

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see rule 3745-300-15 of the Administrative Code titled "Incorporation by reference - voluntary action program."]

(A) Generic numerical standards.

(1) Applicability.

- (a) Generic numerical standards listed in this rule for hazardous substances and petroleum may be used to demonstrate compliance with applicable standards provided the exposure scenario for the property comports with land use and activity patterns used to derive the generic numerical standard. Generic numerical standards are provided for complete exposure pathways to petroleum releases [paragraph (B) of this rule], direct-contact with hazardous substances in soil [paragraph (C) of this rule], indoor air exposure due to vapor intrusion from environmental media to human receptors [paragraph (C)(4) of this rule], unrestricted potable use for hazardous substances in ground water [paragraph (D) of this rule], complete exposure pathways to human and ecological receptors from surface water and sediment [paragraphs (F), (G), and (H) of this rule]. The appendices to this rule provide the generic numerical standards.
- (b) Applicable standards shall be derived in accordance with rule 3745-300-09 of the Administrative Code if the criteria in paragraphs (A)(2) and (A)(3) of rule 3745-300-09 of the Administrative Code are met. Demonstration of compliance with applicable standards at a property may be made with a combination of generic numerical standards in accordance with this rule and standards developed through a property-specific risk assessment in accordance with rule 3745-300-09 of the Administrative Code or any other applicable standards.
- (c) If radioactive materials are identified at a property, the property may be subject to the Atomic Energy Act and regulations adopted thereunder and Chapters 3701. and 3747. of the Revised Code and rules adopted thereunder. If radionuclides or radioactive materials are present at a property, the volunteer shall contact the Ohio department of health's bureau of environmental health and radiation protection regarding the cleanup of the radionuclides or radioactive material. Remedy approval by the Ohio department of health is considered sufficient to meet applicable standards for radionuclides or radioactive materials for the

voluntary action and may be considered a generic numerical standard.

- (2) Assumptions. The following assumptions apply for all generic numerical standards except for the generic direct-contact soil standards for petroleum described in paragraph (B) of this rule, direct-contact soil standards for lead described in paragraph (C)(3)(a)(v) of this rule, the generic unrestricted potable use standards based on maximum contaminant levels or other regulatory established criteria described in paragraph (D) of this rule, and potable use standards for petroleum described in paragraph (D)(3)(a) of this rule:

- (a) Single chemical. The generic numerical standards assume a single COC is present within an identified area.

- (i) Hazardous substances shall not exceed the following risk and hazard levels:

(a) The single chemical generic standards for hazardous substances that have carcinogenic effects are based on a cancer risk level of one excess cancer in a population of one hundred thousand (1×10^{-5}).

(b) The single chemical generic standards for hazardous substances that have non-carcinogenic effects are based on a hazard index of one.

- (ii) As determined in accordance with paragraph (F)(6) of rule 3745-300-07 of the Administrative Code, the concentration of a COC shall not exceed the single chemical generic standard for that chemical.

- (b) Cumulative adjustment for multiple chemicals.

- (i) When more than one COC is present in each media within an identified area and an applicable generic standard for each of the COCs is in this rule, the standard for each COC shall be adjusted for the presence of multiple chemicals to meet the risk and hazard levels described in paragraph (A)(2)(a) of this rule within each identified area.

- (ii) All final cumulative human health carcinogenic risk and

non-carcinogenic hazard levels are based on one significant figure.

(c) Summation of risk and hazard across complete exposure pathways.

(i) If more than one complete exposure pathway exists to each receptor population, the incremental cancer risk and hazard indices determined for each exposure pathway shall be summed to calculate a cumulative cancer risk and hazard index to each receptor population.

(ii) All final cumulative human health carcinogenic risk and non-carcinogenic hazard levels are based on one significant figure.

(d) Points of compliance. In accordance with paragraph (I) of rule 3745-300-07 of the Administrative Code, the volunteer shall comply with the applicable standards at all points of compliance at the property, for each environmental media and complete exposure pathway.

