TITLE 18. ENVIRONMENTAL QUALITY

CHAPTER 7. DEPARTMENT OF ENVIRONMENTAL QUALITY REMEDIAL ACTION

Editor's Note: The Office of the Secretary of State publishes all Code Chapters on white paper (01-4).

Editor's Note: The proposed summary action amending the heading of Chapter 7 was remanded by the Governor's Regulatory Review Council (August 4, 1999), which revoked the interim effectiveness of the change as of January 22, 1999. The heading of Chapter 7 before the proposed summary action has been restored (Supp. 99-3).

Editor's Note: Chapter 7 heading repealed; new heading adopted; both by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4).

Editor's Note: At the request of the Department of Environmental Quality, interim rules removed in Articles 1 & 2 (Supp. 97-3) by the emergency expiring were reinstated. The Department determined these emergency rules were in effect until permanent rules were adopted pursuant to Laws 1995, Ch. 232, § 5, and Laws 1996, Chapter 151, § 9. Under these Laws the Department was required to "adopt risk based remediation standards formally by rule pursuant to A.R.S. § 49-152(A) ... no later than August 1, 1997."; and the "interim standards adopted pursuant to A.R.S. § 49-152(A)(1)(a) and (b) ... as emergency rules shall remain in effect until the formally established rules are adopted." The interim rules have not been reprinted because permanent final rules have now been filed. Refer to Supp. 97-1 for interim emergency rules (Supp. 97-4).

Editor's Note: A Section of this Chapter was adopted under an exemption from the Arizona Administrative Procedure Act (A.R.S. Title 41, Chapter 6) pursuant to Laws 1997, Ch. 296, §§ 3(E) and (G), (10) and (11). Although exempt from certain provisions of the rule-making process, the Department was required to submit notice of proposed rulemaking with the Secretary of State for publication in the Arizona Administrative Register and conduct a public hearing (Supp. 97-3).

Editor's Note: Some Sections of Chapter 7 were exempt from the rulemaking process (Laws 1995, Ch. 232, § 5). However the Department was required to provide a notice of hearing and public hearing before adoption of the emergency rules. The emergency rules were approved by the Attorney General (Supp. 96-1). Editor's note added to clarify exemptions of emergency adoptions (Supp. 97-1).

ARTICLE 1. EXPIRED

Article 1, consisting of Section R18-7-110, expired under A.R.S. § 41-1056(E) at 8 A.A.R. 4298, effective August 31, 2002 (Supp. 02-3).

The proposed summary action renumbering Section R18-7-110 to R18-7-101 was remanded by the Governor's Regulatory Review Council (August 4, 1999), which revoked the interim effectiveness of the changes as of January 22, 1999. The numbering of Article 1 before the proposed summary action has been restored (Supp. 99-3).

Article 1, consisting of Sections R18-7-101 thru R18-7-109 repealed; R18-7-110 renumbered to R18-7-101; both by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4).

Article 1 consisting of Sections R18-7-101 through R18-7-110 adopted as permanent rules effective December 22, 1987.

Article 1 consisting of Sections R18-7-101 through R18-7-110 adopted as an emergency effective September 17, 1987 pursuant to A.R.S. § 41-1026, valid for only 90 days. Emergency expired.

Article 1 consisting of Sections R18-7-101 through R18-7-110 adopted as an emergency effective June 17, 1987 pursuant to A.R.S. § 41-1026, valid for only 90 days. Emergency expired.

Article 1 consisting of Sections R9-20-102, R9-20-104 through R9-20-106 and R9-20-111 adopted as an emergency effective March 6, 1987 pursuant to A.R.S. § 41-1026, valid for only 90 days. Emergency expired.

Article 1 consisting of Sections R9-20-102, R9-20-104 through R9-20-106 and R9-20-111 adopted as an emergency effective December 5, 1986 pursuant to A.R.S. § 41-1003, valid for only 90 days. Emergency expired.

Section
R18-7-101. Repealed
R18-7-102. Repealed
R18-7-103. Repealed
R18-7-104. Repealed
R18-7-105. Repealed
R18-7-106. Repealed
R18-7-107. Repealed
R18-7-108. Repealed
R18-7-109. Repealed
R18-7-110. Expired

ARTICLE 2. SOIL REMEDIATION STANDARDS

Article 2, consisting of interim Sections R18-7-201 through R18-7-209 and Appendices A through C, replaced by new permanent Sections, adopted effective December 4, 1997. Appendix D emergency expired (Supp. 97-4).

Article 2, consisting of Sections R18-7-201 through R18-7-209 and Appendices A through D, removed in Supp. 97-3 reinstated at the request of the Department. Refer to Supp. 97-1 for interim rules. Introduction stating the emergency expired has been removed for clarity (Supp. 97-4).

Article introduction revised below to clarify exemptions of emergency adoption (Supp. 97-1).

Article 2, consisting of Sections R18-7-201 through R18-7-209 and Appendices A through D, adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5. The Sections are in effect until permanent rules are adopted and in place by August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1).

Section
R18-7-201. Definitions
R18-7-202. Applicability
R18-7-203. Remediation Standards
R18-7-204. Background Remediation Standards
R18-7-205. Pre-determined Remediation Standards
R18-7-206. Site-specific Remediation Standards
R18-7-207. Site-specific Remediation Standards for Nitrates and Nitrites

ARTICLE 3. PROSPECTIVE PURCHASER AGREEMENT

Article 3, consisting of Section R18-7-301, adopted effective January 14, 1997 (Supp. 97-1).

ARTICLE 4. REPEALED

Article 4, consisting of Section R18-7-401, repealed by final rulemaking at 15 A.A.R. 232, effective March 7, 2009 (Supp. 09-1).

Article 4, consisting of Section R18-7-401, repealed. New Article 4, consisting of Section R18-7-401, adopted effective October 21, 1998 (Supp. 98-1).

Article 4, consisting of Section R18-7-401, adopted under an exemption from A.R.S. Title 41, Chapter 6 effective August 5, 1997 (Supp. 97-3).

ARTICLE 5. VOLUNTARY REMEDIATION PROGRAM

Article 5, consisting of Sections R18-7-501 through R18-5-507, adopted by exempt rulemaking at 7 A.A.R. 814, effective February 9, 2001 (Supp. 01-1).

ARTICLE 6. DECLARATION OF ENVIRONMENTAL USE RESTRICTION FEE

Article 6, consisting of R18-7-601 through R18-7-606, made by exempt rulemaking at 10 A.A.R. 573, effective February 20, 2004 (Supp. 04-1).

ARTICLE 1. EXPIRED

Article 1, consisting of Section R18-7-110, expired under A.R.S. § 41-1056(E) at 8 A.A.R. 4298, effective August 31, 2002 (Supp. 02-3).

R18-7-101. Repealed

Historical Note

Adopted as an emergency effective December 5, 1986, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 86-6). Emergency expired. Adopted, without change, as an emergency effective March 6, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-1). Emergency expired. Former Section R9-20-102 was renumbered as Section R18-7-101, amended and readopted as an emergency effective June 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-2). Emergency expired. Readopted without change as an emergency effective September 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-3). Emergency expired. Amended and adopted as a permanent rule effective December 22, 1987 (Supp. 87-4). R18-7-101 repealed; new Section renumbered from R18-7-110; both by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4). Summary renumbering action revoked; former numbering of Sections R18-7-101 and R18-7-110 restored effective January 22, 1999. Adopted summary rules filed August 10, 1999; interim effective date of January 22, 1999 now the permanent effective date (Supp. 99-3).

R18-7-102. Repealed

Historical Note

Adopted as an emergency effective December 5, 1986, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 86-6). Emergency expired. Amended and adopted as an emergency effective March 6, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-1). Emergency expired. Former Section R9-20-104 was renumbered as Section R18-7-102, amended and readopted as an emergency effective June 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-2). Emergency expired. Readopted without change as an emergency effective September 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-3). Emergency expired. Amended and adopted as a permanent rule effective December 22, 1987 (Supp. 87-4). R18-7-102 repealed by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4). Adopted summary rules filed August 10, 1999; interim effective date of January 22, 1999 now the permanent effective date (Supp. 99-3).

R18-7-103. Repealed

Historical Note

Adopted as an emergency effective June 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-2). Emergency expired. Readopted without change as an emergency effective September 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-3). Emergency expired. Amended and adopted as a permanent rule effective December 22, 1987 (Supp. 87-4). R18-7-103 repealed by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4). Adopted summary rules filed August 10, 1999; interim effective date of January 22, 1999 now the permanent effective date (Supp. 99-3).

R18-7-104. Repealed

Historical Note

Adopted as an emergency effective June 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-

2). Emergency expired. Readopted without change as an emergency effective September 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-3). Emergency expired. Amended and adopted as a permanent rule effective December 22, 1987 (Supp. 87-4). R18-7-104 repealed by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4). Adopted summary rules filed August 10, 1999; interim effective date of January 22, 1999 now the permanent effective date (Supp. 99-3).

R18-7-105. Repealed

Historical Note

Adopted as an emergency effective December 5, 1986, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 86-6). Emergency expired. Amended and adopted as an emergency effective March 6, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-1). Emergency expired. Former Section R9-20-105 was renumbered as Section R18-7-105, amended and readopted as an emergency effective June 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-2). Emergency expired. Readopted without change as an emergency effective September 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-3). Emergency expired. Amended and adopted as a permanent rule effective December 22, 1987 (Supp. 87-4). R18-7-105 repealed by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4). Adopted summary rules filed August 10, 1999; interim effective date of January 22, 1999 now the permanent effective date (Supp. 99-3).

R18-7-106. Repealed

Historical Note

Adopted as an emergency effective December 5, 1986, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 86-6). Emergency expired. Amended and adopted as an emergency effective March 6, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-1). Emergency expired. Former Section R9-20-106 was renumbered as Section R18-7-106, amended and readopted as an emergency effective June 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-2). Emergency expired. Readopted without change as an emergency effective September 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-3). Emergency expired. Amended and adopted as a permanent rule effective December 22, 1987 (Supp. 87-4). R18-7-106 repealed by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4). Adopted summary rules filed August 10, 1999; interim effective date of January 22, 1999 now the permanent effective date (Supp. 99-3).

R18-7-107. Repealed

Historical Note

Adopted as an emergency effective June 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-2). Emergency expired. Readopted without change as an emergency effective September 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-3). Emergency expired. Amended and adopted as a permanent rule effective December 22, 1987 (Supp. 87-4). R18-7-107 repealed by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4). Adopted summary rules filed August 10, 1999; interim effective date of January 22, 1999 now the permanent effective date (Supp. 99-3).

R18-7-108. Repealed

Historical Note

Adopted as an emergency effective June 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-2). Emergency expired. Readopted without change as an emergency effective September 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-3). Emergency expired. Amended and adopted as a permanent rule effective December 22, 1987 (Supp. 87-4). R18-7-108 repealed by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4). Adopted summary rules filed August 10, 1999; interim effective date of January 22, 1999 now the permanent effective date (Supp. 99-3).

Editor's Note: Emergency amendment R18-7-109, removed in Supp. 97-3, was reinstated at the request of the Department. Refer to Supp. 97-1 for emergency rule. This Section was subsequently amended under the regular rulemaking process effective (Supp. 97-4). This Section was repealed by summary action (Supp. 98-4).

R18-7-109. Repealed

Historical Note

Adopted as an emergency effective December 6, 1986, pursuant to A.R.S. § 41-1003 valid for only 90 days. Emergency expired. Amended and adopted as an emergency effective March 6, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-1). Emergency expired. Former Section R9-20-111 was renumbered as Section R18-7-109, amended and readopted as an emergency effective June 18, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-2). Emergency expired. Readopted without change as an emergency effective September 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-3). Emergency expired. Amended and adopted as a permanent rule effective December 22, 1987 (Supp. 87-4). Section amended by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency amendment reinstated at the request of the Department (see Supp. 97-1); historical note from Supp. 97-3 stating emergency expired removed for clarity. Amendment adopted permanently effective December 4, 1997 (Supp. 97-4). R18-7-109 repealed by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4). Adopted summary rules filed August 10, 1999; interim effective date of January 22, 1999 now the permanent effective date (Supp. 99-3).

R18-7-110. Expired

Historical Note

Adopted as an emergency effective June 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-2). Emergency expired. Readopted without change as an emergency effective September 17, 1987, pursuant to A.R.S. § 41-1026, valid for only 90 days (Supp. 87-3). Emergency expired. Amended and adopted as a permanent rule effective December 22, 1987 (Supp. 87-4). R18-7-110 renumbered by summary action with an interim effective date of January 22, 1999; filed in the Office of the Secretary of State December 29, 1998 (Supp. 98-4). Summary renumbering action revoked; former numbering of Sections R18-7-101 and R18-7-110 restored effective January 22, 1999 (Supp. 99-3). Section expired under A.R.S. § 41-1056(E) at 8 A.A.R. 4298, effective August 31, 2002 (Supp. 02-3).

Editor's Note: Emergency adopted Article 2 removed in Supp. 97-3, was reinstated at the request of the Department. Refer to Supp. 97-1 for emergency Sections. New Sections were subsequently adopted under the regular rulemaking process (Supp. 97-4).

ARTICLE 2. SOIL REMEDIATION STANDARDS

R18-7-201. Definitions

In addition to the definitions provided in A.R.S. §§ 49-151 and 49-152, the following definitions apply in this Article:

1. "Aquifer Protection Permit Program" means the system of requirements prescribed in A.R.S. Title 49, Chapter 2, Article 3 and A.A.C. Title 18, Chapter 9, Articles 1 through 7.
2. "Background" means a concentration of a naturally occurring contaminant in soils.
3. "Carcinogen" or "carcinogenic" means the potential of a contaminant to cause cancer in humans as determined by lines of evidence in accordance with a narrative classification in "Guidelines for Carcinogen Risk Assessment", EPA/630/P-03/001F, March 2005, (and no future editions), which is incorporated by reference. "Guidelines for Carcinogen Risk Assessment" is available from ADEQ and at http://cfpub.epa.gov/ncea/raf/recordisplay.cfm?deid=116283.
4. "Child care facility" means any permanent facility on a property or portion of property in which care or supervision is provided for children below the age of 18, unaccompanied by a parent or guardian, for periods of less than 24 hours per day. Child care facility does not include private homes or facilities that care for fewer than five children.
5. "Contact" means exposure to a contaminant through ingestion, inhalation, or dermal absorption.
6. "Contaminant" means a substance regulated by the programs listed in R18-7-202(A) or R18-7-202(B) or defined in A.R.S. § 49-171(2).
7. "Department" means the Arizona Department of Environmental Quality.
8. "Deterministic risk assessment methodology" means a site-specific human health risk assessment, performed using a specific set of input variables, exposure assumptions, and toxicity criteria, represented by point estimates for each receptor evaluated, which results in a point estimate of risk.
9. "Declaration of Environmental Use Restriction" or "DEUR" means a restrictive covenant as described in A.R.S. § 49-152.
10. "Ecological community" means an assemblage of populations of different species within a specified location in space and time.
11. "Ecological receptor" means a specific ecological community, population, or individual organism, protected by federal or state laws and regulations, or a local population that provides an important natural or economic resource, function, and value.
12. "Ecological risk assessment" means a scientific evaluation of the probability of an adverse effect to ecological receptors from exposure to specific types and concentrations of contaminants. An ecological risk assessment contains four components: identification of potential contaminants; an exposure assessment; a toxicity assessment; and a risk characterization.
13. "Engineering control" means a remediation method, such as a barrier or cap, which is used to prevent or minimize exposure to contaminants, and includes technologies that reduce the mobility or migration of contaminants.
14. "Excess lifetime cancer risk" means the increased risk of developing cancer above the background cancer occurrence levels due to exposure to contaminants.
15. "Exposure" means contact between contaminants and organisms.
16. "Exposure pathway" means the course a contaminant takes from a source to an exposed organism. Each exposure pathway includes a source or release from a source, an exposure point, and an exposure route. If the exposure point differs from the source, transport/exposure media (that is, air, water) are also included.
17. "Exposure point" means a location of potential contact between a contaminant and an organism.
18. "Exposure route" means the way a contaminant comes into contact with an organism (that is, by ingestion, inhalation, or dermal contact).
19. "Groundwater" means water in an aquifer as defined in A.R.S. § 49-201(2).
20. "Hazard Index" means the sum of hazard quotients for multiple substances and/or multiple exposure pathways, or the sum of hazard quotients for chemicals acting by a similar mechanism and/or having the same target organ.
21. "Hazardous Waste Management Program" means the system of requirements prescribed in A.R.S. Title 49, Ch. 5, Article 2 and 18 A.A.C. 8, Article 2.
22. "Hazard quotient" means the value which quantifies noncarcinogenic risk for one chemical for one receptor population for one exposure pathway over a specified exposure period. The hazard quotient is equal to the ratio of a chemical-specific intake to the reference dose.
23. "Imminent and substantial endangerment to the public health or the environment" has the meaning found in A.R.S. § 49-282.02(C)(1).
24. "Institutional control" means a legal or administrative tool or action taken to reduce the potential for exposure to contaminants.
25. "Letter of Completion" means a Departmental statement that indicates whether the property in question has met the soil remediation standards in this Article.
26. "Migrate" or "migration" means the movement of contaminants from the point of release, emission, discharge, or spillage: through the soil profile; by volatilization from soil to air and subsequent dispersion to air; and by water, wind, or other mechanisms.
27. "Non-carcinogen" means a contaminant that has the potential upon exposure to an individual to cause adverse health effects other than cancer.

