koc	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})
MANEB	12427-38-2	0.005 I				1		23	9,13					
MERPHOS OXIDE	78-48-8	0.00003 I				53,000	X	2.3	8,10,12	13100	15100	X	150	
METHACRYLONITRILE	126-98-7	0.0001 I		0.0002 H		21	X	25700	1	13100	15100	X	90	
METHAMIDOPHOS	10265-92-6	0.00005 I				5		2000000	5					
METHANOL	67-56-1	0.5 I		0.5 Ir		2.8	X	1000000	2	13100	15100	X	65	36.14
METHOMYL	16752-77-5	0.025 I		0.025 Ir		20		58000	2				144	
METHOXYCHLOR	72-43-5	0.005 I		0.005 Ir		63000		0.045	4,5,6				346	0.69
METHOXYETHANOL, 2-	109-86-4	0.001 H		0.00571 I			X	1000000	2	13100	15000	X	124.3	4.50
METHYL ACETATE	79-20-9	1 H				30	X	243500	4,5,6	13100	15100	X	56.9	
METHYL ACRYLATE	96-33-3	0.03 H				55	X	52000	1,2,5	13100	15100	X	70	18.07
METHYL CHLORIDE	74-87-3	0.004 M	0.013 H	0.029 D	0.0063 H	6	X	6180	1,2,3,4	13200	15000	X	-24	4.50
METHYL ETHYL KETONE	78-93-3	0.6 I		0.286 I		32	X	275000	1,2,3,4,5	13100	15100	X	80	2.57
METHYL ISOBUTYL KETONE	108-10-1	0.08 H		0.023 H		17	X	19550	1,2,4,5	13100	15100	X	117	18.07
METHYL METHACRYLATE	80-62-6	1.4 I		0.2 I		10	X	15600	1	13100	15100	X	100	4.5045
METHYL METHANESULFONATE	66-27-3		0.099 C		0.098 C	5.2		200000	2				203	
METHYL PARATHION	298-00-0	0.00025 I		0.00025 Ir		790	X	25	4,5,6	13500	15600	X	133	3.61
METHYL STYRENE (MIXED ISOMERS)	25013-15-4	0.006 H		0.011 H		2,200		89	9					
METHYL TERT-BUTYL ETHER (MTBE)	1634-04-4	0.857 Ir	0.0018 C	0.857 I	0.0018 C	12	X	45000	1,2,4,6	13100	15100	X	55	0.693
METHYLENE BIS(2-CHLOROANILINE), 4,4'-	101-14-4	0.0007 H	0.13 H	0.0007 Hr	0.13 H	3,000		13.9	10					
METHYLNAPHTHALENE, 2-	91-57-6	0.02 S		0.00086 S		16000		25	1			X	241	
METHYLSTYRENE, ALPHA	98-83-9	0.07 H				660	X	560	9			X	165.4	
NAPHTHALENE	91-20-3	0.02 I		0.00086 I		950		30	3				218	0.98
NAPHTHYLAMINE,1-	134-32-7		1.8 S		1.8 S	3200		1690	2				301	0.69
NAPHTHYLAMINE,2-	91-59-8		1.8 C		1.8 C	87		6.4	6				306	0.69
NAPROPAMIDE	15299-99-7	0.1 I				880		70	2					
NITROANILINE,M-	99-09-2	0.0000571 S		0.0000571 S		18		100	3				306	
NITROANILINE,O-	88-74-4	0.0000571 Hr		0.0000571 H		27		1200	6				284	
NITROANILINE,P-	100-01-6	0.0000571 S		0.0000571 S		15		800	2				332	
NITROBENZENE	98-95-3	0.0005 I		0.0006 H		130		2000	2			X	211	0.64
NITROPHENOL,2-	88-75-5	0.008 S		0.008 S		37		2100	1,2,3,4,5,6				215	9.01
NITROPHENOL,4-	100-02-7	0.008 N		0.008 Nr		230		16000	2				279	25.81
NITROPROPANE,2-	79-46-9	0.00571 Ir	9.4 Hr	0.00571 I	9.4 H	20	X	16700	1,3,4,5	13000	14900	X	120	0.69
NITROSODIETHYLAMINE, N-	55-18-5		150 I		151 I	26	X	93000	10	13000	14900	X	176	0.69

TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES (Continued)

A. Organic Regulated Substances

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d)-1	RfDi (mg/kg-d)	CSFi (mg/kg-d)-1	Koc	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})
NITROSODIMETHYLAMINE, N-	62-75-9		51 I		49 I	8.5	X	1000000	2	13000	14900	X	154	0.69
NITROSO-DI-N-BUTYLAMINE, N-	924-16-3		5.4 I		5.6 I	450		1200	9,10,13			X	235	0.69
NITROSODI-N-PROPYLAMINE, N-	621-64-7	0.095 D	7 I	0.095 Dr	7 C	11		9900	6			X	206	0.69
NITROSODIPHENYLAMINE, N-	86-30-6		0.0049 I		0.0091 C	580		35	1				269	3.72
NITROSO-N-ETHYLUREA, N-	759-73-9		140 H		27 C	2		13000	9				125	1734.48
OCTYL PHTHALATE, DI-N-	117-84-0	0.02 H		0.02 Hr		980000000		3	5			X	234	0.69
OXAMYL (VYDATE)	23135-22-0	0.025 I		0.025 Ir		7.1		280000	2				101	
PARATHION	56-38-2	0.006 H		0.006 Hr		2300		20	2,4,5,6,7			X	375	
PCB-1016 (AROCLOR)	12674-11-2	0.00007 I	0.09 N	0.00007 Ir	0.09 Nr	110000		0.25	5			X	340	
PCB-1221 (AROCLOR)	11104-28-2		0.5 S		0.5 S	1900		0.59	5			X	340	
PCB-1232 (AROCLOR)	11141-16-5		0.5 S		0.5 S	1500		1.45	7			X	340	
PCB-1242 (AROCLOR)	53469-21-9		0.5 N		0.5 Nr	48000		0.1	5			X	340	
PCB-1248 (AROCLOR)	12672-29-6		1.8 S		1.8 S	190000		0.054	7,9,11			X	340	
PCB-1254 (AROCLOR)	11097-69-1	0.00002 I	1.8 N	0.00002 Ir	1.8 Nr	810000		0.057	5			X	340	
PCB-1260 (AROCLOR)	11096-82-5		0.6 N		0.6 Nr	1800000		0.08	5				385	
PEBULATE	1114-71-2	0.05 H				630	X	92	5	13000	14900	X	142	
PENTACHLOROBENZENE	608-93-5	0.0008 I		0.0008 Ir		32000		0.74	1,5,6,7				277	0.37
PENTACHLORONITROBENZENE	82-68-8	0.003 I	0.26 H	0.003 Ir	0.26 Hr	7900		0.44	4,6,8				328	0.36
PENTACHLOROPHENOL	87-86-5	0.03 I	0.12 I	0.03 Ir	0.12 Ir	20000		14	1,2,4,5				310	0.17
PHENACETIN	62-44-2		0.0022 C		0.0022 C	110		763	2,3,9				200	4.50
PHENANTHRENE	85-01-8	0.3 S		0.3 Sr		38000		1.1	1,4,5				341	0.63
PHENOL	108-95-2	0.6 I		0.6 Ir		22	X	84300	1,2,3,4			X	182	36.14
PHENYLENEDIAMINE,-	108-45-2	0.006 I		0.006 Ir		12		351000	3				286	4.50
PHENYLPHENOL,2-	90-43-7		0.00194 H			5,700		700	5				280	18.07
PHORATE	298-02-2	0.0002 H		0.0002 Hr		810	X	50	2	13100	15100	X	118	
PHTHALIC ANHYDRIDE	85-44-9	2 I		0.0343 H		79		6170	2				285	13490.40
PICLORAM	1918-02-1	0.07 I				15		430	2					
POLYCHLORINATED BIPHENYLS (AROCLORS) (PCBS)	1336-36-3		2 I		2 I			0.0505	10,13					
PRONAMIDE	23950-58-5	0.075 I		0.075 Ir		200		15	2				321	
PROPANIL	709-98-8	0.005 I				160		225	2					
PROPHAM	122-42-9	0.02 I				51		250	5					
PROPYLBENZENE,N-	103-65-1	0.04 N				720	X	52	6	13100	15100	X	159.2	
PROPYLENEXIDE	75-56-9	0.00857 Ir	0.24 I	0.00857 I	0.013 I	25	X	405000	1	13100	15000	X	34	
PYRENE	129-00-0	0.03 I		0.03 Ir		68000		0.132	1				393	0.07

TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES (Continued)

A. Organic Regulated Substances

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d)-1	RfDi (mg/kg-d)	CSFi (mg/kg-d)-1	Koc	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})
PYRIDINE	110-86-1	0.001 I		0.001 Ir		0.0066	X	1000000	2	13100	15000	X	115	18.07
QUINOLINE	91-22-5		12 H			1,300		60000	1,3,5		14900	X	237.7	12.65
QUIZALOFOP (ASSURE)	76578-14-8	0.009 I				580		0.3	2				220	
RONNEL	299-84-3	0.05 H				580		40	2				151	
SIMAZINE	122-34-9	0.005 I	0.12 H	0.005 Ir	0.12 Hr	110		5	5				225	
STRYCHNINE	57-24-9	0.0003 I		0.0003 Ir		280		143	5				270	4.50
STYRENE	100-42-5	0.2 I		0.286 I		910	X	300	5	13100	15100	X	145	1.20
TEBUTHIURON	34014-18-1	0.07 I				620		2500	2					
TERBACIL	5902-51-2	0.013 I				53		710	2					
TERBUFOS	13071-79-9	0.000025 H		0.000025 Hr		510	X	5	6	13000	15000	X	69	
TETRACHLOROBENZENE, 1,2,4,5-	95-94-3	0.0003 I		0.0003 Ir		1,800		0.583	1,5,6,7				245	0.69
TETRACHLORODIBENZO-P-DIOXIN, 2,3,7,8-(TCDD)	1746-01-6	0.000000001 D	150000 H		150000 H	4300000		0.0000193	6				412	0.21
TETRACHLOROETHANE, 1,1,1,2-	630-20-6	0.03 I	0.026 I	0.03 Ir	0.0259 I	980	X	1100	1			X	130.5	3.79
TETRACHLOROETHANE, 1,1,2,2-	79-34-5	0.06 N	0.2 I	0.06 Nr	0.203 I	79	X	2860	2	13100	15100	X	147	0.56
TETRACHLOROETHYLENE (PCE)	127-18-4	0.01 I	0.052 N	0.14 N	0.00203 N	300	X	162	1,2,3,4,5	13100	15000	X	121	0.03
TETRACHLOROPHENOL, 2,3,4,6-	58-90-2	0.03 I		0.03 Ir		6200		183	6				150	0.69
TETRAETHYL LEAD	78-00-2	0.0000001 I		0.0000001Ir		4900		0.8	5			X	200	4.50
TETRAETHYLDITHIOPYROPHOSPHATE	3689-24-5	0.0005 I		0.0005 Ir		550	X	25	2	13000	14900	X	136	
THIOFANOX	39196-18-4	0.0003 H				0.022		5200	9					
THIRAM	137-26-8	0.005 I		0.005 Ir		1000		30	4				200	
TOLUENE	108-88-3	0.2 I		0.114 I		130	X	532.4	1,2,3,4	13100	15000	X	111	9.01
TOLUIDINE,M-	108-44-1		0.24 S		0.24 Sr	140		15030	6			X	203	
TOLUIDINE,O-	95-53-4		0.24 H		0.24 Hr	410		15000	1,3,5			X	200	18.07
TOLUIDINE,P-	106-49-0		0.19 H		0.19 Hr	320		7410	1,2,3				200	
TOXAPHENE	8001-35-2	0.001 D	1.1 I	0.001 Dr	1.12 I	1500		3	2,4,5				432	
TRIALLATE	2303-17-5	0.013 I				2,000		4	5				117	
TRIBROMOMETHANE (BROMOFORM)	75-25-2	0.02 I	0.0079 I	0.02 Ir	0.00385 I	130	X	3050	1,2,3,4	13100	15100	X	149	0.69
TRICHLORO-1,2,2-TRIFLUOROETHANE, 1,1,2-	76-13-1	30 I		8.57 H		1,200	X	170	1			X	47.7	0.35
TRICHLOROBENZENE, 1,2,4-	120-82-1	0.01 I	0.0036 C	0.0571 H		1500		44.4	1,4,6,7			X	213	0.69
TRICHLOROBENZENE, 1,3,5-	108-70-3	0.006 M		0.0571 S		3100		5.8	5				208	
TRICHLOROETHANE, 1,1,1-	71-55-6	0.28 N		0.63 N		100	X	1495	1,4,5,6	13100	15000	X	74	0.05

TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES (Continued)

A. Organic Regulated Substances

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d)-1	RfDi (mg/kg-d)	CSFi (mg/kg-d)-1	Koc	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})
TRICHLOROETHANE, 1,1,2-	79-00-5	0.004 I	0.057 I	0.004 Ir	0.056 I	76	X	4420	1	13100	15100	X	114	0.03
TRICHLOROETHYLENE (TCE)	79-01-6	0.006 M	0.011 N	0.143 D	0.00595 N	93	X	1100	1	13100	15000	X	87	0.02
TRICHLOROPHENOL, 2,4,5-	95-95-4	0.1 I		0.1 Ir		2400		1000	1,2,4				246	0.14
TRICHLOROPHENOL, 2,4,6-	88-06-2	0.0003 I	0.011 I	0.0003	0.01085 I	1100		850	1,2,4,5				246	0.14
TRICHLOROPHEN-OXYACETIC ACID,4,5-2,4,5-T)	93-76-5	0.01 I		0.01 Ir		43		278	2,4,5				279	1.39
TRICHLOROPHEN-OXYPROPIONIC ACID,4,5-(2,4,5-TP)(SILVEX)	93-72-1	0.008 I		0.008 Ir		1700		140	2				200	
TRICHLOROPROPANE, 1,1,2-	598-77-6	0.005 H				24	X	2700	14	13100	15000	X	117	
TRICHLOROPROPANE, 1,2,3-	96-18-4	0.006 I	7 H	0.0014 N	7 Hr	280	X	1896	1,4,6	13100	15100	X	157	0.35
TRICHLOROPROPENE, 1,2,3-	96-19-5	0.005 H				190	X	2700	14	13100	15000	X	142	
TRIFLURALIN	1582-09-8	0.0075 I	0.0077 I	0.0075 Ir	0.0077 Ir	720		4	2,5,6,7				139	
TRIMETHYLBENZENE, 1,3,4- (TRIMETHYLBENZENE, 1,2,4-)	95-63-6	0.05 N		0.0017 N		2,200	X	56	1	13100	15000	X	169	4.50
TRIMETHYLBENZENE, 1,3,5-	108-67-8	0.05 I		0.0017 N		660	X	48.9	1	13100	15100	X	164.7	
TRINITROTOLUENE, 2,4,6-	118-96-7	0.0005 I	0.03 I			1		100	2				240	
VINYL ACETATE	108-05-4	1 I		0.0571 I		2.8	X	20000	1	13200	15000	X	73	
VINYL BROMIDE (BROMOETHENE)	593-60-2	0.000857 Ir	0.11 Hr	0.000857 I	0.11 H	150		4180	12				15.8	0.09
VINYL CHLORIDE	75-01-4	0.003 I	1.5 I	0.029 I	0.03 I	10	X	2700	1	13200	15000	X	-13	0.09
WARFARIN	81-81-2	0.0003 I		0.0003 Ir		910		17	4				356	4.50
XYLENES (TOTAL)	1330-20-7	2 I		0.12 D		350	X	175	13	13100	15000	X	140	0.69
ZINEB	12122-67-7	0.05 I				19		10	4					