(B) Generic numerical standards for petroleum.

(1) Applicability. The generic numerical standards referenced in paragraph (B)(3) of this rule apply to all petroleum releases regardless of the source or how the petroleum was released after eligibility requirements in accordance with rule 3745-300-02 of the Administrative Code are met.

(2) Assumptions.

(a) The points of compliance for generic petroleum standards are identified in paragraph (I) of rule 3745-300-07 of the Administrative Code. In accordance with paragraph (I) of rule 3745-300-07 of the Administrative Code, the volunteer shall comply with the applicable standards at all points of compliance at the property for each environmental medium and complete exposure pathway.

(b) Cumulative adjustment for multiple chemicals and summation of risk across complete exposure pathways that are required for COCs on the property to comply with paragraphs (A)(2) and (E) of this rule may not necessarily apply for generic petroleum standards referenced in paragraph (B)(3) of this rule. Cumulative adjustment for multiple

chemicals and summation of risk across complete exposure pathways to meet generic petroleum standards are required only when required by rules adopted under division (B) of section 3737.882 of the Revised Code.

- (c) When ground water exceeds unrestricted potable use standards, ground water response requirements in accordance with rule 3745-300-10 of the Administrative Code shall be met. Properties with free product determined in accordance with paragraph (F)(11) of rule 3745-300-07 of the Administrative Code exceed applicable standards for unrestricted potable use of ground water.
 - (d) Direct-contact with free product exceeds applicable standards when free product is encountered within the points of compliance for soil as determined in accordance with paragraph (I)(1)(a) of rule 3745-300-07 of the Administrative Code.
 - (e) Restricted residential, commercial with high frequency child exposure, commercial, and industrial land use categories [as determined in accordance with paragraph (C)(2) of this rule] require implementation of institutional controls in accordance with paragraph (C)(2) of rule 3745-300-11 of the Administrative Code.
- (3) Generic numerical standards for petroleum. The generic numerical standards for petroleum at residential, commercial, or industrial properties are the standards established in rules adopted under division (B) of section 3737.882 of the Revised Code, as provided in division (B)(1) of section 3746.04 of the Revised Code. The state fire marshal's bureau of underground storage tank regulations administers the rules adopted under division (B) of section 3737.882 of the Revised Code. Property-specific standards for petroleum may be developed in accordance with rule 3745-300-09 of the Administrative Code.
- (C) Generic numerical standards for hazardous substances; direct-contact with soils and vapor intrusion to indoor air.
- (1) Applicability.
 - (a) When generic direct-contact soil standards are applied, a volunteer shall select the land use or activity category consistent with the land use definitions in rule 3745-300-01 of the Administrative Code based on the property use, receptor populations, and pathways identified in

accordance with paragraphs (E)(6) and (F)(1) of rule 3745-300-07 of the Administrative Code. The exposure factors used in the development of generic numerical standards are in Ohio EPA's "Support Document For the Development of Generic Numerical Standards and Risk Assessment Procedures." Generic direct-contact soil standards for commercial and industrial land uses are equal unless paragraph (C)(2)(b) of this rule or paragraph (B)(1)(b) of rule 3745-300-09 of the Administrative Code applies.

- (b) Generic numerical standards for petroleum releases are identified in paragraph (B)(3) of this rule. The standards identified in paragraphs (C)(3) and (D) of this rule and provided in appendix A to this rule apply to releases of hazardous substances.
- (2) Land use and activity categories. The generic direct-contact soil standards and vapor intrusion to indoor standards established in this rule are based upon the intended use of the property after the completion of a voluntary action. Standards applied to restricted residential, commercial with high frequency child exposure, commercial, and industrial land use categories require implementation of institutional controls in accordance with rule 3745-300-11 of the Administrative Code. Land use and activity categories shall be determined as follows, as the terms are defined in rule 3745-300-01 of the Administrative Code:
 - (a) Residential land use category.
 - (i) Unrestricted residential land use category.
 - (ii) Restricted residential land use category.
 - (b) Commercial land use with high frequency child exposure category.
 - (c) Commercial or industrial land use category.
 - (d) Construction activities.
- (3) Generic numerical direct-contact soil standards.
 - (a) The generic direct-contact soil standards for carcinogenic and non-carcinogenic COCs are derived considering exposures that include ingestion of soil, dermal contact with soil, inhalation of volatile

compounds in outdoor air, and the inhalation and ingestion of particulate emissions.