28. "Non-residential site-specific remediation level" means a level of contaminants remaining in soil after remediation that results in a cumulative excess lifetime cancer risk between 1 x 10^{-6} and 1 x 10^{-4} and a Hazard Index no greater than 1 based on non-residential exposure assumptions.
29. "Nuisance" means the activities or conditions that may be subject to A.R.S. § 49-141.
30. "Person" means any public or private corporation, company, partnership, firm, association, or society of persons, the federal government and any of its departments or agencies, this state or any of its agencies, departments, political subdivisions, counties, towns, municipal corporations, as well as a natural person.
31. "Population" means an aggregate of individuals of a species within a specified location in space and time.
32. "Probabilistic risk assessment methodology" means a site-specific human health risk assessment, performed using probability distributions of input variables and exposure assumptions that take into account the variability and uncertainty of these values, which results in a range or distribution of possible risk estimates.
33. "Reasonable Maximum Exposure" or "RME" means the highest human exposure case that is greater than the average, but is still within the range of possible exposures to humans at a site.
34. "Remediate" or "remediation" has the meaning found in A.R.S. § 49-151.
35. "Reference dose" means the toxicity factor expressed as a threshold level in units of (mg/kg-day) at which non-cancer effects are not expected to occur.
36. "Repository" means the Department's database, established under A.R.S. § 49-152(E), from which the public may view information pertaining to remediation projects.
37. "Residential site-specific remediation level" means a level of contaminants remaining in the soil after remediation that results in a cumulative excess lifetime cancer risk between 1 x 10^{-6} and 1 x 10^{-4} and a Hazard Index no greater than 1 based on residential exposure assumptions.
38. "Residential use" has the meaning found in A.R.S. § 49-151.
39. "School" means any public institution under the jurisdiction of the Arizona State Board of Education or the Arizona State Board for Charter Schools, or any non-public institution, established for the purposes of offering instruction to children attending any grade from preschool through grade 12.
40. "Site-specific human health risk assessment" means a scientific evaluation of the probability of an adverse effect to human health from exposure to specific types and concentrations of contaminants. A site-specific human health risk assessment contains four components: identification of potential contaminants; an exposure assessment; a toxicity assessment; and a risk characterization.
41. "Soil" means all earthen materials, including moisture and pore space contained within earthen material, located between the land surface and groundwater including sediments and unconsolidated accumulations produced by the physical and chemical disintegration of rocks.
42. "Soil remediation level" or "SRL" means a pre-determined risk-based standard based upon the total contaminant concentration in soil, developed pursuant to A.R.S. § 49-152(A)(1) and listed in Appendix A or, as applicable, in Appendix B.
43. "Solid Waste Management Program" means the system of requirements prescribed in A.R.S. Title 49, Ch. 4, and the rules adopted under those statutes.
44. "Special Waste Management Program" means the system of requirements prescribed in A.R.S. Title 49, Ch. 4, Article 9 and 18 A.A.C. 13, Articles 13 and 16.
45. "Underground Storage Tank Program" or "UST Program" means the system of requirements prescribed in A.R.S. Title 49, Ch. 6, Article 1 and 18 A.A.C. 12.
46. "Water Quality Assurance Revolving Fund" or "WQARF" means the system of requirements prescribed in A.R.S. Title 49, Ch. 2, Article 5 and 18 A.A.C. 16.

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency amendment reinstated at the request of the Department (see Supp. 97-1); historical note from Supp. 97-3 stating emergency expired removed for clarity. Section R18-7-201 adopted permanently effective December 4, 1997, replacing emergency rule (Supp. 97-4). Amended by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

R18-7-202. Applicability

A. This Article applies to a person legally required to conduct soil remediation by any of the following regulatory programs administered by the Department:
1. The Aquifer Protection Permit Program.
2. The Hazardous Waste Management Program.
3. The Solid Waste Management Program.
4. The Special Waste Management Program.
5. The Underground Storage Tank Program.
6. The Water Quality Assurance Revolving Fund.
7. Any other program under A.R.S. Title 49 that regulates soil remediation.

B. This Article also applies to a person who is not legally required to conduct soil remediation, but who chooses to do so under any program administered by the Department.

C. The requirements of this Article apply in addition to any specific requirements of the programs described in subsections (A) or (B).

D. This Article is limited to soil remediation.

E. A person who is remediating a site shall comply with the numeric soil remediation standards identified in either Appendix A or Appendix B if both of the following conditions are met. If either subsection (1) or subsection (2) is not met, a person who is remediating a site shall comply with the numeric soil remediation standards identified in Appendix A.
1. The site was characterized before May 5, 2007. A site is considered characterized when the laboratory analytical results of the soil samples delineating the nature, degree, and extent of soil contamination have been received by the person conducting the remediation.
2. The site was remediated or a risk assessment completed before May 5, 2010. A risk assessment or remediation is considered completed when site closure, that meets the conditions in R18-7-209, has been requested.

F. Nothing in this Article limits the Department's authority to establish more stringent soil remediation levels in response to:
1. A nuisance.
2. An imminent and substantial endangerment to the public health or the environment.

G. This Article does not apply to persons remediating soil to numeric soil remediation levels specified in the following documents and entered into, issued, or approved before May 5, 2007:
1. Orders of the Director;
2. Orders of any Court;
3. Work agreements approved by the Director pursuant to A.R.S. § 49-282.05;
4. Closure plans approved by the Director pursuant to R18-8-265;
5. Post-closure permits approved by the Director pursuant to R18-8-270;
6. Records of Decision approved by the Director pursuant to R18-16-410;
7. Records of Decision approved by the Director pursuant to R18-16-413; and
8. Records of Decision approved by the Director pursuant to 40 CFR 300.430(f)(5).

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency amendment reinstated at the request of the Department (see Supp. 97-1); historical note from Supp. 97-3 stating emergency expired removed for clarity. Section R18-7-202 adopted permanently effective December 4, 1997, replacing emergency rule (Supp. 97-4). Amended by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

R18-7-203. Remediation Standards

A. A person subject to this Article shall remediate soil so that any concentration of contaminants remaining in the soil after remediation is less than or equal to one of the following:
1. The background remediation standards prescribed in R18-7-204.
2. The pre-determined remediation standards prescribed in R18-7-205.
3. The site-specific remediation standards prescribed in R18-7-206.

B. A person who conducts a soil remediation based on the standards in R18-7-205, R18-7-206, R18-7-207 shall remediate soil so that any concentration of contaminants remaining in the soil after remediation does not:
1. Cause or threaten to cause a violation of Water Quality Standards prescribed in 18 A.A.C. 11. If the remediation level for a contaminant in the soil is not protective of aquifer water quality and surface water quality, the person shall remediate soil to an alternative soil remediation level that is protective of aquifer water quality and surface water quality.
2. Exhibit a hazardous waste characteristic of ignitability, corrosivity, or reactivity as defined in R18-8-261(A). If the remediation level for a contaminant in the soil results in leaving soils that exhibit a hazardous waste characteristic other than toxicity, the person shall remediate soil to an alternative soil remediation level such that the soil does not exhibit a hazardous waste characteristic other than toxicity.
3. Cause or threaten to cause an adverse impact to ecological receptors. If the Department determines that the remediation level for a contaminant in soil may impact ecological receptors based on the existence of ecological receptors and complete exposure pathways, the person shall conduct an ecological risk assessment. If the ecological risk assessment indicates that any concentration of contaminants remaining in the soil after remediation causes or threatens to cause an adverse impact to ecological receptors, the person shall remediate soil to an alternative soil remediation level, derived from the ecological risk assessment, that is protective of ecological receptors.

C. Soil vapor concentration may be used to estimate the total contaminant concentration in soil if the Department determines that the soil vapor concentration methodology will not be invalidated by the soil, hydrogeology, or other characteristics of the site.

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 59; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency amendment reinstated at the request of the Department (see Supp. 97-1); historical note from Supp. 97-3 stating emergency expired removed for clarity. Section R18-7-203 adopted permanently effective December 4, 1997, replacing emergency rule (Supp. 97-4). Amended by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

R18-7-204. Background Remediation Standards

A. A person may elect to remediate to a background concentration for a contaminant.

B. A person who conducts a remediation to a background concentration for a contaminant shall establish the background concentration using all of the following factors:
1. Site-specific historical information concerning land use.
2. Site-specific sampling of soils unaffected by a release, but having characteristics similar to those of the soils affected by the release.
3. Statistical analysis of background concentrations using the 95th percentile upper confidence limit.

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency amendment reinstated at the request of the Department (see Supp. 97-1); historical note from Supp. 97-3 stating emergency expired removed for clarity. Section R18-7-204 adopted permanently effective December 4, 1997, replacing emergency rule (Supp. 97-4). Amended by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

R18-7-205. Pre-determined Remediation Standards

A. A person may elect to remediate to the residential or non-residential soil remediation levels (SRLs) in Appendix A. If allowed under R18-7-202(E), a person may also elect to remediate to the residential or non-residential SRLs in Appendix B.

B. A person who conducts remediation pursuant to this Article shall remediate to the residential SRL on any property where there is residential use at the time remediation is completed.

C. A pre-determined contaminant standard established by federal law or regulation may be used for polychlorinated biphenyl cleanups regulated pursuant to the Toxic Substances Control

Act (TSCA) at 40 CFR 761.120 et seq., however, the Department has no regulatory authority to issue a Letter of Completion in TSCA-regulated cleanups.

D. A person who elects to utilize a residential or non-residential SRL for the following known human carcinogens shall remediate to a 1×10^{-6} excess lifetime cancer risk: benzene, benzidine, bis (chloromethyl) ether, chromium VI, diethylstilbestrol, direct black 38, direct blue 6, direct brown 95, nickel subsulfide, and vinyl chloride.

E. Except as provided below, a person who elects to remediate to a residential SRL may utilize a 1×10^{-5} excess lifetime cancer risk for any carcinogen other than a known human carcinogen. If the current or currently intended future use of the contaminated site is a child care facility or school where children below the age of 18 are reasonably expected to be in frequent, repeated contact with the soil, the person conducting remediation shall remediate to a 1×10^{-6} excess lifetime cancer risk.

F. For contaminants that exhibit both carcinogenic and non-carcinogenic effects, the numeric standard that is lower (more protective) shall apply.

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency amendment reinstated at the request of the Department (see Supp. 97-1); historical note from Supp. 97-3 stating emergency expired removed for clarity. Section R18-7-205 adopted permanently effective December 4, 1997, replacing emergency rule (Supp. 97-4). Amended by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

R18-7-206. Site-specific Remediation Standards

A. A person may elect to remediate to a residential or a non-residential site-specific remediation level derived from a site-specific human health risk assessment.

B. A person who conducts a remediation to a residential or a non-residential site-specific remediation level shall use one of the following site-specific human health risk assessment methodologies:

1. A deterministic methodology. If a deterministic methodology is used, reasonable maximum exposures shall be evaluated for future use scenarios.
2. A probabilistic methodology. If a probabilistic methodology is used, it shall be no less protective than the 95th percentile upper bound estimate of the distribution.
3. An alternative methodology commonly accepted in the scientific community. An alternative methodology is considered accepted in the scientific community if it is published in peer-reviewed literature, such as a professional journal or publication of standards of general circulation, and there is general consensus within the scientific community that the methodology is sound.

C. A person who conducts a remediation to a site-specific remediation level shall remediate to the residential site-specific remediation level on any property where there is residential use at the time remediation is completed.

D. A person conducting a remediation to a residential or a non-residential site-specific remediation level shall remediate the contaminants in soil to a Hazard Index no greater than 1 and a cumulative excess lifetime cancer risk from 1×10^{-6} to 1×10^{-4}. The following site-specific factors shall be evaluated when determining the cumulative excess lifetime cancer risk:

1. The presence of multiple contaminants.
2. The existence of multiple pathways of exposure.
3. The uncertainty of exposure.
4. The sensitivity of the exposed population.
5. Other program-related laws and regulations that may apply.

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency amendment reinstated at the request of the Department (see Supp. 97-1); historical note from Supp. 97-3 stating emergency expired removed for clarity. Section R18-7-206 adopted permanently effective December 4, 1997, replacing emergency rule (Supp. 97-4). Amended by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

R18-7-207. Site-specific Remediation Standards for Nitrates and Nitrites

A person who conducts remediation of nitrates or nitrites shall remediate to a site-specific remediation level pursuant to R18-7-203(B)(1), (2), and (3).

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency amendment reinstated at the request of the Department (see Supp. 97-1); historical note from Supp. 97-3 stating emergency expired removed for clarity. Section R18-7-207 adopted permanently effective December 4, 1997, replacing emergency rule (Supp. 97-4). Section repealed; new Section made by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

R18-7-208. Declaration of Environmental Use Restriction (DEUR)

A property owner who elects to leave contamination on a property that exceeds the applicable residential standard for the property under R18-7-205 or R18-7-206, or elects to use an institutional control or an engineering control to meet the requirements of R18-7-205, R18-7-206, or R18-7-207, shall record a DEUR pursuant to A.R.S. § 49-152 and comply with the related provisions of that statute and applicable rules.

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency amendment reinstated at the request of the Department (see Supp. 97-1); historical note from Supp. 97-3 stating emergency expired removed for clarity. Section R18-7-208 adopted permanently effective December 4, 1997, replacing emergency rule (Supp. 97-4). Former R18-7-208 renumbered to R18-7-209; new R18-7-208 made by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

R18-7-209. Letter of Completion or Alternative Closure Document

A. If a person requests a Letter of Completion or an alternative closure document, a person shall submit, at a minimum, the following information to the applicable Departmental program listed in R18-7-202(A) or described in R18-7-202(B):

1. A description of the actual activities, techniques, and technologies used to remediate soil at the site, including the legal mechanism in place to ensure that any institutional and engineering controls are maintained.
2. Documentation that requirements prescribed in R18-7-203(A) and R18-7-203(B)(1) and (2) have been satisfied.
3. If the Department determines pursuant to R18-7-203(B)(3) that an ecological risk assessment is required, documentation that the requirements prescribed in R18-7-203(B)(3) have been satisfied.
4. Soil sampling analytical results that are representative of the area remediated, including documentation that the laboratory analysis of samples has been performed by a laboratory licensed by the Arizona Department of Health Services under A.R.S. § 36-495 et seq. and 9 A.A.C. 14, Article 6.
5. A statement signed by the person conducting the remediation certifying the following: I certify under penalty of law that this document and all attachments are, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

B. The applicable Departmental program described in R18-7-202(A) or R18-7-202(B) shall evaluate the information described in R18-7-209(A). The Department may request additional information, or if the Department verifies compliance with the soil remediation standards set forth under this Article and closure requirements of the applicable program or programs identified in R18-7-202(A) or described in R18-7-202(B), the Department shall issue a Letter of Completion, or an alternative closure document provided for by statute or rule that certifies the soil standards in this Article have been achieved.

C. The applicable Departmental program described in R18-7-202(A) or R18-7-202(B) may revoke or amend any Letter of Completion or alternative closure document described in R18-7-209(B) if any of the information submitted pursuant to R18-7-208 or R18-7-209(A) is inaccurate or if any condition was unknown to the Department when the Department issued the Letter of Completion or alternative closure document.

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency amendment reinstated at the request of the Department (see Supp. 97-1); historical note from Supp. 97-3 stating emergency expired removed for clarity. Section R18-7-208 adopted permanently effective December 4, 1997, replacing emergency rule (Supp. 97-4). Former R18-7-209 renumbered to R18-7-210; new R18-7-209 renumbered from R18-7-208 and amended by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

R18-7-210. Notice of Remediation and Repository

A. A person conducting soil remediation shall submit a Notice of Remediation to the applicable Departmental program listed in R18-7-202(A) or R18-7-202(B) before beginning remediation. A person conducting a soil remediation to address an immediate and substantial endangerment to public health or the environment and who has notified the Department in accordance with notification requirements prescribed in A.R.S. § 49-284 is not required to submit a Notice of Remediation before beginning remediation. Any person who continues soil remediation after the immediate and substantial endangerment has been abated shall submit a Notice of Remediation. A Notice of Remediation shall include all of the following information:

1. The name and address of the real property owner;
2. The name and address of the remediating party;
3. A legal description and street address of the property;
4. A list of each contaminant to be remediated;
5. The background concentration, SRL, or site-specific remediation level selected to meet the remediation standards;
6. A description of the current and post-remediation property use as either residential or non-residential;
7. The rationale for the selection of residential or non-residential remediation; and
8. The proposed technologies for remediating the site.

B. The Department shall maintain a repository available to the public for information regarding sites where soil is remediated. The Repository shall include a listing of sites for which a Notice of Remediation has been submitted or a Letter of Completion or alternative closure document has been issued.

1. For sites where a Notice of Remediation has been filed, the Repository shall contain the date the notice was filed and the information submitted as described in subsection (A).
2. For sites where a Letter of Completion or alternative closure document has been issued, the Repository shall contain the following:
   a. The name and address of the real property owner;
   b. The name and address of the remediating party;
   c. A legal description and street address of the property;
   d. A listing of each contaminant that was remediated;
   e. The background concentration, SRL, or site-specific remediation level selected to meet the remediation standard;
   f. A description whether the residential or non-residential standard was achieved;
   g. A description of any engineering or institutional control used to remediate the site; and
   h. The date when the Letter of Completion or alternative closure document was issued.