[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
r = route-to-route extrapolation

TABLE 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES

B. Inorganic Regulated Substances

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d)-1	RfDi (mg/kg-d)	CSFi (mg/kg-d)-1	Kd
ALUMINUM	7429-90-5	1 N		0.001 N		
ANTIMONY	7440-36-0	0.0004 I		0.0004 Ir		45
ARSENIC	7440-38-2	0.0003 I	1.5 I	0.0003 Ir	15 I	29
BARIUM AND COMPOUNDS	7440-39-3	0.07 I		0.0001 H		41
BERYLLIUM	7440-41-7	0.002 I		0.00000571 Ir	8.4 I	790
BORON AND COMPOUNDS	7440-42-8	0.09 I		0.0057 H		
CADMIUM	7440-43-9	0.0005 I	0.38 C	0.0005 Ir	6.3 I	75
CHROMIUM III	16065-83-1	1.5 I				1800000
CHROMIUM VI	18540-29-9	0.003 I	0.19 C	0.00003 I	42 I	19
COBALT	7440-48-4	0.02 N		0.000005 D		
COPPER	7440-50-8	0.0371 H				360
CYANIDE, TOTAL	57-12-5	0.02 I		0.02 Ir		9.9
IRON	7439-89-6	0.3 N		0.3 Nr		
LEAD	7439-92-1		0.0085 C		0.042 C	890
MANGANESE	7439-96-5	0.14 I		0.0000143 I		
MERCURY	7439-97-6	0.0003 M		0.000086 I		52
NICKEL	7440-02-0	0.02 I		0.0000571 D	0.84 Is	65
SELENIUM	7782-49-2	0.005 I		0.005 Ir		5
SILVER	7440-22-4	0.005 I		0.005 Ir		8.3
THALLIUM	7440-28-0	0.00007 I		0.00007 Ir		71
TIN	7440-31-5	0.6 H		0.6 Hr		
VANADIUM	7440-62-2	0.007 H		0.000057 D		1000
ZINC	7440-66-6	0.3 I		0.3 Ir		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)
M = EPA Drinking Water Regulations and Health Advisories
N = EPA NCEA Provisional Values
r = route-to-route extrapolation

TABLE 6—THRESHOLD OF REGULATION COMPOUNDS

REGULATED SUBSTANCE	CASRN	ALL AQUIFER GROUND-WATER 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	64197	5	100	100	100	0.5
ACETIC ANHYDRIDE	108247	5	100	100	100	0.5
AMYL ACETATE, N-	628637	5	100	100	100	0.5
AMYL ACETATE, SEC-	626380	5	100	100	100	0.5
ANTU (ALPHA-NAPHTHYLTHIOUREA)	86884	5	100	100	100	0.5
AZINPHOS-METHYL (GUTHION)	86500	5	100	100	100	0.5
BETA PROPIOLACTONE	57578	5	100	100	100	0.5
BIS(2-CHLOROETHOXY)METHANE	111911	5	100	100	100	0.5
BROMOPHENYL PHENYL ETHER, 4-	101553	5	100	100	100	0.5
BUTYL ACETATE, N-	123864	5	100	100	100	0.5
BUTYL ACETATE, SEC-	105464	5	100	100	100	0.5
BUTYL ACETATE, TERT-	540885	5	100	100	100	0.5
BUTYLAMINE, N-	109739	5	100	100	100	0.5
CALCIUM CHROMATE	13765190	5	100	100	100	0.5
CALCIUM CYANAMIDE	156627	5	100	100	100	0.5
CARBONYL FLUORIDE	353504	5	100	100	100	0.5
CATECHOL	120809	5	100	100	100	0.5
CHLOROACETALDEHYDE	107200	5	100	100	100	0.5
CHLOROETHYL VINYL ETHER, 2-	110-75-8	5	100	100	100	0.5
CHLOROPHENYL PHENYL ETHER, 4-	7005723	5	100	100	100	0.5
CYCLOHEXANE	110827	5	100	100	100	0.5
DECABORANE	17702419	5	100	100	100	0.5
DIBENZOFURAN	132649	5	100	100	100	0.5
DICHLORO-2-BUTENE, TRANS-1,3-	110576	5	100	100	100	0.5
DIETHANOLAMINE	111422	5	100	100	100	0.5
DIETHYLAMINE	109897	5	100	100	100	0.5
DIGLYCIDYL ETHER (DGE)	2238075	5	100	100	100	0.5
DIMETHYL PHTHALATE	131113	5	100	100	100	0.5
DIMETHYL SULFATE	77781	5	100	100	100	0.5
DIMETHYLPHENETHYLAMINE, ALPHA, ALPHA-	122098	5	100	100	100	0.5
DINITRO-O-CRESOL, 4,6-	534521	5	100	100	100	0.5
DIOXATHION	78342	5	100	100	100	0.5
ETHYL METHANESULFONATE	62500	5	100	100	100	0.5