- (i) The generic direct-contact soil standards for carcinogenic and non-carcinogenic COCs for residential land use categories are in table I of appendix A to this rule.
 - (ii) The generic direct-contact soil standards for carcinogenic and non-carcinogenic COCs for commercial land use with high frequency child exposure are in table II of appendix A to this rule.
 - (iii) The generic direct-contact soil standards for carcinogenic and non-carcinogenic COCs for commercial and industrial land use categories are in table III of appendix A to this rule.
 - (iv) The generic direct-contact soil standards for carcinogenic and non-carcinogenic COCs for the construction activities category are in table IV of appendix A to this rule.
 - (v) The lead standards in tables I, II, III, and IV of appendix A to this rule account for other factors and assumptions in addition to the carcinogenic or non-carcinogenic risk of lead. Therefore, the cumulative risk considerations in paragraph (A)(2) of this rule are not appropriate and need not be performed for lead.
- (b) The soil saturation concentrations are calculated using the U.S. EPA recommended soil saturation equation in paragraph (H)(5) of rule 3745-300-09 of the Administrative Code. This equation is not recommended for compounds that are at solid phase at ambient soil temperatures. Therefore, no generic soil saturation values are calculated for those chemicals for which the melting point is greater than seventeen degrees Celsius. Further, soil saturation values are determined only for those chemicals for which physicochemical parameters used to derive the soil saturation concentrations could be verified. The volunteer may either use the soil saturation levels as listed in appendix A to this rule or may calculate a property-specific soil saturation concentration in place of the generic soil saturation in accordance with paragraph (H)(5) of 3745-300-09 of the Administrative Code.
- (4) Generic numerical standards for indoor air due to vapor intrusion from environmental media are derived considering the exposure scenario and the

chemical specific inhalation toxicity. Standards apply to indoor air only for chemicals that have volatilized from environmental media to indoor air. Concentrations of COCs in ground water or soil gas may be used to approximate indoor air concentrations through modeling conducted in accordance with rule 3745-300-07 of the Administrative Code.

- (a) The standards for indoor air exposure due to vapor intrusion from environmental media for the residential land use category are in table V of appendix A to this rule.
- (b) The standards for indoor air exposure due to vapor intrusion from environmental media for the commercial land use with high frequency child exposure category are in table VI of appendix A to this rule.
- (c) The standards for indoor air exposure due to vapor intrusion from environmental media for the commercial or industrial land use categories are in table VII of appendix A to this rule.

(D) Generic unrestricted potable use standards for hazardous substances in ground water.

(1) Applicability.

- (a) The generic unrestricted potable use standards in paragraph (D)(3) of this rule apply as determined in accordance with rule 3745-300-10 of the Administrative Code.
- (b) The standards in paragraph (D)(3) of this rule apply to releases of hazardous substances. Generic numerical standards for petroleum releases are identified in paragraph (B)(3) of this rule.

(2) Assumptions. The generic unrestricted potable use standards in tables VIII and IX of appendix A to this rule are determined using the assumption that the ground water on or from the property will be used as a source of water for drinking, cooking, showering, and bathing.

(3) Generic unrestricted potable use standards for ground water.

- (a) The generic unrestricted potable use standards for petroleum at commercial, industrial, and residential properties are the standards established in rules adopted under division (B) of section 3737.882 of the Revised Code, as provided by division (B)(1) of section 3746.04 of

the Revised Code.