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency amendment reinstated at the request of the Department (see Supp. 97-1); historical note from Supp. 97-3 stating emergency expired removed for clarity. Section R18-7-208 adopted permanently effective December 4, 1997, replacing emergency rule (Supp. 97-4). Section R18-7-210 renumbered from R18-7-209 and amended by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

Appendix A. Soil Remediation Levels (SRLs)

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Acephate	30560-19-1	ca, nc	63	630	240	2,000
Acetaldehyde	75-07-0	ca, nc	11	110	50	160
Acetochlor	34256-82-1	nc			1,200	12,000
Acetone	67-64-1	nc			14,000	54,000
Acetone cyanohydrin	75-86-5	nc			49	490
Acetonitrile	75-05-8	nc			420	1,800
Acrolein	107-02-8	nc			0.10	0.34
Acrylamide	79-06-1	ca, nc	0.12	1.2		3.8
Acrylic acid	79-10-7	nc			29,000	270,000
Acrylonitrile	107-13-1	ca, nc	0.21	2.1		4.9
Alachlor	15972-60-8	ca, nc	6.8	68		210
Alar	1596-84-5	nc			9,200	92,000
Aldicarb	116-06-3	nc			61	620
Aldicarb sulfone	1646-88-4	nc			61	620
Aldrin	309-00-2	ca, nc	0.032	0.32		1.0
Ally	74223-64-6	nc			15,000	150,000
Allyl alcohol	107-18-6	nc			310	3,100
Allyl chloride	107-05-1	nc			18	180
Aluminum	7429-90-5	nc			76,000	920,000
Aluminum phosphide	20859-73-8	nc			31	410
Amdro	67485-29-4	nc			18	180
Ametryn	834-12-8	nc			550	5,500
Aminodinitrotoluene	1321-12-6	nc			12	120
m-Aminophenol	591-27-5	nc			4,300	43,000
4-Aminopyridine	504-24-5	nc			1.2	12
Amitraz	33089-61-1	nc			150	1,500
Ammonium sulfamate	7773-06-0	nc			12,000	120,000
Aniline	62-53-3	ca, nc	96	960	430	3,000
Antimony and compounds	7440-36-0	nc			31	410
Apollo	74115-24-5	nc			790	8,000
Aramite	140-57-8	ca, nc	22	220		690
Arsenic[1]	7440-38-2	ca, nc	10	10	10	10
Assure	76578-12-6	nc			550	5,500

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Asulam	3337-71-1	nc			3,100	31,000
Atrazine	1912-24-9	ca, nc	2.5	25		78
Avermectin B1	71751-41-2	nc			24	250
Azobenzene	103-33-3	ca	5.0	50		160
Barium and compounds	7440-39-3	nc			15,000	170,000
Baygon	114-26-1	nc			240	2,500
Bayleton	43121-43-3	nc			1,800	18,000
Baythroid	68359-37-5	nc			1,500	15,000
Benefin	1861-40-1	nc			18,000	180,000
Benomyl	17804-35-2	nc			3,100	31,000
Bentazon	25057-89-0	nc			1,800	18,000
Benzaldehyde	100-52-7	nc			6,100	62,000
Benzene	71-43-2	ca, nc	0.65	NA		1.4
Benzidine	92-87-5	ca, nc	0.0024	NA		0.0075
Benzoic acid	65-85-0	nc			240,000	1,000,000 **
Benzotrichloride	98-07-7	ca	0.042	0.42		1.3
Benzyl alcohol	100-51-6	nc			18,000	180,000
Benzyl chloride	100-44-7	ca, nc	0.92	9.2		22
Beryllium and compounds	7440-41-7	ca, nc			150	1,900
Bidrin	141-66-2	nc			6.1	62
Biphenthrin (Talstar)	82657-04-3	nc			920	9,200
1,1-Biphenyl	92-52-4	nc			350 *	350 *
Bis(2-chloroethyl)ether	111-44-4	ca	0.23	2.3		5.8
Bis(2-chloroisopropyl)ether	39638-32-9	nc			790 *	790 *
Bis(chloromethyl)ether	542-88-1	ca	0.00020	NA		0.00043
Bis(2-chloro-1-methylethyl)ether	108-60-1	ca, nc	3.0	30		74
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7	ca, nc	39	390		1200
Bisphenol A	80-05-7	nc			3,100	31,000
Boron	7440-42-8	nc			16,000	200,000
Bromate	15541-45-4	ca, nc	0.78	7.8		25
Bromobenzene	108-86-1	nc			28	92
Bromodichloromethane	75-27-4	ca, nc	0.83	8.3		18
Bromoform (tribromomethane)	75-25-2	ca, nc	69	690		2,200
Bromomethane (methyl bromide)	74-83-9	nc			3.9	13
Bromophos	2104-96-3	nc			310	3,100

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Bromoxynil	1689-84-5	nc			1,200	12,000
Bromoxynil octanoate	1689-99-2	nc			1,200	12,000
1,3-Butadiene	106-99-0	ca, nc	0.058	0.58		1.2
1-Butanol	71-36-3	nc			6,100	61,000
Butylate	2008-41-5	nc			3,100	31,000
n-Butylbenzene	104-51-8	nc			240 *	240 *
sec-Butylbenzene	135-98-8	nc			220 *	220 *
tert-Butylbenzene	98-06-6	nc			390 *	390 *
Butyl benzyl phthalate	85-68-7	nc			12,000	120,000
Butylphthalyl butylglycolate	85-70-1	nc			61,000	620,000
Cadmium and compounds	7440-43-9	ca, nc			39	510
Caprolactam	105-60-2	nc			31,000	310,000
Captafol	2425-06-1	ca, nc	64	640	120	1,200
Captan	133-06-2	ca, nc	160	1,600		4,900
Carbaryl	63-25-2	nc			6,100	62,000
Carbazole	86-74-8	ca	27	270		860
Carbofuran	1563-66-2	nc			310	3,100
Carbon disulfide	75-15-0	nc			360	720 *
Carbon tetrachloride	56-23-5	ca, nc	0.25	2.5	2.2	5.5
Carbosulfan	55285-14-8	nc			610	6,200
Carboxin	5234-68-4	nc			6,100	62,000
Chloral hydrate	302-17-0	nc			6,100	62,000
Chloramben	133-90-4	nc			920	9,200
Chloranil	118-75-2	ca	1.4	14		43
Chlordane	12789-03-6	ca, nc	1.9	19		65
Chlorimuron-ethyl	90982-32-4	nc			1,200	12,000
Chloroacetic acid	79-11-8	nc			120	1,200
2-Chloroacetophenone	532-27-4	nc			0.033	0.11
4-Chloroaniline	106-47-8	nc			240	2,500
Chlorobenzene	108-90-7	nc			150	530
Chlorobenzilate	510-15-6	ca, nc	2.0	20		64
p-Chlorobenzoic acid	74-11-3	nc			12,000	120,000
4-Chlorobenzotrifluoride	98-56-6	nc			1,200	12,000
2-Chloro-1,3-butadiene	126-99-8	nc			3.6	12
1-Chlorobutane	109-69-3	nc			480 *	480 *

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
1-Chloro-1,1-difluoroethane	75-68-3	nc			340 *	340 *
Chlorodifluoromethane	75-45-6	nc			340 *	340 *
Chloroethane	75-00-3	ca, nc	3.0	30		65
Chloroform	67-66-3	ca, nc	0.94	9.4		20
Chloromethane	74-87-3	nc			48	160
4-Chloro-2-methylaniline	95-69-2	ca	0.94	9.4		30
4-Chloro-2-methylaniline hydrochloride	3165-93-3	ca	1.2	12		37
beta-Chloronaphthalene	91-58-7	nc			110 *	110 *
o-Chloronitrobenzene	88-73-3	ca, nc			1.4	4.5
p-Chloronitrobenzene	100-00-5	ca, nc			10	37
2-Chlorophenol	95-57-8	nc			63	240
2-Chloropropane	75-29-6	nc			170	590
Chlorothalonil	1897-45-6	ca, nc	50	500		1600
o-Chlorotoluene	95-49-8	nc			160	510 *
Chlorpropham	101-21-3	nc			12,000	120,000
Chlorpyrifos	2921-88-2	nc			180	1,800
Chlorpyrifos-methyl	5598-13-0	nc			610	6,200
Chlorsulfuron	64902-72-3	nc			3,100	31,000
Chlorthiophos	60238-56-4	nc			49	490
Chromium III	16065-83-1	nc			120,000	1,000,000 **
Chromium VI	18540-29-9	ca, nc	30	NA		65
Cobalt	7440-48-4	ca, nc	900	9,000	1,400	13,000
Copper and compounds	7440-50-8	nc			3,100	41,000
Crotonaldehyde	123-73-9	ca	0.0053	0.053		0.11
Cumene (isopropylbenzene)	98-82-8	nc			92 *	92 *
Cyanazine	21725-46-2	ca, nc	0.65	6.5		21
Cyanide (free)[2]	57-12-5	nc			1,200	12,000
Cyanide (hydrogen)[3]	74-90-8	nc			11	35
Cyanogen	460-19-5	nc			130	430
Cyanogen bromide	506-68-3	nc			290	970
Cyanogen chloride	506-77-4	nc			160	540
Cyclohexane	110-82-7	nc			140 *	140 *
Cyclohexanone	108-94-1	nc			310,000	1,000,000 **
Cyclohexylamine	108-91-8	nc			12,000	120,000
Cyhalothrin/Karate	68085-85-8	nc			310	3,100

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Cypermethrin	52315-07-8	nc			610	6,200
Cyromazine	66215-27-8	nc			460	4,600
Dacthal	1861-32-1	nc			610	6,200
Dalapon	75-99-0	nc			1,800	18,000
Danitol	39515-41-8	nc			1,500	15,000
DDD	72-54-8	ca	2.8	28		100
DDE	72-55-9	ca	2.0	20		70
DDT	50-29-3	ca, nc	2.0	20		70
Decabromodiphenyl ether	1163-19-5	nc			610	6,200
Demeton	8065-48-3	nc			2.4	25
Diallate	2303-16-4	ca	9.0	90		280
Diazinon	333-41-5	nc			55	550
Dibenzofuran	132-64-9	nc			140 *	140 *
1,4-Dibromobenzene	106-37-6	nc			610	6,200
Dibromochloromethane	124-48-1	ca, nc	1.1	11		26
1,2-Dibromo-3-chloropropane	96-12-8	ca, nc	0.53	5.3	1.5	6.5
1,2-Dibromoethane	106-93-4	ca, nc	0.029	0.29		0.63
Dibutyl phthalate	84-74-2	nc			6,100	62,000
Dicamba	1918-00-9	nc			1,800	18,000
1,2-Dichlorobenzene	95-50-1	nc			600 *	600 *
1,3-Dichlorobenzene	541-73-1	nc			530	600 *
1,4-Dichlorobenzene	106-46-7	ca, nc	3.5	35		79
3,3-Dichlorobenzidine	91-94-1	ca	1.2	12		38
4,4'-Dichlorobenzophenone	90-98-2	nc			1,800	18,000
1,4-Dichloro-2-butene	764-41-0	ca	0.0080	0.080		0.18
Dichlorodifluoromethane	75-71-8	nc			94	310
1,1-Dichloroethane	75-34-3	nc			510	1,700 *
1,2-Dichloroethane (DCA)	107-06-2	ca, nc	0.28	2.8		6.0
1,1-Dichloroethylene (DCE)	75-35-4	nc			120	410
1,2-Dichloroethylene (cis)	156-59-2	nc			43	150
1,2-Dichloroethylene (trans)	156-60-5	nc			69	230
2,4-Dichlorophenol	120-83-2	nc			180	1,800
4-(2,4-Dichlorophenoxy)butyric acid	94-82-6	nc			490	4,900
2,4-Dichlorophenoxyacetic Acid (2,4-D)	94-75-7	nc			690	7,700
1,2-Dichloropropane	78-87-5	ca, nc	0.34	3.4		7.4

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
1,3-Dichloropropane	142-28-9	nc			100	360
1,3-Dichloropropene	542-75-6	ca, nc	0.79	7.9		18
2,3-Dichloropropanol	616-23-9	nc			180	1,800
Dichlorvos	62-73-7	ca, nc	1.9	19		59
Dicofol	115-32-2	ca	1.2	12		39
Dicyclopentadiene	77-73-6	nc			0.54	1.8
Dieldrin	60-57-1	ca, nc	0.034	0.34		1.1
Diethylene glycol, monobutyl ether	112-34-5	nc			610	6,200
Diethylene glycol, monomethyl ether	111-90-0	nc			3,700	37,000
Diethylformamide	617-84-5	nc			24	250
Di(2-ethylhexyl)adipate	103-23-1	ca, nc	460	4,600		14,000
Diethyl phthalate	84-66-2	nc			49,000	490,000
Diethylstilbestrol	56-53-1	ca	0.00012	NA		0.0037
Difenzoquat (Avenge)	43222-48-6	nc			4,900	49,000
Diflubenzuron	35367-38-5	nc			1,200	12,000
Diisononyl phthalate	28553-12-0	nc			1,200	12,000
Diisopropyl methylphosphonate	1445-75-6	nc			4,900	49,000
Dimethipin	55290-64-7	nc			1,200	12,000
Dimethoate	60-51-5	nc			12	120
3,3'-Dimethoxybenzidine	119-90-4	ca	39	390		1,200
Dimethylamine	124-40-3	nc			0.067	0.25
N-N-Dimethylaniline	121-69-7	nc			120	1,200
2,4-Dimethylaniline	95-68-1	ca	0.73	7.3		23
2,4-Dimethylaniline hydrochloride	21436-96-4	ca	0.94	9.4		30
3,3'-Dimethylbenzidine	119-93-7	ca	0.24	2.4		7.5
N,N-Dimethylformamide	68-12-2	nc			6,100	62,000
Dimethylphenethylamine	122-09-8	nc			61	620
2,4-Dimethylphenol	105-67-9	nc			1,200	12,000
2,6-Dimethylphenol	576-26-1	nc			37	370
3,4-Dimethylphenol	95-65-8	nc			61	620
Dimethyl phthalate	131-11-3	nc			610,000	1,000,000 **
Dimethyl terephthalate	120-61-6	nc			6,100	62,000
4,6-Dinitro-o-cyclohexyl phenol	131-89-5	nc			120	1,200
1,2-Dinitrobenzene	528-29-0	nc			6.1	62
1,3-Dinitrobenzene	99-65-0	nc			6.1	62

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
1,4-Dinitrobenzene	100-25-4	nc			6.1	62
2,4-Dinitrophenol	51-28-5	nc			120	1,200
Dinitrotoluene mixture	25321-14-6	ca	0.81	8.1		25
2,4-Dinitrotoluene	121-14-2	nc			120	1,200
2,6-Dinitrotoluene	606-20-2	nc			61	620
Dinoseb	88-85-7	nc			61	620
di-n-Octyl phthalate	117-84-0	nc			2,400	25,000
1,4-Dioxane	123-91-1	ca	50	500		1,600
Dioxin (2,3,7,8-TCDD)	1746-01-6	ca	0.0000045	0.000045		0.00016
Diphenamid	957-51-7	nc			1,800	18,000
Diphenylamine	122-39-4	nc			1,500	15,000
N,N-Diphenyl-1,4 benzenediamine (DPPD)	74-31-7	nc			18	180
1,2-Diphenylhydrazine	122-66-7	ca	0.68	6.8		22
Diphenyl sulfone	127-63-9	nc			180	1,800
Diquat	85-00-7	nc			130	1,400
Direct black 38	1937-37-7	ca	0.064	NA		0.20
Direct blue 6	2602-46-2	ca	0.068	NA		0.21
Direct brown 95	16071-86-6	ca	0.059	NA		0.19
Disulfoton	298-04-4	nc			2.4	25
1,4-Dithiane	505-29-3	nc			610	6,200
Diuron	330-54-1	nc			120	1,200
Dodine	2439-10-3	nc			240	2,500
Dysprosium	7429-91-6	nc			7,800	102,000
Endosulfan	115-29-7	nc			370	3,700
Endothall	145-73-3	nc			1,200	12,000
Endrin	72-20-8	nc			18	180
Epichlorohydrin	106-89-8	ca, nc			7.6	26
1,2-Epoxybutane	106-88-7	nc			350	3,500
EPTC (S-Ethyl dipropylthiocarbamate)	759-94-4	nc			1,500	15,000
Ethephon (2-chloroethyl phosphonic acid)	16672-87-0	nc			310	3,100
Ethion	563-12-2	nc			31	310
2-Ethoxyethanol	110-80-5	nc			24,000	250,000
2-Ethoxyethanol acetate	111-15-9	nc			18,000	180,000
Ethyl acetate	141-78-6	nc			19,000	37,000 *
Ethyl acrylate	140-88-5	ca	0.21	2.1		4.5