TABLE 6—THRESHOLD OF REGULATION COMPOUNDS (Continued)

REGULATED SUBSTANCE	CASRN	ALL AQUIFER GROUND-WATER 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	
ETHYLAMINE	75047	5	100	100	100	0.5
ETHYLENE CHLORHYDRIN	107073	5	100	100	100	0.5
FAMPHUR	52857	5	100	100	100	0.5
FENSULFOTHION	115902	5	100	100	100	0.5
HEXACHLOROPROPENE	1888717	5	100	100	100	0.5
HEXANONE, 2- (METHYL N-BUTYL KETONE)	591786	5	100	100	100	0.5
IODOMETHANE	74884	5	100	100	100	0.5
ISOAMYL ACETATE	123922	5	100	100	100	0.5
ISOBUTYL ACETATE	110190	5	100	100	100	0.5
ISODRIN	465736	5	100	100	100	0.5
ISOPHORONE DIISOCYANATE	4098719	5	100	100	100	0.5
ISOSAFROLE	120581	5	100	100	100	0.5
LITHIUM	7439932	5	100	100	100	0.5
LITHIUM HYDRIDE	7580678	5	100	100	100	0.5
MANGANESE CYCLOPENTADIENYL TRICARBONYL	12079651	5	100	100	100	0.5
METHYL HYDRAZINE	60344	5	100	100	100	0.5
METHYL ISOAMYL KETONE	110123	5	100	100	100	0.5
METHYL ISOCYANATE	624839	5	100	100	100	0.5
METHYL MERCAPTAN	74931	5	100	100	100	0.5
METHYLAMINE	74895	5	100	100	100	0.5
METHYLCHLOROPHENOXYACETIC ACID (MCPA)	94749	5	100	100	100	0.5
MEVINPHOS	7786347	5	100	100	100	0.5
MONOCROTOPHOS	6923224	5	100	100	100	0.5
NAPHTHOQUINONE, 1,4-	130154	5	100	100	100	0.5
NITRIC ACID	7697372	5	100	100	100	0.5
NITROQUINOLINE-1-OXIDE, 4-	56575	5	100	100	100	0.5
OSMIUM TETROXIDE	20816120	5	100	100	100	0.5
PENTABORANE	19624227	5	100	100	100	0.5
PENTACHLOROETHANE	76017	5	100	100	100	0.5
PERCHLOROMETHYL MERCAPTAN	594423	5	100	100	100	0.5
PHENYL MERCAPTAN	108985	5	100	100	100	0.5
PICOLINE, 2-	109068	5	100	100	100	0.5
PROPANOL, 1-	71238	5	100	100	100	0.5

TABLE 6—THRESHOLD OF REGULATION COMPOUNDS (Continued)