- (b) The generic unrestricted potable use standards based on maximum contaminant levels or other regulatory established criteria are in table VIII of appendix A to this rule. COCs in table VIII of appendix A to this rule need not be included in the cumulative adjustment for multiple chemicals.
- (c) The generic risk-derived unrestricted potable use standards are in table IX of appendix A to this rule. COCs in table IX of appendix A to this rule shall be included in the cumulative adjustment for multiple chemicals.
- (E) Procedures for cumulative adjustment for multiple chemicals. The following procedures may be used to meet the risk and hazard levels described in paragraph (A)(2)(a) of this rule when more than one COC is present in environmental media within an identified area:
 - (1) Several procedures may be used to adjust for the presence of multiple carcinogenic COCs in an identified area to comply with paragraph (A)(2)(b) of this rule. One method is to divide the exposure point concentration (chem_a) for each COC in the affected media by the "Single Chemical Carcinogenic Standard" (SCCS_a) in appendix A to this rule. The resultant ratios are summed as an expression of estimated risk (see equation 1). When the summed ratios result in a value less than or equal to one, at one significant figure in accordance with paragraph (A)(2)(b)(ii) of this rule, carcinogenic risk levels are met on the property for exposure to that media. When the summed ratios result in a value greater than one the carcinogenic risk levels are not met and remedial action is required.

Equation 1 - cumulative cancer risk ratio for affected media

$$[(\text{chem}_a / \text{SCCS}_a) + (\text{chem}_b / \text{SCCS}_b) + \dots] = \text{cumulative cancer risk ratio}$$

- (2) Several procedures may be used to adjust for the presence of multiple non-carcinogenic COCs in an identified area to comply with paragraph (A)(2)(b) of this rule. One method is to divide the exposure point concentration (chem_a) for each COC in the affected media by the "Single Chemical Noncarcinogenic Standard" (SCNS_a) in appendix A to this rule. The resultant ratios are summed as an expression of estimated hazard index (see equation 2). When the summed ratios result in a value less than or equal to one at one significant figure in accordance with paragraph (A)(2)(b)(ii) of this rule, non-carcinogenic risk levels are met on the property. When the summed ratios result in a value greater than one the non-carcinogenic risk

levels are not met and remedial action is required.

Equation 2 - cumulative noncancer risk ratio for affected media

$$[(\text{chem}_a / \text{SCNS}_a) + (\text{chem}_b / \text{SCNS}_b) + \dots] = \text{cumulative noncancer risk ratio}$$

Segregation of hazard indices. Hazard quotients for non-carcinogenic COCs which do not exhibit the same toxic endpoint may be segregated by critical effect and mechanism of action, in accordance with U.S. EPA's "Risk Assessment Guidance for Superfund, Volume I: Human Health Evaluation Manual (Part A)" following a procedure, analogous to section 8.2.2 of the document, rather than being aggregated into one cumulative non-cancer risk ratio. A written justification for this approach should be submitted and approved by Ohio EPA prior to attempting to segregate hazard indices. The consideration of all major toxic endpoints and mechanisms of action shall include, at a minimum, those identified with the critical effect upon which the reference dose or reference concentration for each non-carcinogenic COC is based. The source for each reference dose and reference concentration for each non-carcinogenic chemical for which generic direct-contact soil standards are derived, are cited in Ohio EPA's "Support Document for the Development of Generic Numerical Standards and Risk Assessment Procedures." It may be necessary to calculate more than one cumulative non-cancer risk ratio for a property that results from the segregation of non-carcinogenic COCs based on toxic endpoints or mechanisms of action.