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Ethylbenzene	100-41-4	nc			400 *	400 *
Ethyl chloride	75-00-3	ca, nc	3.0	30		65
Ethylene cyanohydrin	109-78-4	nc			18,000	180,000
Ethylene diamine	107-15-3	nc			5,500	55,000
Ethylene glycol	107-21-1	nc			120,000	1,000,000 **
Ethylene glycol, monobutyl ether	111-76-2	nc			31,000	310,000
Ethylene oxide	75-21-8	ca	0.14	1.4		3.4
Ethylene thiourea (ETU)	96-45-7	ca, nc			4.9	49
Ethyl ether	60-29-7	nc			1,800 *	1,800 *
Ethyl methacrylate	97-63-2	nc			140 *	140 *
Ethyl p-nitrophenyl phenylphosphorothioate	2104-64-5	nc			0.61	6.2
Ethylphthalyl ethyl glycolate	84-72-0	nc			180,000	1,000,000 **
Express	101200-48-0	nc			490	4,900
Fenamiphos	22224-92-6	nc			15	150
Fluometuron	2164-17-2	nc			790	8,000
Fluoride	16984-48-8	nc			3,700	37,000
Fluoridone	59756-60-4	nc			4,900	49,000
Flurprimidol	56425-91-3	nc			1,200	12,000
Flutolanil	66332-96-5	nc			3,700	37,000
Fluvalinate	69409-94-5	nc			610	6,200
Folpet	133-07-3	ca, nc	160	1,600		4,900
Fomesafen	72178-02-0	ca	2.9	29		91
Fonofos	944-22-9	nc			120	1,200
Formaldehyde	50-00-0	ca, nc			9,200	92,000
Formic Acid	64-18-6	nc			110,000	1,000,000 **
Fosetyl-al	39148-24-8	nc			180,000	1,000,000 **
Furan	110-00-9	nc			2.5	8.5
Furazolidone	67-45-8	ca	0.14	1.4		4.5
Furfural	98-01-1	nc			180	1,800
Furium	531-82-8	ca	0.011	0.11		0.34
Furmecyclox	60568-05-0	ca	18	180		570
Glufosinate-ammonium	77182-82-2	nc			24	250
Glycidaldehyde	765-34-4	nc			24	250
Glyphosate	1071-83-6	nc			6,100	62,000
Haloxyfop-methyl	69806-40-2	nc			3.1	31

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Harmony	79277-27-3	nc			790	8,003
Heptachlor	76-44-8	ca, nc	0.12	1.2		3.8
Heptachlor epoxide	1024-57-3	ca, nc	0.060	0.60		1.9
Hexabromobenzene	87-82-1	nc			120	1,200
Hexachlorobenzene	118-74-1	ca, nc	0.34	3.4		11
Hexachlorobutadiene	87-68-3	ca, nc	7.0	70	18	180
HCH (alpha)	319-84-6	ca, nc	0.10	1.0		3.6
HCH (beta)	319-85-7	ca, nc	0.36	3.6		13
HCH (gamma) Lindane	58-89-9	ca, nc	0.50	5.0		17
HCH-technical	608-73-1	ca	0.36	3.6		13
Hexachlorocyclopentadiene	77-47-4	nc			370	3,700
Hexachloroethane	67-72-1	ca, nc	39	390	61	620
Hexachlorophene	70-30-4	nc			18	180
Hexahydro-1,3,5-trinitro-1,3,5-triazine	121-82-4	ca, nc	5.0	50		160
1,6-Hexamethylene diisocyanate	822-06-0	nc			0.17	1.8
n-Hexane	110-54-3	nc			110 *	110 *
Hexazinone	51235-04-2	nc			2,020	20,000
Hydrazine, hydrazine sulfate	302-01-2	ca	0.18	1.8		5.7
Hydrazine, monomethyl	60-34-4	ca	0.18	1.8		5.7
Hydrazine, dimethyl	57-14-7	ca	0.18	1.8		5.7
p-Hydroquinone	123-31-9	ca, nc	9.8	98		310
Imazalil	35554-44-0	nc			790	8,000
Imazaquin	81335-37-7	nc			15,000	150,000
Iprodione	36734-19-7	nc			2,400	25,000
Isobutanol	78-83-1	nc			13,000	40,000 *
Isophorone	78-59-1	ca, nc	580	5,800		18,000
Isopropalin	33820-53-0	nc			920	9,200
Isopropyl methyl phosphonic acid	1832-54-8	nc			6,100	62,000
Isoxaben	82558-50-7	nc			3,100	31,000
Kepone	143-50-0	ca, nc	0.068	0.68		2.2
Lactofen	77501-63-4	nc			120	1,200
Lead	7439-92-1	ca, nc			400	800
Lead (tetraethyl)	78-00-2	nc			0.0061	0.062
Linuron	330-55-2	nc			120	1,200
Lithium	7439-93-2	nc			1,600	20,000

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Londax	83055-99-6	nc			12,000	120,000
Malathion	121-75-5	nc			1,200	12,000
Maleic anhydride	108-31-6	nc			6,100	62,000
Maleic hydrazide	123-33-1	nc			1,700	2,400 *
Malononitrile	109-77-3	nc			6.1	62
Mancozeb	8018-01-7	nc			1,800	18,000
Maneb	12427-38-2	ca, nc	9.1	91		290
Manganese	7439-96-5	nc			3,300	32,000
Mephosfolan	950-10-7	nc			5.5	55
Mepiquat	24307-26-4	nc			1,800	18,000
2-Mercaptobenzothiazole	149-30-4	ca, nc	19	190		590
Mercury and compounds	7487-94-7	nc			23	310
Mercury (methyl)	22967-92-6	nc			6.1	62
Merphos	150-50-5	nc			1.8	18
Merphos oxide	78-48-8	nc			1.8	18
Metalaxyl	57837-19-1	nc			3,700	37,000
Methacrylonitrile	126-98-7	nc			2.1	8.4
Methamidophos	10265-92-6	nc			3.1	31
Methanol	67-56-1	nc			31,000	310,000
Methidathion	950-37-8	nc			61	620
Methomyl	16752-77-5	nc			44	150
Methoxychlor	72-43-5	nc			310	3,100
2-Methoxyethanol	109-86-4	nc			61	620
2-Methoxyethanol acetate	110-49-6	nc			120	1,200
2-Methoxy-5-nitroaniline	99-59-2	ca	12	120		370
Methyl acetate	79-20-9	nc			22,000	92,000
Methyl acrylate	96-33-3	nc			70	230
2-Methylaniline (o-toluidine)	95-53-4	ca	2.3	23		72
2-Methylaniline hydrochloride	636-21-5	ca	3.0	30		96
2-Methyl-4-chlorophenoxyacetic acid	94-74-6	nc			31	310
4-(2-Methyl-4-chlorophenoxy) butyric acid (MCPB)	94-81-5	nc			610	6,200
2-(2-Methyl-4-chlorophenoxy) propionic acid	93-65-2	nc			61	620
2-(2-Methyl-1,4-chlorophenoxy) propionic acid (MCPP)	16484-77-8	nc			61	620

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Methylcyclohexane	108-87-2	nc			230 *	230 *
4,4'-Methylenebisbenzeneamine	101-77-9	ca	2.2	22		69
4,4'-Methylene bis(2-chloroaniline)	101-14-4	ca, nc	4.2	42		130
4,4'-Methylene bis(N,N'-dimethyl) aniline	101-61-1	ca	12	120		370
Methylene bromide	74-95-3	nc			67	230
Methylene chloride	75-09-2	ca, nc	9.3	93		210
4,4'-Methylenediphenyl diisocyanate	101-68-8	nc			10	110
Methyl ethyl ketone (MEK)	78-93-3	nc			23,000	34,000 *
Methyl isobutyl ketone (MIBK)	108-10-1	nc			5,300	17,000 *
Methyl mercaptan	74-93-1	nc			35	350
Methyl methacrylate	80-62-6	nc			2,200	2,700 *
2-Methyl-5-nitroaniline	99-55-8	ca	17	170		520
Methyl parathion	298-00-0	nc			15	150
2-Methylphenol	95-48-7	nc			3,100	31,000
3-Methylphenol	108-39-4	nc			3,100	31,000
4-Methylphenol	106-44-5	nc			310	3,100
Methyl phosphonic acid	993-13-5	nc			1,200	12,000
Methyl styrene (mixture)	25013-15-4	nc			130	540
Methyl styrene (alpha)	98-83-9	nc			680 *	680 *
Methyl tertbutyl ether (MTBE)	1634-04-4	ca, nc	32	320		710
Metolaclor (Dual)	51218-45-2	nc			9,200	92,000
Metribuzin	21087-64-9	nc			1,500	15,000
Mirex	2385-85-5	ca, nc	0.30	3.0		9.6
Molinate	2212-67-1	nc			120	1,200
Molybdenum	7439-98-7	nc			390	5,100
Monochloramine	10599-90-3	nc			6,100	62,000
Naled	300-76-5	nc			120	1,200
Napropamide	15299-99-7	nc			6,100	62,000
Nickel and compounds	7440-02-0	nc			1,600	20,000
Nickel subsulfide	12035-72-2	ca	5,200	NA		11,000
2-Nitroaniline	88-74-4	nc			180	1,800
3-Nitroaniline	99-09-2	ca, nc			18	180
4-Nitroaniline	100-01-6	ca, nc	26	260	180	820
Nitrobenzene	98-95-3	nc			20	100
Nitrofurantoin	67-20-9	nc			4,300	43,000

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Nitrofurazone	59-87-0	ca	0.37	3.7		11
Nitroglycerin	55-63-0	ca	39	390		1,200
Nitroguanidine	556-88-7	nc			6,100	62,000
2-Nitropropane	79-46-9	ca, nc	0.0028	0.028		0.061
N-Nitrosodi-n-butylamine	924-16-3	ca	0.025	0.25		0.58
N-Nitrosodiethanolamine	1116-54-7	ca	0.20	2.0		6.2
N-Nitrosodiethylamine	55-18-5	ca	0.0037	0.037		0.11
N-Nitrosodimethylamine	62-75-9	ca, nc	0.011	0.11		0.34
N-Nitrosodiphenylamine	86-30-6	ca, nc	110	1,100		3,500
N-Nitroso di-n-propylamine	621-64-7	ca	0.078	0.78		2.5
N-Nitroso-N-methylethylamine	10595-95-6	ca	0.025	0.25		0.78
N-Nitrosopyrrolidine	930-55-2	ca	0.26	2.6		8.2
m-Nitrotoluene	99-08-1	nc			730	1,000 *
o-Nitrotoluene	88-72-2	ca, nc	0.93	9.3		22
p-Nitrotoluene	99-99-0	ca, nc	13	130		300
Norflurazon	27314-13-2	nc			2,400	25,000
NuStar	85509-19-9	nc			43	430
Octabromodiphenyl ether	32536-52-0	nc			180	1,800
Octahydro-1357-tetranitro-1357-tetrazocine (HMX)	2691-41-0	nc			3,100	31,000
Octamethylpyrophosphoramide	152-16-9	nc			120	1,200
Oryzalin	19044-88-3	nc			3,100	31,000
Oxadiazon	19666-30-9	nc			310	3,100
Oxamyl	23135-22-0	nc			1,500	15,000
Oxyfluorfen	42874-03-3	nc			180	1,800
Paclobutrazol	76738-62-0	nc			790	8,000
Paraquat	4685-14-7	nc			270	2,800
Parathion	56-38-2	nc			370	3,700
Pebulate	1114-71-2	nc			3,100	31,000
Pendimethalin	40487-42-1	nc			2,400	25,000
Pentabromo-6-chloro cyclohexane	87-84-3	ca	24	240		750
Pentabromodiphenyl ether	32534-81-9	nc			120	1,200
Pentachlorobenzene	608-93-5	nc			49	490
Pentachloronitrobenzene	82-68-8	ca, nc	2.1	21		66
Pentachlorophenol	87-86-5	ca, nc	3.2	32		90
Perchlorate	7601-90-3	nc			55	720

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Permethrin	52645-53-1	nc			3,100	31,000
Phenmedipham	13684-63-4	nc			15,000	150,000
Phenol	108-95-2	nc			18,000	180,000
Phenothiazine	92-84-2	nc			120	1,200
m-Phenylenediamine	108-45-2	nc			370	3,700
o-Phenylenediamine	95-54-5	ca	12	120		370
p-Phenylenediamine	106-50-3	nc			12,000	120,000
Phenylmercuric acetate	62-38-4	nc			4.9	49
2-Phenylphenol	90-43-7	ca	280	2,800		8,900
Phorate	298-02-2	nc			12	120
Phosmet	732-11-6	nc			1,200	12,000
Phosphine	7803-51-2	nc			18	180
Phosphorus (white)	7723-14-0	nc			1.6	20
p-Phthalic acid	100-21-0	nc			61,000	620,000
Phthalic anhydride	85-44-9	nc			120,000	1,000,000 **
Picloram	1918-02-1	nc			4,300	43,000
Pirimiphos-methyl	29232-93-7	nc			610	6,200
Polybrominated biphenyls (PBBs)	NA	ca, nc	0.062	0.62	0.43	1.9
Polychlorinated biphenyls (PCBs), low-risk mixture[4]	12674-11-2	ca, nc			3.9	37
Polychlorinated biphenyls (PCBs), high-risk mixture[5]	11097-69-1	ca, nc	0.25	2.5	1.1	7.4
Polychlorinated terphenyls	61788-33-8	ca	0.12	1.2		3.8
Polynuclear aromatic hydrocarbons						
Acenaphthene	83-32-9	nc			3,700	29,000
Anthracene	120-12-7	nc			22,000	240,000
Benz[a]anthracene	56-55-3	ca	0.69	6.9		21
Benzo[b]fluoranthene	205-99-2	ca	0.69	6.9		21
Benzo[k]fluoranthene	207-08-9	ca	6.9	69		210
Benzo[a]pyrene	50-32-8	ca	0.069	0.69		2.1
Chrysene	218-01-9	ca	68	680		2,000
Dibenz[ah]anthracene	53-70-3	ca	0.069	0.69		2.1
Fluoranthene	206-44-0	nc			2,300	22,000
Fluorene	86-73-7	nc			2,700	26,000
Indeno[1,2,3-cd]pyrene	193-39-5	ca	0.69	6.9		21
Naphthalene	91-20-3	nc			56	190

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Pyrene	129-00-0	nc			2,300	29,000
Prochloraz	67747-09-5	ca, nc	3.7	37		110
Profluralin	26399-36-0	nc			370	3,700
Prometon	1610-18-0	nc			920	9,200
Prometryn	7287-19-6	nc			240	2,500
Pronamide	23950-58-5	nc			4,600	46,000
Propachlor	1918-16-7	nc			790	8,000
Propanil	709-98-8	nc			310	3,100
Propargite	2312-35-8	nc			1,200	12,000
Propargyl alcohol	107-19-7	nc			120	1,200
Propazine	139-40-2	nc			1,200	12,000
Propham	122-42-9	nc			1,200	12,000
Propiconazole	60207-90-1	nc			790	8,000
n-Propylbenzene	103-65-1	nc			240 *	240 *
Propylene glycol	57-55-6	nc			30,000	290,000
Propylene glycol, monoethyl ether	52125-53-8	nc			43,000	430,000
Propylene glycol, monomethyl ether	107-98-2	nc			43,000	430,000
Propylene oxide	75-56-9	ca, nc	2.2	22		66
Pursuit	81335-77-5	nc			15,000	150,000
Pydrin	51630-58-1	nc			1,500	15,000
Pyridine	110-86-1	nc			61	620
Quinalphos	13593-03-8	nc			31	310
Quinoline	91-22-5	ca	0.18	1.8		5.7
RDX (Cyclonite)	121-82-4	ca, nc	5.0	50		160
Resmethrin	10453-86-8	nc			1,800	18,000
Ronnel	299-84-3	nc			3,100	31,000
Rotenone	83-79-4	nc			240	2,500
Savey	78587-05-0	nc			1,500	15,000
Selenious Acid	7783-00-8	nc			310	3,100
Selenium	7782-49-2	nc			390	5,100
Selenourea	630-10-4	nc			310	3,100
Sethoxydim	74051-80-2	nc			5,500	55,000
Silver and compounds	7440-22-4	nc			390	5,100
Simazine	122-34-9	ca, nc	4.6	46		140
Sodium azide	26628-22-8	nc			310	4,100

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Sodium diethyldithiocarbamate	148-18-5	ca, nc	2.0	20		64
Sodium fluoroacetate	62-74-8	nc			1.2	12
Sodium metavanadate	13718-26-8	nc			61	620
Strontium, stable	7440-24-6	nc			47,000	610,000
Strychnine	57-24-9	nc			18	180
Styrene	100-42-5	nc			1,500 *	1,500 *
1,1'-Sulfonylbis-(4-chlorobenzene)	80-07-9	nc			310	3,100
Systhane	88671-89-0	nc			1,500	15,000
Tebuthiuron	34014-18-1	nc			4,300	43,000
Temephos	3383-96-8	nc			1,200	12,000
Terbacil	5902-51-2	nc			790	8,000
Terbufos	13071-79-9	nc			1.5	15
Terbutryn	886-50-0	nc			61	620
1,2,4,5-Tetrachlorobenzene	95-94-3	nc			18	180
1,1,1,2-Tetrachloroethane	630-20-6	ca, nc	3.2	32		73
1,1,2,2-Tetrachloroethane	79-34-5	ca, nc	0.42	4.2		9.3
Tetrachloroethylene (PCE)	127-18-4	ca, nc	0.51	5.1		13
2,3,4,6-Tetrachlorophenol	58-90-2	nc			1,800	18,000
p,a,a,a-Tetrachlorotoluene	5216-25-1	ca	0.027	0.27		0.86
Tetrachlorovinphos	961-11-5	ca, nc	23	230		720
Tetraethyldithiopyrophosphate	3689-24-5	nc			31	310
Tetrahydrofuran	109-99-9	ca, nc	9.5	95		210
Thallium and compounds	7440-28-0	nc			5.2	67
Thiobencarb	28249-77-6	nc			610	6,200
Thiocyanate	NA	nc			3,100	31,000
Thiofanox	39196-18-4	nc			18	180
Thiophanate-methyl	23564-05-8	nc			4,900	49,000
Thiram	137-26-8	nc			310	3,100
Tin	7440-31-5	nc			47,000	610,000
Titanium	7440-32-6	nc			310,000	1,000,000 **
Toluene	108-88-3	nc			650 *	650 *
Toluene-2,4-diamine	95-80-7	ca	0.17	1.7		5.4
Toluene-2,5-diamine	95-70-5	nc			37,000	370,000
Toluene-2,6-diamine	823-40-5	nc			12,000	120,000
p-Toluidine	106-49-0	ca	2.9	29		91