REGULATED SUBSTANCE	CASRN	ALL AQUIFER GROUND-WATER 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	
PROPANOL, 2- (ISOPROPYL ALCOHOL)	67630	5	100	100	100	0.5
PROPIONIC ACID	79094	5	100	100	100	0.5
PROPIONITRILE (ETHYL CYANIDE)	107120	5	100	100	100	0.5
PROPYLENE IMINE	75558	5	100	100	100	0.5
PYRETHRUM	8003347	5	100	100	100	0.5
QUINONE (p-BENZOQUINONE)	106514	5	100	100	100	0.5
RESORCINOL	108463	5	100	100	100	0.5
SELENIUM HEXAFLUORIDE	7783791	5	100	100	100	0.5
SODIUM BISULFITE	7631905	5	100	100	100	0.5
SULFIDE	18496258	5	100	100	100	0.5
SULFUR MONOCHLORIDE	10025679	5	100	100	100	0.5
SULFURIC ACID	7664939	5	100	100	100	0.5
TELLURIUM	13494809	5	100	100	100	0.5
TELLURIUM HEXAFLUORIDE	7783804	5	100	100	100	0.5
TEPP (TETRAETHYL PYROPHOSPHATE)	107493	5	100	100	100	0.5
TETRAHYDROFURAN	109999	5	100	100	100	0.5
TETRANITROMETHANE	509148	5	100	100	100	0.5
THIONAZIN	297972	5	100	100	100	0.5
TRIETHYLAMINE	121448	5	100	100	100	0.5
TRIETHYLPHOSPHOROTHIOATE, O,O,O-	126681	5	100	100	100	0.5
TRINITROGLYCEROL (NITROGLYCERIN)	55630	5	100	100	100	0.5

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

TABLE 8
CONSTITUENTS OF POTENTIAL ECOLOGICAL CONCERN

METALS

Arsenic III
Arsenic V
Barium
Beryllium
Cadmium
Chromium III
Chromium VI
Cobalt
Copper
Iron
Lead
Manganese
Mercury, inorganic
Mercury, methyl
Molybdenum
Nickel
Selenium
Vanadium
Zinc
Cyanide

ORGANICS

Acenaphthene
Aldrin *
Benzene
Benzo(a)pyrene
Biphenyl
Bis(2-ethylhexyl)phthalate
Bromophenyl phenyl ether,4-
Butylbenzyl phthalate
Chlordane *
Chlorobenzene
DDT (and metabolites)
Diazinon
Dibenzofuran
Dichlorobenzene,1,2-

ORGANICS

Dichlorobenzene,1,3-
Dichlorobenzene,1,4-
Dichlorobenzene,1,1-
Dieldrin
Diethyl phthalate
Di-n-butyl phthalate
Endosulfan (mixed isomers)
Endosulfan, alpha
Endosulfan, beta
Endrin
Ethylbenzene
Fluoranthene
Fluorene
Heptachlor
Hexachloroethane
Hexachlorocyclohexane (Lindane)
Kepone *
Malathion
Methoxychlor
Mirex *
Naphthalene
Pentachlorobenzene
Pentachlorophenol
Polynuclear aromatic hydrocarbons
Polychlorinate biphenyls (PCB)
Phenanthrene
Pyrene
Tetrachloroethane,1,1,2,2-
Tetrachloroethylene
Tetrachloromethane
Toluene
Toxaphene
Tribromomethane
Trichlorobenzene,1,2,4-
Trichloroethane,1,1,1-
Trichloroethylene
Xylenes

[Pa.B. Doc. No. 01-2102. Filed for public inspection November 21, 2001, 9:00 a.m.]

Title 58—RECREATION

FISH AND BOAT COMMISSION

[58 PA. CODE CH. 63]

Marking Fish

The Fish and Boat Commission (Commission) by this order amends Chapter 63 (relating to general fishing regulations). The Commission is publishing this final-form rulemaking under the authority of 30 Pa.C.S. (relating to the Fish and Boat Code) (code). The final-form rulemaking relates to tagging, branding, marking or finclipping fish.

A. *Effective Date*

The final-form rulemaking will go into effect on January 1, 2002, or upon publication of an order adopting the regulation in the *Pennsylvania Bulletin*, whichever occurs later.