- (3) For situations where a COC poses both carcinogenic and non-carcinogenic risks and a value for the COC is listed in both the "Standard for a Single Chemical Carcinogens" column and the "Standard for a Single Chemical Non-Carcinogens" column in the tables in appendix A to this rule, or an applicable single chemical carcinogen and non-carcinogen standard is determined in accordance with rule 3745-300-09 of the Administrative Code, the COC shall be included in the multiple carcinogenic chemical adjustment calculation under paragraph (E)(1) of this rule and the adjustment calculation for multiple non-carcinogenic chemicals under paragraph (E)(2) of this rule. The single-chemical applicable standard for the COC is the lowest of the values determined using the equations in this paragraph or, if appropriate, the soil saturation concentration.

(F) Generic numerical standards for surface water.

(1) Applicability.

- (a) The generic numerical standards for surface water in paragraph (F)(2) of this rule apply to a property in accordance with paragraph (F) of rule

3745-300-07 of the Administrative Code.

- (b) For all releases of petroleum to surface water of the state, the generic petroleum standards are in paragraph (B) of this rule.

(2) Generic surface water standards.

- (a) For all releases or source areas of hazardous substances on or from the property to surface waters of the state, surface water chemical concentrations shall be compared to the chemical criteria pursuant to Chapter 3745-1 of the Administrative Code. The outside mixing zone average criteria for human health and aquatic life and wildlife should be compared against ambient samples averaged over a thirty-day period. Single ambient samples shall not exceed the outside the mixing zone maximum or the outside the mixing zone average, if a thirty-day average is not obtained. If all chemical constituents are below the chemical criteria, then the surface water may be eliminated as an exposure medium. If chemical constituents exceed the chemical criteria, then the surface water shall be further assessed in accordance with rule 3745-300-09 of the Administrative Code. For the purposes of this rule, the generic numerical standards for surface water apply regardless of whether the release or source area of hazardous substances is a point source or nonpoint source.
- (b) All regulated point source discharges of pollutants to surface waters of the state and any other regulated discharges that occur from or on the property shall comply with all permit and other applicable requirements of the Water Pollution Control Act, Chapter 6111. of the Revised Code, and the regulations adopted thereunder. The permit and other applicable requirements of point source discharges include, but are not limited to, the following:
 - (i) The national pollutant discharge elimination system permit issued pursuant to Chapter 3745-33 of the Administrative Code (also referred to as Ohio NPDES permits).
 - (ii) The water quality certification issued pursuant to Chapter 3745-32 of the Administrative Code.
 - (iii) A volunteer may obtain a consolidated standards permit for activities conducted in connection with a voluntary action which require permits from the director.

- (c) Storm water associated with industrial activity that is discharged to surface waters of the state or is discharged through a separate municipal storm sewer system shall comply with the applicable requirements in 40 CFR 122.26.

(G) Generic numerical standards for human exposure to sediments.

(1) Applicability.

- (a) For purposes of this rule and rule 3745-300-07 of the Administrative Code, human health exposure pathways to sediments are considered complete when the surface water which contains the sediments meets either of the following criteria:
 - (i) Produces or can produce a consistent supply of edible-sized fish and the COCs in the sediment are persistent, bioaccumulative, and toxic.
 - (ii) Is reasonably anticipated to support recreational activities such as wading, swimming, or boating.
- (b) For all releases of petroleum on or from the property to surface waters of the state which contain sediments, the generic petroleum standards are in paragraph (B) of this rule.
- (c) If the concentrations of COCs in sediment exceed the generic numerical standards for human exposure to sediment, the volunteer shall conduct a human health property-specific risk assessment following the methodology described in paragraph (D) of rule 3745-300-09 of the Administrative Code or conduct a remedy in accordance with 3745-300-11 of the Administrative Code.

(2) Generic numerical standards for human exposure to sediment.

- (a) Generic direct-contact standards for sediments are the generic direct-contact soil standards for residential land use specified in table I of appendix A to this rule. Cumulative adjustment for multiple chemicals shall be evaluated in accordance with paragraph (A)(2)(b) of this rule.
- (b) If COCs in sediment are persistent, bioaccumulative, and toxic, and the

surface water that contains the sediments produces or can produce a consistent supply of edible-sized fish, the volunteer shall conduct a human health property-specific risk assessment in accordance with rule 3745-300-09 of the Administrative Code to evaluate fish consumption.