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Toxaphene	8001-35-2	ca	0.50	5.0		16
Tralomethrin	66841-25-6	nc			460	4,600
Triallate	2303-17-5	nc			790	8,000
Triasulfuron	82097-50-5	nc			610	6,200
1,2,4-Tribromobenzene	615-54-3	nc			310	3,100
Tributyl phosphate	126-73-8	ca, nc	60	600		1,900
Tributyltin oxide (TBTO)	56-35-9	nc			18	180
2,4,6-Trichloroaniline	634-93-5	ca	16	160		510
2,4,6-Trichloroaniline hydrochloride	33663-50-2	ca	19	190		590
1,2,4-Trichlorobenzene	120-82-1	nc			62	220
1,1,1-Trichloroethane	71-55-6	nc			1,200 *	1,200 *
1,1,2-Trichloroethane	79-00-5	ca, nc	0.74	7.4		16
Trichloroethylene (TCE)	79-01-6	ca, nc	3.0	30	17	65
Trichlorofluoromethane	75-69-4	nc			390	1,300
2,4,5-Trichlorophenol	95-95-4	nc			6,100	62,000
2,4,6-Trichlorophenol	88-06-2	ca, nc			6.1	62
2,4,5-Trichlorophenoxyacetic Acid	93-76-5	nc			610	6,200
2-(2,4,5-Trichlorophenoxy) propionic acid	93-72-1	nc			490	4,900
1,1,2-Trichloropropane	598-77-6	nc			15	51
1,2,3-Trichloropropane	96-18-4	ca, nc	0.0050	0.050		0.11
1,2,3-Trichloropropene	96-19-5	nc			0.71	2.3
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	76-13-1	nc			5,600 *	5,600 *
Tridiphane	58138-08-2	nc			180	1,800
Triethylamine	121-44-8	nc			23	86
Trifluralin	1582-09-8	ca, nc	71	710	460	2,200
Trimellitic Anhydride (TMAN)	552-30-7	nc			8.6	86
1,2,4-Trimethylbenzene	95-63-6	nc			52	170
1,3,5-Trimethylbenzene	108-67-8	nc			21	70
Trimethyl phosphate	512-56-1	ca	15	150		470
1,3,5-Trinitrobenzene	99-35-4	nc			1,800	18,000
Trinitrophenylmethylnitramine	479-45-8	nc			610	6,200
2,4,6-Trinitrotoluene	118-96-7	ca, nc	18	180	31	310
Triphenylphosphine oxide	791-28-6	nc			1,200	12,000
Tris(2-chloroethyl) phosphate	115-96-8	ca, nc	39	390		1,200
Tris(2-ethylhexyl) phosphate	78-42-2	ca, nc	170	1,700		5,400

CONTAMINANT	CASRN	Class	Residential (mg/kg)			Non-residential (mg/kg)
			Carcinogen		Non-carcinogen	
			10^{-6} Risk	10^{-5} Risk		
Uranium (chemical toxicity only)	7440-61-0	nc			16	200
Vanadium and compounds	7440-62-2	nc			78	1,000
Vernam	1929-77-7	nc			61	620
Vinclozolin	50471-44-8	nc			1,500	15,000
Vinyl acetate	108-05-4	nc			430	1,400
Vinyl bromide	593-60-2	ca, nc	0.19	1.9		4.2
Vinyl chloride	75-01-4	ca, nc	0.085	NA		0.75
Warfarin	81-81-2	nc			18	180
Xylenes	1330-20-7	nc			270	420 *
Zinc	7440-66-6	nc			23,000	310,000
Zinc phosphide	1314-84-7	nc			23	310
Zineb	12122-67-7	nc			3,100	31,000
NA indicates not applicable.						

Class is the classification of the chemical. “ca” indicates carcinogenic effects; “nc” indicates non-carcinogenic effects. Chemicals that have both carcinogenic and non-carcinogenic effects are classified “ca, nc”.

* Indicates SRL is based on the chemical-specific saturation level in soil for volatile organic chemicals only.

** Indicates SRL is based on a 100% saturation ceiling limit for non-volatile organic chemicals.

[1]Arsenic standards are not risk-based standards, but based on background.

[2]Cyanide (free): Free cyanide is a subset of total cyanides. If any ADHS approved method for total cyanide reports a concentration exceeding this standard, further analyses to differentiate free cyanide from other cyanide metal complexes is required.

[3]Cyanide (hydrogen): If the cyanide concentrations using any method exceed the hydrogen cyanide standard, then hydrogen cyanide vapor samples should be collected at the site.

[4]PCBs, low-risk mixture: Use if laboratory analysis confirms that the total PCB concentration consists of 0.5 percent or less of congeners that contain five or more chlorines and that no dioxin-like congeners are present.

[5]PCBs, high-risk mixture: Use if only total PCB concentration is reported by any ADHS licensed analytical method, or if laboratory analysis confirms that the total PCB concentration consists of more than 0.5 percent congeners that contain five or more chlorines or that dioxin-like congeners are present.

Bold indicates adequate evidence to classify the chemical as a known human carcinogen.

CASRN is the Chemical Abstract System Registry Number.

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency appendix reinstated at the request of the Department; historical note from Supp. 97-3 stating emergency expired removed for clarity. Appendix A adopted permanently effective December 4, 1997, replacing emergency appendix (Supp. 97-4). Amended to correct measurement units in columns 5 and 6 from “mg/k” to “mg/kg” (Supp. 01-4). Former Appendix A renumbered to Appendix B; new Appendix A made by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

Appendix B. 1997 Soil Remediation Levels (SRLs)

	Chemical Name	CAS Number	Cancer Group	Residential (mg/kg)	Non-residential (mg/kg)
	A				
1	Acenaphthene	83-32-9	D	3900.0	41000.0
2	Acephate	30560-19-1	C	260.0	2200.0
3	Acetaldehyde	75-07-0	B2	39.0	150.0
4	Acetochlor	34256-82-1	D	1300.0	14000.0
5	Acetone	67-64-1	D	2100.0	8800.0
6	Acetone cyanohydrin	75-86-5	D	52.0	550.0
7	Acetonitrile	75-05-8	D	220.0	1200.0
8	Acetophenone	98-86-2	D	0.49	1.6
9	Acifluorfen	62476-59-9	D	850.0	8900.0
10	Acrolein	107-02-8	C	0.10	0.34
11	Acrylamide	79-06-1	B2	0.98	4.2
12	Acrylic acid	79-10-7	D	31000.0	290000.0
13	Acrylonitrile	107-13-1	B1	1.9	4.7
14	Alachlor	15972-60-8	B2	55.0	240.0
15	Alar	1596-84-5	D	9800.0	100000.0
16	Aldicarb	116-06-3	D	65.0	680.0
17	Aldicarb sulfone	1646-88-4	D	65.0	680.0
18	Aldrin	309-00-2	B2	0.26	1.1
19	Ally	74223-64-6	D	16000.0	170000.0
20	Allyl alcohol	107-18-6	D	330.0	3400.0
21	Allyl chloride	107-05-1	C	3200.0	33000.0
22	Aluminum	7429-90-5	D	77000.0	1000000.0
23	Aluminum phosphide	20859-73-8	D	31.0	680.0
24	Amdro	67485-29-4	D	20.0	200.0
25	Ametryn	834-12-8	D	590.0	6100.0
26	m-Aminophenol	591-27-5	D	4600.0	48000.0
27	4-Aminopyridine	504-24-5	D	1.3	14.0
28	Amitraz	33089-61-1	D	160.0	1700.0
29	Ammonia	7664-41-7	D	2200.0	58000.0
30	Ammonium sulfamate	7773-06-0	D	13000.0	140000.0
31	Aniline	62-53-3	B2	19.0	200.0
32	Anthracene	120-12-7	D	20000.0	200000.0
33	Antimony and compounds	7440-36-0	D	31.0	680.0
34	Antimony pentoxide	1314-60-9	D	38.0	850.0
35	Antimony potassium tartrate	28300-74-5	D	69.0	1500.0
36	Antimony tetroxide	1332-81-6	D	31.0	680.0
37	Antimony trioxide	1309-64-4	D	31.0	680.0
38	Apollo	74115-24-5	C	850.0	8900.0
39	Aramite	140-57-8	B2	180.0	760.0
40	~Arsenic	7440-38-2	A	10.0	10.0
41	Assure	76578-14-8	D	590.0	6100.0
42	Asulam	3337-71-1	D	3300.0	34000.0
43	Atrazine	1912-24-9	C	20.0	86.0
44	Avermectin B1	71751-41-2	D	26.0	270.0
45	Azobenzene	103-33-3	B2	40.0	170.0
	B				
46	Barium and compounds	7440-39-3	D	5300.0	110000.0
47	Barium cyanide	542-62-1	D	7700.0	170000.0
48	Baygon	114-26-1	D	260.0	2700.0
49	Bayleton	43121-43-3	D	2000.0	20000.0
50	Baythroid	68359-37-5	D	1600.0	17000.0
51	Benefin	1861-40-1	D	20000.0	200000.0
52	Benomyl	17804-35-2	D	3300.0	34000.0
53	Bentazon	25057-89-0	D	160.0	1700.0
54	Benzaldehyde	100-52-7	D	6500.0	68000.0
55	Benz[a]anthracene	56-55-3	B2	6.1	26.0
56	Benzene	71-43-2	A	0.62	1.4

	Chemical Name	CAS Number	Cancer Group	Residential (mg/kg)	Non-residential (mg/kg)
57	Benzidine	92-87-5	A	0.0019	0.0083
58	Benzo[a]pyrene	50-32-8	B2	0.61	2.6
59	Benzo[b]fluoranthene	205-99-2	B2	6.1	26.0
60	Benzoic acid	65-85-0	D	260000.0	1000000.0
61	Benzo[k]fluoranthene	207-08-9	B2	61.0	260.0
62	Benzotrichloride	98-07-7	B2	0.34	1.5
63	Benzyl alcohol	100-51-6	D	20000.0	200000.0
64	Benzyl chloride	100-44-7	B2	8.0	20.0
65	Beryllium and compounds	7440-41-7	B2	1.4	11.0
66	Bidrin	141-66-2	D	6.5	68.0
67	Biphenthrin (Talstar)	82657-04-3	D	980.0	10000.0
68	1,1-Biphenyl	92-52-4	D	3300.0	34000.0
69	Bis(2-chloroethyl)ether	111-44-4	B2	0.43	0.97
70	Bis(2-chloroisopropyl)ether	39638-32-9	C	25.0	67.0
71	Bis(chloromethyl)ether	542-88-1	A	0.0002	0.0004
72	Bis(2-chloro-1-methylethyl)ether	108-60-1	C	63.0	270.0
73	Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7	B2	320.0	1400.0
74	Bisphenol A	80-05-7	D	3300.0	34000.0
75	Boron	7440-42-8	D	5900.0	61000.0
76	Bromodichloromethane	75-27-4	B2	6.3	14.0
77	Bromoform (tribromomethane)	75-25-2	B2	560.0	2400.0
78	Bromomethane	74-83-9	D	6.8	23.0
79	Bromophos	2104-96-3	D	330.0	3400.0
80	Bromoxynil	1689-84-5	D	1300.0	14000.0
81	Bromoxynil octanoate	1689-99-2	D	1300.0	14000.0
82	1,3-Butadiene	106-99-0	B2	0.064	0.14
83	1-Butanol	71-36-3	D	6500.0	68000.0
84	Butylate	2008-41-5	D	3300.0	34000.0
85	Butyl benzyl phthalate	85-68-7	C	13000.0	140000.0
86	Butylphthalyl butylglycolate	85-70-1	D	65000.0	680000.0
	C				
87	Cacodylic acid	75-60-5	D	200.0	2000.0
88	Cadmium and compounds	7440-43-9	B1	38.0	850.0
89	Calcium cyanide	592-01-8	D	3100.0	68000.0
90	Caprolactam	105-60-2	D	33000.0	340000.0
91	Captafol	2425-06-1	C	130.0	1400.0
92	Captan	133-06-2	D	1300.0	5500.0
93	Carbaryl	63-25-2	D	6500.0	68000.0
94	Carbazole	86-74-8	B2	220.0	950.0
95	Carbofuran	1563-66-2	E	330.0	3400.0
96	Carbon disulfide	75-15-0	D	7.5	24.0
97	Carbon tetrachloride	56-23-5	B2	1.6	5.0
98	Carbosulfan	55285-14-8	D	650.0	6800.0
99	Carboxin	5234-68-4	D	6500.0	68000.0
100	Chloral (hydrate)	302-17-0	D	130.0	1400.0
101	Chloramben	133-90-4	D	980.0	10000.0
102	Chloranil	118-75-2	C	11.0	47.0
103	Chlordane	12789-03-6	B2	3.4	15.0
104	Chlorimuron-ethyl	90982-32-4	D	1300.0	14000.0
105	Chlorine cyanide	506-77-4	D	3800.0	85000.0
106	Chloroacetic acid	79-11-8	D	130.0	1400.0
107	2-Chloroacetophenone	532-27-4	D	0.56	5.9
108	4-Chloroaniline	106-47-8	D	260.0	2700.0
109	Chlorobenzene	108-90-7	D	65.0	220.0
110	Chlorobenzilate	510-15-6	B2	16.0	71.0
111	p-Chlorobenzoic acid	74-11-3	D	13000.0	140000.0
112	4-Chlorobenzotrifluoride	98-56-6	D	1300.0	14000.0
113	2-Chloro-1,3-butadiene	126-99-8	D	3.6	12.0
114	1-Chlorobutane	109-69-3	D	710.0	2400.0

	Chemical Name	CAS Number	Cancer Group	Residential (mg/kg)	Non-residential (mg/kg)
115	* 1-Chloro-1,1-difluoroethane	75-68-3	D	2800.0	2800.0
116	* Chlorodifluoromethane	75-45-6	D	2800.0	2800.0
117	Chloroform	67-66-3	B2	2.5	5.3
118	Chloromethane	74-87-3	C	12.0	26.0
119	4-Chloro-2-methylaniline	95-69-2	B2	7.7	33.0
120	4-Chloro-2-methylaniline hydrochloride	3165-93-3	B2	9.7	41.0
121	beta-Chloronaphthalene	91-58-7	D	5200.0	55000.0
122	o-Chloronitrobenzene	88-73-3	B2	180.0	760.0
123	p-Chloronitrobenzene	100-00-5	B2	250.0	1100.0
124	2-Chlorophenol	95-57-8	D	91.0	370.0
125	2-Chloropropane	75-29-6	D	170.0	580.0
126	Chlorothalonil	1897-45-6	B2	400.0	1700.0
127	* o-Chlorotoluene	95-49-8	D	160.0	550.0
128	Chlorpropham	101-21-3	D	13000.0	140000.0
129	Chlorpyrifos	2921-88-2	D	200.0	2000.0
130	Chlorpyrifos-methyl	5598-13-0	D	650.0	6800.0
131	Chlorsulfuron	64902-72-3	D	3300.0	34000.0
132	Chlorthiophos	602-38-56-4	D	52.0	550.0
133	Chromium, Total (1/6 ratio Cr VI/Cr III)	N/A	D	2100.0	4500.0
134	Chromium III	16065-83-1	D	77000.0	1000000.0
135	Chromium VI	7440-47-3	A	30.0	64.0
136	Chrysene	218-01-9	B2	610.0	2600.0
137	Cobalt	7440-48-4	D	4600.0	97000.0
138	Copper and compounds	7440-50-8	D	2800.0	63000.0
139	Copper cyanide	544-92-3	D	380.0	8500.0
140	Crotonaldehyde	123-73-9	C	0.052	0.11
141	Cumene	98-82-8	D	19.0	62.0
142	Cyanazine	21725-46-2	D	5.3	23.0
143	Cyanide, Free	57-12-5	D	1300.0	14000.0
144	Cyanogen	460-19-5	D	2600.0	27000.0
145	Cyanogen bromide	506-68-3	D	5900.0	61000.0
146	Cyanogen chloride	506-77-4	D	3300.0	34000.0
147	Cyclohexanone	108-94-1	D	330000.0	1000000.0
148	Cyclohexylamine	108-91-8	D	13000.0	140000.0
149	Cyhalothrin/Karate	68085-85-8	D	330.0	3400.0
150	Cypermethrin	52315-07-8	D	650.0	6800.0
151	Cyromazine	66215-27-8	D	490.0	5100.0
	D				
152	Dacthal	1861-32-1	D	650.0	6800.0
153	Dalapon	75-99-0	D	2000.0	20000.0
154	Danitol	39515-41-8	D	1600.0	17000.0
155	DDD	72-54-8	B2	19.0	80.0
156	DDE	72-55-9	B2	13.0	56.0
157	DDT	50-29-3	B2	13.0	56.0
158	Decabromodiphenyl ether	1163-19-5	C	650.0	6800.0
159	Demeton	8065-48-3	D	2.6	27.0
160	Diallate	2303-16-4	B2	73.0	310.0
161	Diazinon	333-41-5	E	59.0	610.0
162	Dibenz[ah]anthracene	53-70-3	B2	0.61	2.6
163	Dibenzofuran	132-64-9	D	260.0	2700.0
164	1,4-Dibromobenzene	106-37-6	D	650.0	6800.0
165	Dibromochloromethane	124-48-1	C	53.0	230.0
166	1,2-Dibromo-3-chloropropane	96-12-8	B2	3.2	14.0
167	1,2-Dibromoethane	106-93-4	B2	0.049	0.2
168	Dibutyl phthalate	84-74-2	D	6500.0	68000.0
169	Dicamba	1918-00-9	D	2000.0	20000.0
170	* 1,2-Dichlorobenzene	95-50-1	D	1100.0	3900.0
171	* 1,3-Dichlorobenzene	541-73-1	D	500.0	2000.0
172	1,4-Dichlorobenzene	106-46-7	C	190.0	790.0