B. *Contact Person*

For further information on the final-form rulemaking, contact Laurie E. Shepler, Assistant Counsel, (717) 705-7815, P. O. Box 67000, Harrisburg, PA 17106-7000. This final-form rulemaking is available electronically through the Commission's website (http://www.fish.state.pa.us).

C. *Statutory Authority*

The final-form rulemaking is published under the statutory authority of section 2102 of the code (relating to rules and regulations).

D. *Purpose and Background*

The final-form rulemaking is designed to update, modify and improve the Commission's regulations pertaining to fishing. The specific purpose of the final-form rulemaking is described in more detail under the summary of regulation.

E. *Summary of Regulation*

Tagging, branding, marking and finclipping have been used to identify fish for a variety of reasons by fisheries scientists, angling organizations, commercial establishments and even individual anglers for years. Reasons for "marking" fish have been equally diverse from well designed studies aimed at answering a specific question to a means of dispersing awards or simply identifying repeat catches at an angler's favorite fishing spots. Devices for "marking" fish go from sophisticated radio transmitters to crude home-made creations, sometimes as

plain as a bent paperclip inserted through the dorsal fin of a trout. Tags are readily available from a variety of commercial sources, not only those in the fisheries supply business but poultry and livestock suppliers as well. In addition, tags and tagging kits can be purchased through popular fishing tackle catalogs. Each year, Commission staff encounter anglers who have caught fish with tags often with no labels as to who applied the tag or a means to learn about the tagging.

Generally speaking, marked fish, particularly those with a skin piercing tag, are not better off from the activity. Commission biologists in conducting field studies requiring the marking of fish resort to tagging and fin clipping only as a last resort. These studies also must take into account mortality due to marking and behavior responses that may impact study results. Tagging efforts by anglers often are at the worst time of the year for fish as warming water temperatures increase the likelihood that tagged fish may become infected due to the placement of tags and entry wounds.

When asked by the general public about tagging fish, Commission staff can only attempt to persuade the requestor to not do any, due not only to the limited information that might come from the effort but the likelihood of damage and even death to tagged fish. Given the Commission's stewardship role in regard to fish and other aquatic life, the Commission has adopted a new regulation that prohibits tagging and other forms of marking except under certain conditions. The Commission has adopted the new regulation as proposed.

F. *Paperwork*

The final-form rulemaking will not increase paperwork and will create no new paperwork requirements.

G. *Fiscal Impact*

The final-form rulemaking will have no adverse fiscal impact on the Commonwealth or its political subdivisions. The final-form rulemaking will impose no new costs on the private sector or the general public.

H. *Public Involvement*

A notice of proposed rulemaking was published at 31 Pa.B. 3411 (June 30, 2001). The Commission did not receive any public comments concerning the proposal.

Finding

The Commission finds that:

(1) Public notice of intention to adopt the amendment adopted by this order has been given under sections 201 and 202 of the act of July 31, 1968 (P. L. 769, No. 240) (45 P. S. §§ 1201 and 1202) and the regulations promulgated thereunder, 1 Pa. Code §§ 7.1 and 7.2.

(2) A public comment period was provided, and no comments were received.

(3) The adoption of the regulation of the Commission in the manner provided in this order is necessary and appropriate for administration and enforcement of the authorizing statutes.

Order

The Commission, acting under the authorizing statutes, orders that:

(a) The regulations of the Commission, 58 Pa. Code Chapter 63, are amended by adding § 63.45 to read as set forth in 31 Pa.B. 3411.

(b) The Executive Director will submit this order and 31 Pa.B. 3411 to the Office of Attorney General for approval as to legality as required by law.

(c) The Executive Director shall certify this order and 31 Pa.B. 3411 and deposit them with the Legislative Reference Bureau as required by law.

(d) This order shall take effect immediately upon publication in the *Pennsylvania Bulletin*.

PETER A. COLANGELO,
Executive Director

Fiscal Note: Fiscal Note 48A-120 remains valid for the final adoption of the subject regulation.

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