(H) Generic numerical standards for exposure of important ecological resources to sediments.

(1) Applicability. The volunteer shall do either of the following:

(a) Sample sediments directly and apply the applicable standards in accordance with paragraph (H)(2) of this rule.

(b) Demonstrate compliance with applicable standards in accordance with paragraph (F)(5) of rule 3745-300-09 of the Administrative Code.

(2) Generic numerical standards for exposure of important ecological resources to sediments. To apply applicable standards to sediments in accordance with paragraph (H)(1)(a) of this rule, the volunteer shall compare the concentration of COCs to one of the following ecological reference values:

(a) Ohio-specific sediment reference values by ecoregion in table I of appendix B to this rule.

(b) Consensus-based threshold effects concentration values from MacDonald, Ingersoll and Berger's "Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems" in table II of appendix B to this rule.

(3) If concentrations of COCs do not exceed the generic numerical standards identified pursuant to paragraph (H)(2) of this rule, then the applicable standards are met.

(4) The volunteer shall evaluate the sediments in accordance with paragraph (F) of rule 3745-300-09 of the Administrative Code, or conduct a remedy in accordance with rule 3745-300-11 of the Administrative Code if any of the following criteria apply:

(a) The sediments exceed applicable standards in accordance with this rule.

- (b) The sediment samples were not compared to the sediment values in accordance with paragraph (H)(2) of this rule.

(I) Development of soil standards for leaching of COCs from soil to ground water.

(1) Applicability.

- (a) Soil standards for leaching may be developed when one or more ground water zones are determined to meet unrestricted potable use standards and the potential for leaching of COCs from soil to ground water is determined to be a complete exposure pathway.
- (b) Soil standards for leaching may be developed when one or more ground water zones are determined to exceed unrestricted potable use standards and the potential for leaching of COCs from soil to ground water is a complete exposure pathway that shall be evaluated in accordance with either of the following:
 - (i) Applicable ground water response requirements in paragraph (E) of rule 3745-300-10 of the Administrative Code.
 - (ii) A pathway completeness determination in paragraph (F)(1) of rule 3745-300-07 of the Administrative Code.

(2) Soil standards for leaching.

- (a) Soil standards for leaching when the underlying ground water zone meets unrestricted potable use standards. Soil standards for leaching are the soil concentrations determined to be protective of the applicable ground water zone and shall not cause unrestricted potable use standards to be exceeded in the ground water zone as demonstrated in accordance with paragraph (F)(4)(a) of rule 3745-300-07 of the Administrative Code.
- (b) Soil standards for leaching when the underlying ground water zone exceeds unrestricted potable use standards.
 - (i) Soil standards for leaching are the soil concentrations determined to be protective of the applicable ground water response requirements for the ground water zone as determined by rule 3745-300-10 of the Administrative Code.

- (ii) Soil standards for leaching are the soil concentrations determined to be protective of any other applicable standard in ground water that shall be met in accordance with a pathway completeness determination and the demonstration of compliance with applicable standards.

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AMENDED

Appendix 3745-300-08

Appendix A

In this appendix, mg/kg means milligrams per kilogram, NA means not applicable, µg/m³ means micrograms per cubic meter, and µg/L means micrograms per liter.

Table I: Generic numerical direct-contact soil standards (residential land use category)