	Chemical Name	CAS Number	Cancer Group	Residential (mg/kg)	Non-residential (mg/kg)
173	3,3-Dichlorobenzidine	91-94-1	B2	9.9	42.0
174	1,4-Dichloro-2-butene	764-41-0	B2	0.074	0.17
175	Dichlorodifluoromethane	75-71-8	D	94.0	310.0
176	1,1-Dichloroethane	75-34-3	C	500.0	1700.0
177	1,2-Dichloroethane (EDC)	107-06-2	B2	2.5	5.5
178	1,1-Dichloroethylene	75-35-4	C	0.36	0.8
179	1,2-Dichloroethylene (cis)	156-59-2	D	31.0	100.0
180	1,2-Dichloroethylene (trans)	156-60-5	D	78.0	270.0
181	1,2-Dichloroethylene (mixture)	540-59-0	D	35.0	120.0
182	2,4-Dichlorophenol	120-83-2	D	200.0	2000.0
183	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	94-82-6	D	520.0	5500.0
184	2,4-Dichlorophenoxyacetic Acid (2,4-D)	94-75-7	D	650.0	6800.0
185	1,2-Dichloropropane	78-87-5	B2	3.1	6.8
186	1,3-Dichloropropene	542-75-6	B2	2.4	5.5
187	2,3-Dichloropropanol	616-23-9	D	200.0	2000.0
188	Dichlorvos	62-73-7	B2	15.0	66.0
189	Dicofol	115-32-2	C	10.0	43.0
190	Dieldrin	60-57-1	B2	0.28	1.2
191	Diethylene glycol, monobutyl ether	112-34-5	D	370.0	3900.0
192	Diethylene glycol, monoethyl ether	111-90-0	D	130000.0	1000000.0
193	Diethylformamide	617-84-5	D	720.0	7500.0
194	Di(2-ethylhexyl)adipate	103-23-1	C	3700.0	16000.0
195	Diethyl phthalate	84-66-2	D	52000.0	550000.0
196	Diethylstilbestrol	56-53-1	A	0.0001	0.0004
197	Difenzoquat (Avenge)	43222-48-6	D	5200.0	55000.0
198	Diflubenzuron	35367-38-5	D	1300.0	14000.0
199	Diisopropyl methylphosphonate	1445-75-6	D	5200.0	55000.0
200	Dimethipin	55290-64-7	C	1300.0	14000.0
201	Dimethoate	60-51-5	D	13.0	140.0
202	3,3'-Dimethoxybenzidine	119-90-4	B2	320.0	1400.0
203	Dimethylamine	124-40-3	D	0.07	0.24
204	N-N-Dimethylaniline	121-69-7	D	130.0	1400.0
205	2,4-Dimethylaniline	95-68-1	C	5.9	25.0
206	2,4-Dimethylaniline hydrochloride	21436-96-4	C	7.7	33.0
207	3,3'-Dimethylbenzidine	119-93-7	B2	0.48	2.1
208	1,1-Dimethylhydrazine (Hydrazine, dimethyl)	57-14-7	B, C	1.7	7.3
209	1,2-Dimethylhydrazine	540-73-8	B2	0.12	0.52
210	N,N-Dimethylformamide	68-12-2	D	6500.0	68000.0
211	2,4-Dimethylphenol	105-67-9	D	1300.0	14000.0
212	2,6-Dimethylphenol	576-26-1	D	39.0	410.0
213	3,4-Dimethylphenol	95-65-8	D	65.0	680.0
214	Dimethyl phthalate	131-11-3	D	650000.0	1000000.0
215	Dimethyl terephthalate	120-61-6	D	6500.0	68000.0
216	4,6-Dinitro-o-cyclohexyl phenol	131-89-5	D	130.0	1400.0
217	1,3-Dinitrobenzene	99-65-0	D	6.5	68.0
218	1,2-Dinitrobenzene	528-29-0	D	26.0	270.0
219	1,4-Dinitrobenzene	100-25-4	D	26.0	270.0
220	2,4-Dinitrophenol	51-28-5	D	130.0	1400.0
221	Dinitrotoluene mixture	25321-14-6	B2	6.5	28.0
222	2,4-Dinitrotoluene	121-14-2	D	130.0	1400.0
223	2,6-Dinitrotoluene	606-20-2	D	65.0	680.0
224	Dinoseb	88-85-7	D	65.0	680.0
225	di-n-Octyl phthalate	117-84-0	D	1300.0	14000.0
226	1,4-Dioxane	123-91-1	B2	400.0	1700.0
227	Diphenamid	957-51-7	D	2000.0	20000.0
228	Diphenylamine	122-39-4	D	1600.0	17000.0
229	1,2-Diphenylhydrazine	122-66-7	B2	5.6	24.0
230	Diquat	85-00-7	D	140.0	1500.0

	Chemical Name	CAS Number	Cancer Group	Residential (mg/kg)	Non-residential (mg/kg)
231	Direct black 38	1937-37-7	A	0.052	0.22
232	Direct blue 6	2602-46-2	A	0.055	0.24
233	Direct brown 95	16071-86-6	A	0.048	0.21
234	Disulfoton	298-04-4	E	2.6	27.0
235	1,4-Dithiane	505-29-3	D	650.0	6800.0
236	Diuron	330-54-1	D	130.0	1400.0
237	Dodine	2439-10-3	D	260.0	2700.0
	E				
238	Endosulfan	115-29-7	D	390.0	4100.0
239	Endothall	145-73-3	D	1300.0	14000.0
240	Endrin	72-20-8	D	20.0	200.0
241	Epichlorohydrin	106-89-8	B2	7.5	25.0
242	1,2-Epoxybutane	106-88-7	D	370.0	3900.0
243	EPTC (S-Ethyl dipropylthiocarbamate)	759-94-4	D	1600.0	17000.0
244	Ethephon (2-chloroethyl phosphonic acid)	16672-87-0	D	330.0	3400.0
245	Ethion	563-12-2	D	33.0	340.0
246	2-Ethoxyethanol	110-80-5	D	26000.0	270000.0
247	2-Ethoxyethanol acetate	111-15-9	D	20000.0	200000.0
248	* Ethyl acetate	141-78-6	D	18000.0	39000.0
249	Ethyl acrylate	140-88-5	B2	2.1	4.5
250	* Ethylbenzene	100-41-4	D	1500.0	2700.0
251	Ethylene cyanohydrin	109-78-4	D	20000.0	200000.0
252	Ethylene diamine	107-15-3	D	1300.0	14000.0
253	Ethylene glycol	107-21-1	D	130000.0	1000000.0
254	Ethylene glycol, monobutyl ether	111-76-2	D	370.0	3900.0
255	Ethylene oxide	75-21-8	B1	1.3	3.2
256	Ethylene thiourea (ETU)	96-45-7	B2	5.2	55.0
257	* Ethyl chloride	75-00-3	D	1100.0	4200.0
258	* Ethyl ether	60-29-7	D	3800.0	3800.0
259	* Ethyl methacrylate	97-63-2	D	210.0	690.0
260	Ethyl p-nitrophenyl phenylphosphorothioate	2104-64-5	D	0.65	6.8
261	Ethylphthalyl ethyl glycolate	84-72-0	D	200000.0	1000000.0
262	Express	101200-48-0	D	520.0	5500.0
	F				
263	Fenamiphos	22224-92-6	D	16.0	170.0
264	Fluometuron	2164-17-2	D	850.0	8900.0
265	Fluoranthene	206-44-0	D	2600.0	27000.0
266	Fluorene	86-73-7	D	2600.0	27000.0
267	Fluorine (soluble fluoride)	7782-41-4	D	3900.0	41000.0
268	Fluoridone	59756-60-4	D	5200.0	55000.0
269	Flurprimidol	56425-91-3	D	1300.0	14000.0
270	Flutolanil	66332-96-5	D	3900.0	41000.0
271	Fluvalinate	69409-94-5	D	650.0	6800.0
272	Folpet	133-07-3	B2	1300.0	5500.0
273	Fomesafen	72178-02-0	C	23.0	100.0
274	Fonofos	944-22-9	D	130.0	1400.0
275	Formaldehyde	50-00-0	B1	9800.0	100000.0
276	Formic Acid	64-18-6	D	130000.0	1000000.0
277	Fosetyl-al	39148-24-8	C	200000.0	1000000.0
278	Furan	110-00-9	D	2.5	8.5
279	Furazolidone	67-45-8	B2	1.2	5.0
280	Furfural	98-01-1	D	200.0	2000.0
281	Furium	531-82-8	B2	0.089	0.38
282	Furmecyclox	60568-05-0	B2	150.0	640.0
	G				
283	Glufosinate-ammonium	77182-82-2	D	26.0	270.0
284	Glycidaldehyde	765-34-4	B2	26.0	270.0
285	Glyphosate	1071-83-6	D	6500.0	68000.0
	H				

	Chemical Name	CAS Number	Cancer Group	Residential (mg/kg)	Non-residential (mg/kg)
286	Haloxyfop-methyl	69806-40-2	D	3.3	34.0
287	Harmony	79277-27-3	D	850.0	8900.0
288	Heptachlor	76-44-8	B2	0.99	4.2
289	Heptachlor epoxide	1024-57-3	B2	0.49	2.1
290	Hexabromobenzene	87-82-1	D	130.0	1400.0
291	Hexachlorobenzene	118-74-1	B2	2.8	12.0
292	Hexachlorobutadiene	87-68-3	C	13.0	140.0
293	HCH (alpha)	319-84-6	B2	0.71	3.0
294	HCH (beta)	319-85-7	C	2.5	11.0
295	HCH (gamma) Lindane	58-89-9	B2-C	3.4	15.0
296	HCH-technical	608-73-1	B2	2.5	11.0
297	Hexachlorocyclopentadiene	77-47-4	D	450.0	4600.0
298	Hexachlorodibenzo-p-dioxin mixture (HxCDD)	19408-74-3	B2	0.00072	0.0031
299	Hexachloroethane	67-72-1	C	65.0	680.0
300	Hexachlorophene	70-30-4	D	20.0	200.0
301	Hexahydro-1,3,5-trinitro-1,3,5-triazine	121-82-4	C	40.0	170.0
302	* n-Hexane	110-54-3	D	120.0	400.0
303	Hexazinone	51235-04-2	D	2200.0	22000.0
304	Hydrazine, hydrazine sulfate	302-01-2	B2	1.5	6.4
305	Hydrocarbons (C_{10} to C_{32})	N/A	N/A	4100.0	18000.0
306	Hydrogen chloride	7647-01-0	D	370.0	3900.0
307	Hydrogen cyanide	74-90-8	D	11.0	35.0
308	p-Hydroquinone	123-31-9	D	2600.0	27000.0
	I				
309	Imazalil	35554-44-0	D	850.0	8900.0
310	Imazaquin	81335-37-7	D	16000.0	170000.0
311	Indeno[1,2,3-cd]pyrene	193-39-5	B2	6.1	26.0
312	Iprodione	36734-19-7	D	2600.0	27000.0
313	* Isobutanol	78-83-1	D	11000.0	42000.0
314	Isophorone	78-59-1	C	4700.0	20000.0
315	Isopropalin	33820-53-0	D	980.0	10000.0
316	Isopropyl methyl phosphonic acid	1832-54-8	D	6500.0	68000.0
317	Isoxaben	82558-50-7	C	3300.0	34000.0
	K				
318	Kepone	143-50-0	B, C	0.25	1.1
	L				
319	Lactofen	77501-63-4	D	130.0	1400.0
320	#Lead	7439-92-1	B2	400.0	2000.0
321	Lead (tetraethyl)	78-00-2	D	0.0065	0.068
322	Linuron	330-55-2	C	130.0	1400.0
323	Lithium	7439-93-2	D	1500.0	34000.0
324	Londax	83055-99-6	D	13000.0	140000.0
	M				
325	Malathion	121-75-5	D	1300.0	14000.0
326	Maleic anhydride	108-31-6	D	6500.0	68000.0
327	Maleic hydrazide	123-33-1	D	33000.0	340000.0
328	Malononitrile	109-77-3	D	1.3	14.0
329	Mancozeb	8018-01-7	D	2000.0	20000.0
330	Maneb	12427-38-2	D	330.0	3400.0
331	Manganese and compounds	7439-96-5	D	3200.0	43000.0
332	Mephosfolan	950-10-7	D	5.9	61.0
333	Mepiquat	24307-26-4	D	2000.0	20000.0
334	Mercuric chloride	7487-94-7	C	23.0	510.0
335	Mercury (elemental)	7439-97-6	D	6.7	180.0
336	Mercury (methyl)	22967-92-6	D	6.5	68.0
337	Merphos	150-50-5	D	2.0	20.0
338	Merphos oxide	78-48-8	D	2.0	20.0
339	Metalaxyl	57837-19-1	D	3900.0	41000.0

	Chemical Name	CAS Number	Cancer Group	Residential (mg/kg)	Non-residential (mg/kg)
340	Methacrylonitrile	126-98-7	D	2.0	8.1
341	Methamidophos	10265-92-6	D	3.3	34.0
342	Methanol	67-56-1	D	33000.0	340000.0
343	Methidathion	950-37-8	C	65.0	680.0
344	Methomyl	16752-77-5	D	1600.0	17000.0
345	Methoxychlor	72-43-5	D	330.0	3400.0
346	2-Methoxyethanol	109-86-4	D	65.0	680.0
347	2-Methoxyethanol acetate	110-49-6	D	130.0	1400.0
348	2-Methoxy-5-nitroaniline	99-59-2	C	97.0	410.0
349	Methyl acetate	79-20-9	D	21000.0	88000.0
350	Methyl acrylate	96-33-3	D	69.0	230.0
351	2-Methylaniline (o-toluidine)	95-53-4	B2	19.0	79.0
352	2-Methylaniline hydrochloride	636-21-5	B2	25.0	110.0
353	Methyl chlorocarbonate	79-22-1	D	65000.0	680000.0
354	2-Methyl-4-chlorophenoxyacetic acid	94-74-6	D	33.0	340.0
355	4-(2-Methyl-4-chlorophenoxy) butyric acid (MCPB)	94-81-5	D	650.0	6800.0
356	2-(2-Methyl-4-chlorophenoxy) propionic acid	93-65-2	D	65.0	680.0
357	2-(2-Methyl-1,4-chlorophenoxy) propionic acid (MCPP)	16484-77-8	D	65.0	680.0
358	Methylcyclohexane	108-87-2	D	56000.0	590000.0
359	4,4'-Methylenebisbenzeneamine	101-77-9	D	18.0	76.0
360	4,4'-Methylene bis(2-chloroaniline)	101-14-4	B2	34.0	150.0
361	4,4'-Methylene bis(N,N'-dimethyl)aniline	101-61-1	B2	97.0	410.0
362	Methylene bromide	74-95-3	D	650.0	6800.0
363	Methylene chloride	75-09-2	B2	77.0	180.0
364	Methyl ethyl ketone	78-93-3	D	7100.0	27000.0
365	Methyl hydrazine	60-34-4	B, C	4.0	17.0
366	Methyl isobutyl ketone	108-10-1	D	770.0	2800.0
367	* Methyl methacrylate	80-62-6	D	760.0	2800.0
368	2-Methyl-5-nitroaniline	99-55-8	C	130.0	580.0
369	Methyl parathion	298-00-0	D	16.0	170.0
370	2-Methylphenol	95-48-7	C	3300.0	34000.0
371	3-Methylphenol	108-39-4	C	3300.0	34000.0
372	4-Methylphenol	106-44-5	C	330.0	3400.0
373	Methyl styrene (mixture)	25013-15-4	D	120.0	520.0
374	* Methyl styrene (alpha)	98-83-9	D	890.0	3100.0
375	Methyl tertbutyl ether (MTBE)	1634-04-4	D	320.0	3300.0
376	Metolaclor (Dual)	51218-45-2	D	9800.0	100000.0
377	Metribuzin	21087-64-9	D	1600.0	17000.0
378	Mirex	2385-85-5	B2	2.5	11.0
379	Molinate	2212-67-1	D	130.0	1400.0
380	Molybdenum	7439-98-7	D	380.0	8500.0
381	Monochloramine	10599-90-3	D	6500.0	68000.0
	N				
382	Naled	300-76-5	D	130.0	1400.0
383	Naphthalene	91-20-3	D	2600.0	27000.0
384	Napropamide	15299-99-7	D	6500.0	68000.0
385	Nickel and compounds	7440-02-0	D	1500.0	34000.0
386	Nickel subsulfide	12035-72-2	A	5100.0	11000.0
387	Nitrapyrin	1929-82-4	D	98.0	1000.0
388	Nitrate	14797-55-8	D	100000.0	1000000.0
389	Nitrite	14797-65-0	D	6500.0	68000.0
390	2-Nitroaniline	88-74-4	D	3.9	41.0
391	Nitrobenzene	98-95-3	D	18.0	94.0
392	Nitrofurantoin	67-20-9	D	4600.0	48000.0
393	Nitrofurazone	59-87-0	B2	3.0	13.0
394	Nitroguanidine	556-88-7	D	6500.0	68000.0
395	N-Nitrosodi-n-butylamine	924-16-3	B2	0.22	0.55

	Chemical Name	CAS Number	Cancer Group	Residential (mg/kg)	Non-residential (mg/kg)
396	N-Nitrosodiethanolamine	1116-54-7	B2	1.6	6.8
397	N-Nitrosodiethylamine	55-18-5	B2	0.03	0.13
398	N-Nitrosodimethylamine	62-75-9	B2	0.087	0.37
399	N-Nitrosodiphenylamine	86-30-6	B2	910.0	3900.0
400	N-Nitroso di-n-propylamine	621-64-7	B2	0.63	2.7
401	N-Nitroso-N-methylethylamine	10595-95-6	B2	0.20	0.87
402	N-Nitrosopyrrolidine	930-55-2	B2	2.1	9.1
403	m-Nitrotoluene	99-08-1	D	650.0	6800.0
404	p-Nitrotoluene	99-99-0	D	650.0	6800.0
405	Norflurazon	27314-13-2	D	2600.0	27000.0
406	NuStar	85509-19-9	D	46.0	480.0
	O				
407	Octabromodiphenyl ether	32536-52-0	D	200.0	2000.0
408	Octahydro-1357-tetranitro-1357-tetrazocine (HMX)	2691-41-0	D	3300.0	34000.0
409	Octamethylpyrophosphoramide	152-16-9	D	130.0	1400.0
410	Oryzalin	19044-88-3	C	3300.0	34000.0
411	Oxadiazon	19666-30-9	D	330.0	3400.0
412	Oxamyl	23135-22-0	E	1600.0	17000.0
413	Oxyfluorfen	42874-03-3	D	200.0	2000.0
	P				
414	Paclobutrazol	76738-62-0	D	850.0	8900.0
415	Paraquat	4685-14-7	C	290.0	3100.0
416	Parathion	56-38-2	C	390.0	4100.0
417	Pebulate	1114-71-2	D	3300.0	34000.0
418	Pendimethalin	40487-42-1	D	2600.0	27000.0
419	Pentabromo-6-chloro cyclohexane	87-84-3	C	190.0	830.0
420	Pentabromodiphenyl ether	32534-81-9	D	130.0	1400.0
421	Pentachlorobenzene	608-93-5	D	52.0	550.0
422	Pentachloronitrobenzene	82-68-8	C	17.0	73.0
423	Pentachlorophenol	87-86-5	B2	25.0	79.0
424	Permethrin	52645-53-1	D	3300.0	34000.0
425	Phenmedipham	13684-63-4	D	16000.0	170000.0
426	Phenol	108-95-2	D	39000.0	410000.0
427	m-Phenylenediamine	108-45-2	D	390.0	4100.0
428	p-Phenylenediamine	106-50-3	D	12000.0	130000.0
429	Phenylmercuric acetate	62-38-4	D	5.2	55.0
430	2-Phenylphenol	90-43-7	C	2300.0	9800.0
431	Phorate	298-02-2	E	13.0	140.0
432	Phosmet	732-11-6	D	1300.0	14000.0
433	Phosphine	7803-51-2	D	20.0	200.0
434	Phosphorus, white	7723-14-0	D	1.5	34.0
435	Phthalic anhydride	85-44-9	D	130000.0	1000000.0
436	Picloram	1918-02-1	D	4600.0	48000.0
437	Pirimiphos-methyl	23505-41-1	D	650.0	6800.0
438	Polybrominated biphenyls (PBBs)	N/A	B2	0.46	2.1
439	Polychlorinated biphenyls (PCBs)	1336-36-3	B2	2.5	13.0
440	Potassium cyanide	151-50-8	D	3300.0	34000.0
441	Potassium silver cyanide	506-61-6	D	13000.0	140000.0
442	Prochloraz	67747-09-5	C	30.0	130.0
443	Profluralin	26399-36-0	D	390.0	4100.0
444	Prometon	1610-18-0	D	980.0	10000.0
445	Prometryn	7287-19-6	D	260.0	2700.0
446	Pronamide	23950-58-5	C	4900.0	51000.0
447	Propachlor	1918-16-7	D	850.0	8900.0
448	Propanil	709-98-8	D	330.0	3400.0
449	Propargite	2312-35-8	D	1300.0	14000.0
450	Propargyl alcohol	107-19-7	D	130.0	1400.0
451	Propazine	139-40-2	C	1300.0	14000.0

	Chemical Name	CAS Number	Cancer Group	Residential (mg/kg)	Non-residential (mg/kg)
452	Propham	122-42-9	D	1300.0	14000.0
453	Propiconazole	60207-90-1	D	850.0	8900.0
454	Propylene glycol	57-55-6	D	1000000.0	1000000.0
455	Propylene glycol, monoethyl ether	111-35-3	D	46000.0	480000.0
456	Propylene glycol, monomethyl ether	107-98-2	D	46000.0	480000.0
457	Propylene oxide	75-56-9	B2	19.0	79.0
458	Pursuit	81335-77-5	D	16000.0	170000.0
459	Pydrin	51630-58-1	D	1600.0	17000.0
460	Pyrene	129-00-0	D	2000.0	20000.0
461	Pyridine	110-86-1	D	65.0	680.0
	Q				
462	Quinalphos	13593-03-8	D	33.0	340.0
463	Quinoline	91-22-5	C	0.37	1.6
	R				
464	RDX (Cyclonite)	121-82-4	C	40.0	170.0
465	Resmethrin	10453-86-8	D	2000.0	20000.0
466	Ronnel	299-84-3	D	3300.0	34000.0
467	Rotenone	83-79-4	D	260.0	2700.0
	S				
468	Savey	78587-05-0	D	1600.0	17000.0
469	Selenious Acid	7783-00-8	D	330.0	3400.0
470	Selenium	7782-49-2	D	380.0	8500.0
471	Selenourea	630-10-4	D	330.0	3400.0
472	Sethoxydim	74051-80-2	D	5900.0	61000.0
473	Silver and compounds	7440-22-4	D	380.0	8500.0
474	Silver cyanide	506-64-9	D	6500.0	68000.0
475	Simazine	122-34-9	C	37.0	160.0
476	Sodium azide	26628-22-8	D	260.0	2700.0
477	Sodium cyanide	143-33-9	D	2600.0	27000.0
478	Sodium diethyldithiocarbamate	148-18-5	C	16.0	71.0
479	Sodium fluoroacetate	62-74-8	D	1.3	14.0
480	Sodium metavanadate	13718-26-8	D	65.0	680.0
481	Strontium, stable	7440-24-6	D	46000.0	1000000.0
482	Strychnine	57-24-9	D	20.0	200.0
483	* Styrene	100-42-5	C	3300.0	3300.0
484	Systhane	88671-89-0	D	1600.0	17000.0
	T				
485	2,3,7,8-TCDD (dioxin)	1746-01-6	B2	0.000038	0.00024
486	Tebuthiuron	34014-18-1	D	4600.0	48000.0
487	Temephos	3383-96-8	D	1300.0	14000.0
488	Terbacil	5902-51-2	E	850.0	8900.0
489	Terbufos	13071-79-9	D	1.6	17.0
490	Terbutryn	886-50-0	D	65.0	680.0
491	1,2,4,5-Tetrachlorobenzene	95-94-3	D	20.0	200.0
492	1,1,1,2-Tetrachloroethane	630-20-6	C	23.0	54.0
493	1,1,2,2-Tetrachloroethane	79-34-5	C	4.4	11.0
494	Tetrachloroethylene (PCE)	127-18-4	B2	53.0	170.0
495	2,3,4,6-Tetrachlorophenol	58-90-2	D	2000.0	20000.0
496	p,a,a,a-Tetrachlorotoluene	5216-25-1	B2	0.22	0.95
497	Tetrachlorovinphos	961-11-5	C	190.0	790.0
498	Tetraethyldithiopyrophosphate	3689-24-5	D	33.0	340.0
499	Thallic oxide	1314-32-5	D	5.4	120.0
500	Thallium acetate	563-68-8	D	6.9	150.0
501	Thallium carbonate	6533-73-9	D	6.1	140.0
502	Thallium chloride	7791-12-0	D	6.1	140.0
503	Thallium nitrate	10102-45-1	D	6.9	150.0
504	Thallium selenite	12039-52-0	D	6.9	150.0
505	Thallium sulfate	7446-18-6	D	6.1	140.0
506	Thiobencarb	28249-77-6	D	650.0	6800.0

	Chemical Name	CAS Number	Cancer Group	Residential (mg/kg)	Non-residential (mg/kg)
507	2-(Thiocyanomethylthio)- benzothiazole (TCMTB)	3689-24-5	D	2000.0	20000.0
508	Thiofanox	39196-18-4	D	20.0	200.0
509	Thiophanate-methyl	23564-05-8	D	5200.0	55000.0
510	Thiram	137-26-8	D	330.0	3400.0
511	Tin and compounds	7440-31-5	D	46000.0	1000000.0
512	* Toluene	108-88-3	D	790.0	2700.0
513	Toluene-2,4-diamine	95-80-7	B2	1.4	6.0
514	Toluene-2,5-diamine	95-70-5	D	39000.0	410000.0
515	Toluene-2,6-diamine	823-40-5	C	13000.0	140000.0
516	p-Toluidine	106-49-0	C	23.0	100.0
517	Toxaphene	8001-35-2	B2	4.0	17.0
518	Tralomethrin	66841-25-6	D	490.0	5100.0
519	Triallate	2303-17-5	D	850.0	8900.0
520	Triasulfuron	82097-50-5	D	650.0	6800.0
521	1,2,4-Tribromobenzene	615-54-3	D	330.0	3400.0
522	Tributyltin oxide (TBTO)	56-35-9	D	2.0	20.0
523	2,4,6-Trichloroaniline	634-93-5	C	130.0	560.0
524	2,4,6-Trichloroaniline hydrochloride	33663-50-2	C	150.0	660.0
525	* 1,2,4-Trichlorobenzene	120-82-1	D	570.0	4700.0
526	* 1,1,1-Trichloroethane	71-55-6	D	1200.0	4800.0
527	1,1,2-Trichloroethane	79-00-5	C	6.5	15.0
528	Trichloroethylene (TCE)	79-01-6	B2	27.0	70.0
529	Trichlorofluoromethane	75-69-4	D	380.0	1300.0
530	2,4,5-Trichlorophenol	95-95-4	D	6500.0	68000.0
531	2,4,6-Trichlorophenol	88-06-2	B2	400.0	1700.0
532	2,4,5-Trichlorophenoxyacetic acid	93-76-5	D	650.0	6800.0
533	2-(2,4,5-Trichlorophenoxy) propionic acid	93-72-1	D	520.0	5500.0
534	1,1,2-Trichloropropane	598-77-6	D	15.0	50.0
535	1,2,3-Trichloropropane	96-18-4	B2	0.014	0.03
536	1,2,3-Trichloropropene	96-19-5	D	11.0	38.0
537	* 1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	D	10000.0	10000.0
538	Tridiphane	58138-08-2	D	200.0	2000.0
539	Triethylamine	121-44-8	D	23.0	84.0
540	Trifluralin	1582-09-8	C	490.0	2500.0
541	Trimethyl phosphate	512-56-1	B2	120.0	520.0
542	1,3,5-Trinitrobenzene	99-35-4	D	3.3	34.0
543	Trinitrophenylmethylnitramine	479-45-8	D	650.0	6800.0
544	2,4,6-Trinitrotoluene	118-96-7	C	33.0	340.0
	V				
545	Vanadium	7440-62-2	D	540.0	12000.0
546	Vanadium pentoxide	1314-62-1	D	690.0	15000.0
547	Vanadium sulfate	13701-70-7	D	1500.0	34000.0
548	Vernam	1929-77-7	D	65.0	680.0
549	Vinclozolin	50471-44-8	D	1600.0	17000.0
550	Vinyl acetate	108-05-4	D	780.0	2600.0
551	Vinyl bromide	593-60-2	B2	1.9	4.1
552	Vinyl chloride	75-01-4	A	0.016	0.035
	W				
553	Warfarin	81-81-2	D	20.0	200.0
	X				
554	* Xylene (mixed)	1330-20-7	D	2800.0	2800.0
	Z				
555	Zinc	7440-66-6	D	23000.0	510000.0
556	Zinc phosphide	1314-84-7	D	23.0	510.0
557	Zinc cyanide	557-21-1	D	3300.0	34000.0
558	Zineb	12122-67-7	D	3300.0	34000.0

* = 1% free-phase analysis
# = Based on IEUBK Model

~ = Based on natural background
N/A = Not Applicable
CARCINOGENICITY CLASSIFICATIONS:
A = Known human carcinogen
B1 = Probable human carcinogen, with limited data indicating human carcinogenicity.
B2 = Probable human carcinogen, with inadequate or no evidence of carcinogenicity in humans. Sufficient evidence for carcinogenicity in laboratory animals.
C = Possible human carcinogen.
D = Not classifiable as to human carcinogenicity.
E = Evidence of noncarcinogenicity in humans.

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency appendix reinstated at the request of the Department; historical note from Supp. 97-3 stating emergency expired removed for clarity. Appendix B adopted permanently effective December 4, 1997, replacing emergency appendix (Supp. 97-4). Former Appendix B repealed; new Appendix B renumbered from Appendix A and amended by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

Appendix C. Repealed

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Interim emergency appendix reinstated at the request of the Department; historical note from Supp. 97-3 stating emergency expired removed for clarity. Appendix C adopted permanently effective December 4, 1997, replacing emergency appendix (Supp. 97-4). Appendix C repealed by final rulemaking at 13 A.A.R. 971, effective May 5, 2007 (Supp. 07-1).

Appendix D. Emergency Expired

Historical Note

Adopted by emergency action effective March 29, 1996, pursuant to A.R.S. § 41-1026 and Laws 1995, Ch. 232, § 5; in effect until permanent rules are adopted and in place no later than August 1, 1997, pursuant to A.R.S. § 49-152 and Laws 1995, Ch. 232, § 5 (Supp. 96-1). Historical note revised to clarify exemptions of emergency adoption (Supp. 97-1). Historical note from Supp. 97-3 stating emergency expired removed for clarity; interim emergency rule reinstated at the request of the Department. Emergency expired effective December 4, 1997 (Supp. 97-4).

ARTICLE 3. PROSPECTIVE PURCHASER AGREEMENT

R18-7-301. Prospective Purchaser Agreement Fee

A. An applicant for a prospective purchaser agreement with the Department under A.R.S. § 49-285.01 shall pay to the Department the fee prescribed in this Article. The Department shall not refund a fee once it accepts an application.

B. An applicant for a prospective purchaser agreement shall pay a fee for each prospective purchaser agreement application submitted to the Department for review. The fee includes:
1. An initial charge as prescribed in subsection (C);
2. An hourly charge, if the conditions of subsection (D)(1) apply;
3. The publication costs for the legal notice as prescribed in subsection (F); and
4. A charge, as prescribed in subsection (D)(2), if an applicant requests a settlement.

C. An applicant shall pay an initial charge of $2,500 for an application for a prospective purchaser agreement requiring minimal review for property within a site that is listed in the Water Quality Assurance Revolving Fund (WQARF) registry under A.R.S. § 49-287.01. For property that is not on the WQARF registry, an applicant shall pay an initial charge of $3,600 for an application for a prospective purchaser agreement. The initial charge covers direct and indirect Department costs. An application for a prospective purchaser agreement requiring minimal review is one that requires 34 or fewer hours of review time for a site on the WQARF registry or 49 or fewer hours for a site not on the WQARF registry.

D. In addition to the initial charge described in subsection (C), the applicant shall pay the following charges, if applicable:
1. An hourly charge for reviewing a prospective purchaser agreement that requires more than the hours for review covered by the initial charge in subsection (C). The additional charge is $73 per hour for Department staff time and Assistant Attorney General time.
2. A charge in the amount of $2,000, to accompany a request for a settlement that includes immunity from contribution claims for existing contamination, if requested under A.R.S. § 49-285.01. If costs for the settlement exceed $2,000, the remainder of the costs will be paid for through the terms of the settlement.

E. The applicant may agree in writing to pay charges that exceed the initial charge described in subsection (C). Unless the applicant has so agreed, when the Department believes that the costs associated with the prospective purchaser agreement have begun to exceed the initial charge, the Department shall stop work on the prospective purchaser agreement and notify the applicant in writing. The applicant shall notify the Department in writing, within 30 days of the Department's notification under this subsection, whether the applicant wishes the Department to continue work on the application and to incur additional costs. The Department shall terminate the application if the applicant does not provide written confirmation within 30 days that it wishes the Department to continue work on the application.

F. The Department shall publish a legal notice announcing an opportunity for public comment on the prospective purchaser agreement. The legal notice shall include:
1. A general description of the contents of the agreement;

2. The location where information regarding the agreement can be obtained;
3. The name and address of the Department contact where comments may be sent; and
4. The time and date that the comment period closes.

G. The initial charge described in subsection (C) is due when the applicant submits the prospective purchaser agreement application to the Department. The publication cost specified in subsection (B)(3), and any hourly charge described in subsection (D)(1), are due within 30 days of the date the invoice is sent by the Department. Fee charges are payable to the state of Arizona, and shall be paid in full before the Department executes a prospective purchaser agreement.

Historical Note
Adopted effective February 7, 1997; filed with the Office of the Secretary of State January 14, 1997 (Supp. 97-1). Amended by final rulemaking at 12 A.A.R. 345, effective March 11, 2006 (Supp. 06-1).

Editor's Note: The heading for the following Article was amended by exempt rulemaking at 7 A.A.R. 814, effective February 9, 2001 (Supp. 01-1).

Editor's Note: The following Article was originally adopted under an exemption from the Arizona Administrative Procedure Act (A.R.S. Title 41, Chapter 6) pursuant to Laws 1997, Ch. 296, §§ 3(E) & (G), 10 & 11. Although exempt from certain provisions of the rulemaking process, the Department was required to submit notice of proposed rulemaking with the Secretary of State for publication in the Arizona Administrative Register and conduct a public hearing (Supp. 97-3).

ARTICLE 4. REPEALED

R18-7-401. Repealed

Historical Note
Adopted effective August 5, 1997, under an exemption from certain provisions of the Administrative Procedure Act pursuant to Laws 1997, Ch. 296, §§ 3(E) & (G), 10 & 11 (Supp. 97-3). Section R18-7-401 repealed; new Section R18-7-401 adopted effective October 21, 1998 (Supp. 98-4). Repealed by final rulemaking at 15 A.A.R. 232, effective March 7, 2009 (Supp. 09-1).

Editor's Note: The rules in the following Article were adopted as interim rules under an exemption from the Arizona Administrative Procedure Act (A.R.S. Title 41, Chapter 6) pursuant to Laws 2000, Ch. 225, § 13. Although exempt from certain provisions of the rulemaking process, the Department is required to submit notice of proposed rulemaking with the Secretary of State for publication in the Arizona Administrative Register and conduct a public hearing (Supp. 01-1).

ARTICLE 5. VOLUNTARY REMEDIATION PROGRAM

R18-7-501. Definitions

The following definitions shall apply in this Article, unless the context otherwise requires:

"Applicant" means a person who participates in the Voluntary Remediation Program. Participation in the Voluntary Remediation Program begins when the Department receives an application under A.R.S. § 49-173 and continues until any one of the following occurs:

The Department grants the applicant's request for a no further action determination.

The applicant provides the Department with notice of the applicant's intent to withdraw from the program.

The Department terminates the applicant's participation under A.R.S. § 49-178(B).

"Department" means the Arizona Department of Environmental Quality.

"Voluntary Remediation Program" means the program authorized under A.R.S. Title 49, Chapter 1, Article 5.

Historical Note
New Section adopted as interim rules, under an exemption from certain provisions of the Administrative Procedure Act pursuant to Laws 2000, Ch. 225, § 13, at 7 A.A.R. 814, effective February 9, 2001 (Supp. 01-1).

R18-7-502. Application Fee

A. At the time of filing an application to participate in the Voluntary Remediation Program, the applicant shall pay a nonrefundable application fee in the amount of $2,000.00.

B. The application fee shall be in the form of a company check, cashier's check, certified check, or money order made payable to the Arizona Department of Environmental Quality.

C. Except as provided in subsection (D), an application does not meet the requirements in A.R.S. § 49-173 unless accompanied by the application fee. The Department shall not review an application until the application fee is paid in full.

D. At the request of an applicant that is a small business as defined under A.R.S. § 41-1001, the Department may review and approve an application upon receipt of a partial payment of the application fee in an amount approved by the Department and an agreement to pay the remainder of the fee in scheduled installments.

E. An applicant that withdraws or is terminated from participation in the Voluntary Remediation Program may reapply to the program by submitting an application that meets the requirements of A.R.S. § 49-173, including payment of the application fee.

Historical Note
New Section adopted as interim rules, under an exemption from certain provisions of the Administrative Procedure Act pursuant to Laws 2000, Ch. 225, § 13, at 7 A.A.R. 814, effective February 9, 2001 (Supp. 01-1).

R18-7-503. Deposit

A. At the time that an applicant submits a work plan under A.R.S. § 49-175 or a report under A.R.S. § 49-181, the applicant shall submit to the Department an initial deposit of $4,000.00.

B. The deposit shall be in the form of a company check, cashier's check, certified check, or money order made payable to the Arizona Department of Environmental Quality.

C. The Department shall begin review of the applicant's work plan or the report submitted under A.R.S. § 49-181 upon receipt of the initial deposit.

D. Upon receipt of the initial deposit, the Department shall establish a site-specific deposit account identified by a unique account number. The Department shall charge all incurred reimbursable costs attributable to the applicant's site against the site-specific deposit account.

E. If, at any time during the applicant's participation in the program, the balance in the site-specific deposit account falls below $1,000.00 and the Department reasonably estimates that the reimbursable costs chargeable to the account will exceed the amount available in the account, the Department shall mail or fax a written request that the applicant submit an additional deposit in an amount not to exceed $4,000.00. The Department may request any number of additional deposits, in amounts of $4,000.00 or less, at any time that the conditions of this subsection are met.

F. If any requested additional deposit is not received within 30 days after the Department mails or faxes the request in subsection (E) and the Department determines that the applicant's site specific account balance is insufficient to support continued program participation, the Department shall mail a written notice of deficiency under A.R.S. § 49-178 and shall notify the applicant that work on the site may be suspended until the additional deposit is received. If the Department does not receive the requested additional deposit within 60 days after the notice of deficiency is mailed or faxed and the applicant does not dispute the Department's determination that the site specific account balance is insufficient to support continued program participation, the Department may terminate the applicant's participation in the program. An applicant whose participation is terminated under this subsection may reapply to the program as provided in R18-7-502(E).

Historical Note
New Section adopted as interim rules, under an exemption from certain provisions of the Administrative Procedure Act pursuant to Laws 2000, Ch. 225, § 13, at 7 A.A.R. 814, effective February 9, 2001 (Supp. 01-1).

R18-7-504. Voluntary Remediation Program Reimbursement

A. The applicant shall reimburse the Department, at an hourly reimbursement rate established under R18-7-505, for time spent by Voluntary Remediation Program staff on activities specifically related to the applicant's site, including the following:
1. Review of the application submitted under A.R.S. § 49-173, including review of any modifications requested by the Department or the applicant or additional information submitted by the applicant.
2. Review of the work plan submitted under A.R.S. § 49-175, including review of any modifications requested by the Department under A.R.S. § 49-177 or by the applicant or the Department under A.R.S. § 49-180.
3. Review of progress reports submitted as part of a work plan under A.R.S. § 49-175 or as requested by the Department under A.R.S. § 49-177 or A.R.S. § 49-180.
4. Consideration by the Department under A.R.S. § 49-176(D) of written comments submitted in response to a public notice providing an opportunity to comment or a public meeting.
5. Participation in public hearings required by the Department under A.R.S. § 49-176(D).
6. Site inspections under A.R.S. § 49-177 and site investigations under A.R.S. § 49-181, including time spent in travel to and from the site.
7. Review of the report and request for a no further action determination submitted under A.R.S. § 49-181, including review of any modifications requested by the applicant or the Department.
8. Time spent in reviewing a request submitted by an applicant under A.R.S. § 49-182 for approval of a remedial action under A.R.S. § 49-285.
9. Time spent in meetings or discussions requested by the applicant or the Department.

B. The applicant shall reimburse the Department for the site-specific costs of goods and services contracted by the Department including:
1. Reasonable and necessary attorneys' fees billed to the Department by the Attorney General for legal services, including legal fees billed for representation in regard to appeals or dispute resolution under A.R.S. § 49-185.
2. Costs incurred by the Department for work provided under a contract described in A.R.S. § 49-179(D)(1) or A.R.S. § 49-179(D)(2).
3. Reasonable and necessary travel costs incurred in the performance of activities described in subsections (A)(5), (A)(6), or (A)(9) or performed at the request of the applicant.
4. Other reasonable site related expenses documented in writing by the Department.

Historical Note
New Section adopted as interim rules, under an exemption from certain provisions of the Administrative Procedure Act pursuant to Laws 2000, Ch. 225, § 13, at 7 A.A.R. 814, effective February 9, 2001 (Supp. 01-1).

R18-7-505. Hourly Reimbursement Rate

The hourly reimbursement rate is $110.00 per hour.

Historical Note
New Section adopted as interim rules, under an exemption from certain provisions of the Administrative Procedure Act pursuant to Laws 2000, Ch. 225, § 13, at 7 A.A.R. 814, effective February 9, 2001 (Supp. 01-1).

R18-7-506. Voluntary Remediation Program Accounting

Within a reasonable time after the end of each calender quarter, the Department shall mail or fax each applicant a statement itemizing reimbursable costs charged against the site-specific deposit account and a summary of account activity during that quarter. The statement shall be in a form consistent with generally accepted accounting principles.

Historical Note
New Section adopted as interim rules, under an exemption from certain provisions of the Administrative Procedure Act pursuant to Laws 2000, Ch. 225, § 13, at 7 A.A.R. 814, effective February 9, 2001 (Supp. 01-1).

R18-7-507. Account Reconciliation

A. Within a reasonable time after completion of the remediation work at the site, or after termination or withdrawal of the applicant from participation in the program, the Department shall prepare and mail or fax to the applicant a final statement which shall include:
1. An itemization of site-specific reimbursable costs incurred by the Department but not previously reported in a quarterly statement.
2. The total amount of site-specific reimbursable costs incurred by the Department during the course of the project, including the costs reported in subsection (A)(1).
3. The total amount submitted as deposits by the applicant and applied by the Department to the applicant's site-specific deposit account during the course of the project, plus the amount paid by the applicant as an application fee.

B. If the final statement shows that the amounts submitted or paid during the course of the project are less than the Department's reimbursable costs, the applicant shall be responsible for and shall pay, within 30 days after receipt of the final statement, the difference between the costs incurred and the amounts submitted or paid.

C. If the final statement shows that the amounts submitted or paid during the course of the project are more than the Department's reimbursable costs and the Department's reimbursable costs exceed $2,000.00, the Department shall return to the applicant, within a reasonable time period, the difference between the amounts submitted or paid and the costs incurred.

D. If the final statement shows that the amounts submitted or paid during the course of the project are more than the Depart-

ment's reimbursable costs and the Department's reimbursable costs total $2,000.00 or less, the Department shall retain the applicant's nonrefundable application fee of $2,000.00 and shall return to the applicant the amount of any deposits submitted.

E. The Department may withhold any program approval or no further action determination until the applicant has paid any amount due and payable under the final statement.

Historical Note
New Section adopted as interim rules, under an exemption from certain provisions of the Administrative Procedure Act pursuant to Laws 2000, Ch. 225, § 13, at 7 A.A.R. 814, effective February 9, 2001 (Supp. 01-1).

ARTICLE 6. DECLARATION OF ENVIRONMENTAL USE RESTRICTION FEE

Article 6, consisting of R18-7-601 through R18-7-606, made by exempt rulemaking at 10 A.A.R. 573, effective February 20, 2004 (Supp. 04-1).

R18-7-601. Definitions

The following definitions shall apply in this Article, unless the context otherwise requires:

"APP mine sites" means mining facilities which are subject to the aquifer protection permit provisions of Arizona Revised Statutes Title 49, Chapter 2, Article 3.

"Department" means the Arizona Department of Environmental Quality.

"DEUR" means declaration of environmental use restriction, as described in A.R.S. §§ 49-152 and 49-158. It is an institutional control and a restrictive covenant that runs with and burdens the property, binds the owner and the owner's heirs, successors and assigns, and inures to the benefit of the Department and the state.

"Fee" means the fee authorized by A.R.S. §§ 49-152(K) and 49-158(G).

"Engineering control" has the meaning in A.R.S. § 49-151.

"Institutional control" has the meaning in A.R.S. § 49-151.

"Modification" means modification of a DEUR that continues to address the same spill or release, and the same contaminants, as in the original DEUR. No other changes are considered a modification of a DEUR, but would be the subject of a separate DEUR.

"One-time activities" includes reviewing and/or approving legal descriptions, control areas, contaminants, institutional or engineering controls, and draft DEUR documents.

"Ongoing activities" includes reviewing written reports, conducting site inspections, or otherwise verifying maintenance of institutional or engineering controls.

"Underground storage tanks" means those underground storage tanks defined and regulated under A.R.S. Title 49, Chapter 6, Article 1.

"WQARF sites" means sites that are listed on the site registry specified in A.R.S. § 49-287.01 and are the subject of remedial action pursuant to A.R.S. Title 49, Chapter 2, Article 5. A property that is within a registry site boundary, but does not involve a contaminant of concern identified for that registry site and is not the subject of remedial action pursuant to the above Chapter 2, is not a WQARF site for the purpose of this Section.

Historical Note
New Section made by exempt rulemaking at 10 A.A.R. 573, effective February 20, 2004 (Supp. 04-1).

R18-7-602. Applicability

The provisions of this Article apply to properties where the owner has elected to use an institutional control and/or an engineering control to reduce the potential for exposure to contaminants on the property, or to leave contamination on the property that exceeds the applicable residential soil standard for the property. The owner of such property shall record, in each county where the property is located, a restrictive covenant labeled "declaration of environmental use restriction," that contains the information required by A.R.S. §§ 49-152 or 49-158, as approved by the Department. The owner shall submit the information on a form provided by the Department.

Historical Note
New Section made by exempt rulemaking at 10 A.A.R. 573, effective February 20, 2004 (Supp. 04-1).

R18-7-603. Fee

Except as provided in R18-7-605, before recording the DEUR or DEUR modification, property owners shall pay to the Department a fee as provided in R18-7-604 by company, cashier, or certified check, or money order, or other method approved by the Department.

Historical Note
New Section made by exempt rulemaking at 10 A.A.R. 573, effective February 20, 2004 (Supp. 04-1).

R18-7-604. Fee Calculation

A. Property owners who use only an institutional control shall pay to the Department a fee that is the sum of the following:
1. $825, representing Department costs to perform one-time activities;
2. An amount representing the costs of ongoing activities performed by the Department that is one of the following:
   a. For properties contaminated only by a petroleum release from one or more underground storage tanks: $110 multiplied by the number of years the Department projects the property will require ongoing activities, not to exceed 30 years; or
   b. For all other properties: $220 multiplied by the number of years the Department projects the property will require ongoing activities, not to exceed 30 years;
3. $770, representing Department costs to review and render a decision on a request to release a DEUR, and to record the release, pursuant to A.R.S. §§ 49-152(D) or 49-158(L);
4. $1,985 per site, representing the property owner's pro-rata share of Department costs to oversee and coordinate its DEUR-related activities; plus
5. $550 per site, representing the property owner's pro-rata share of Department costs to administer the repository under A.R.S. § 49-152(E).

B. Property owners who use an engineering control without groundwater monitoring shall pay a fee to the Department that is the sum of the following:
1. $1,595, representing Department costs to perform one-time activities;
2. $660, representing Department costs of annual ongoing activities, multiplied by the number of years the Department projects the property will require ongoing activities, not to exceed 30 years;
3. $1,320, representing Department costs to review and render a decision on a request to release a DEUR, and to record the release, pursuant to A.R.S. §§ 49-152(D) or 49-158(L);

4. $1,985 per site, representing the property owner's pro-rata share of Department costs to oversee and coordinate its DEUR-related activities; plus
5. $550 per site, representing the property owner's pro-rata share of Department costs to administer the repository under A.R.S. § 49-152(E).

C. Property owners who use an engineering control with groundwater monitoring, and owners of WQARF sites and APP mine sites, shall pay to the Department a fee that is the sum of the following:
1. $3,740, representing Department costs for performing one-time activities;
2. A component of the fee to be determined on a case-by-case basis, at $55 per hour, based on both:
   a. The number of hours per year that the Department projects will be required for ongoing activities performed by the Department for the property, not to exceed 70 hours per year; and
   b. The number of years that the Department projects the property will require ongoing activities, not to exceed 30 years;
3. $1,870, representing Department costs to review and render a decision on a request to release a DEUR, and to record the release, pursuant to A.R.S. §§ 49-152(D) or 49-158(L);
4. $1,985 per site, representing the property owner's pro-rata share of Department costs to oversee and coordinate its DEUR-related activities; plus
5. $550 per site, representing the property owner's pro-rata share of Department costs to administer the repository under A.R.S. § 49-152(E).

Historical Note
New Section made by exempt rulemaking at 10 A.A.R. 573, effective February 20, 2004 (Supp. 04-1).

R18-7-605. Postponement of the Release Portion of the DEUR Fee
Property owners may elect to postpone payment of the portion of the fee to release the DEUR, described in R18-7-604(A)(3), R18-7-604(B)(3), or R18-7-604(C)(3), on the condition that payment of the reasonable and necessary costs of releasing the DEUR is made with the request to the Department to release the DEUR from the property. Property owners electing to use this option acknowledge that the future amount of the release portion of the DEUR fee will be the amount established by this Article at the time the request for the release of the DEUR is filed with the Department, which may be greater than the amount described in R18-7-604(A)(3), R18-7-604(B)(3), or R18-7-604(C)(3) at the time the DEUR is recorded.

Historical Note
New Section made by exempt rulemaking at 10 A.A.R. 573, effective February 20, 2004 (Supp. 04-1).

R18-7-606. DEUR Modification Fee
A property owner who wishes to request a modification to an existing DEUR pursuant to A.R.S. §§ 49-152(I)(2), 49-152(J)(2), 49-158(E), or 49-158(F) shall pay to the Department a fee, representing Department costs to review and render a decision on the request to modify the DEUR. The fee shall accompany the proposed modification, and shall be in the form of company, cashier, or certified check, or money order, or other method approved by the Department. The fee shall be the amount specified in R18-7-604(A)(3), R18-7-604(B)(3), or R18-7-604(C)(3), as appropriate for the category of site as described in R18-7-604(A), R18-7-604(B), or R18-7-604(C).

Historical Note
New Section made by exempt rulemaking at 10 A.A.R. 573, effective February 20, 2004 (Supp. 04-1).