<u>Table I</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Inorganics/Metals					
Aluminum Phosphide	20859-73-8	63	NA	NA	63
Antimony (metallic)	7440-36-0	63	NA	NA	63
Antimony Trioxide	1309-64-4	400,000	NA	NA	400,000
Arsenic, Inorganic	7440-38-2	70	14	NA	14
Barium	7440-39-3	30,000	NA	NA	30,000
Beryllium and Compounds	7440-41-7	310	22,000	NA	310
Cadmium	7440-43-9	14	30,000	NA	14
Chlorine	7782-50-5	0.48	NA	2,800	0.48
Chromium (III)	16065-83-1	79,000	NA	NA	79,000
Chromium (VI)	18540-29-9	470	6	NA	6
Cobalt Compounds	7440-48-4	47	5,900	NA	47
Copper	7440-50-8	6,300	NA	NA	6,300
Disodium Phosphate	7558-79-4	160,000	NA	NA	160,000
Hydrogen Chloride	7647-01-0	1,000,000	NA	NA	1,000,000
Hydrogen Fluoride	7664-39-3	6,300	NA	NA	6,300
Hydrogen Sulfide	7783-06-4	72,000	NA	NA	72,000
Fluorine (Soluble Fluoride)	7782-41-4	9,400	NA	NA	9,400
Manganese Compounds	7439-96-5	3,600	NA	NA	3,600

Table I	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Mercury and Compounds	7439-97-6	27	NA	3.1	3.1
Nickel Soluble Salts	7440-02-0	2,800	210,000	NA	2,800
Phosphine	7803-51-2	47	NA	NA	47
Selenium	7782-49-2	780	NA	NA	780
Selenious Acid	7783-00-8	780	NA	NA	780
Silver	7440-22-4	780	NA	NA	780
Sodium Azide	26628-22-8	630	NA	NA	630
Sodium Fluoride	7681-49-4	7,800	NA	NA	7,800
Sodium Fluoroacetate	62-74-8	2.5	NA	NA	2.5
Sodium tripolyphosphate	7758-29-4	160,000	NA	NA	160,000
Sulfuric Acid	7664-93-9	250,000	NA	NA	250,000
Titanium Tetrachloride	7550-45-0	200,000	NA	NA	200,000
Trisodium Phosphate	7601-54-9	160,000	NA	NA	160,000
Vanadium Compounds	7440-62-2	780	NA	NA	780
Zinc and Compounds	7440-66-6	47,000	NA	NA	47,000
Zinc Phosphide	1314-84-7	47	NA	NA	47
Cyanides					
Calcium Cyanide	592-01-8	160	NA	NA	160
Copper Cyanide	544-92-3	780	NA	NA	780
Cyanide (CN-)	57-12-5	51	NA	950,000	51
Cyanogen	460-19-5	160	NA	NA	160
Cyanogen Bromide	506-68-3	14,000	NA	NA	14,000
Cyanogen Chloride	506-77-4	7,800	NA	NA	7,800
Hydrogen Cyanide	74-90-8	51	NA	1,000,000	51

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Chemical of Concern					
Potassium Cyanide	151-50-8	310	NA	NA	310
Potassium Silver Cyanide	506-61-6	780	NA	NA	780
Silver Cyanide	506-64-9	16,000	NA	NA	16,000
Sodium Cyanide	143-33-9	160	NA	NA	160
Zinc Cyanide	557-21-1	7,800	NA	NA	7,800
Lead Compounds					
Lead Acetate	301-04-2	NA	52	NA	52
Lead and Compounds*	7439-92-1	NA	NA	NA	200
Lead Phosphate	7446-27-7	NA	1,600	NA	1,600
Lead Subacetate	1335-32-6	NA	290	NA	290
Tetraethyl Lead	78-00-2	0.016	NA	2.4	0.016
Semi-Volatile Organic Compounds (SVOCs)					
Acenaphthene	83-32-9	7,200	NA	NA	7,200
Acetophenone	98-86-2	16,000	NA	2,500	2,500
Acetylaminofluorene, 2-	53-96-3	NA	2.9	NA	2.9
Acrylamide	79-06-1	250	4.9	NA	4.9
Alachlor	15972-60-8	1,300	190	NA	190
Aldicarb	116-06-3	130	NA	NA	130
Aldicarb Sulfone	1646-88-4	130	NA	NA	130
Aldrin	309-00-2	4.7	0.79	NA	0.79
Aminobiphenyl, 4-	92-67-1	NA	0.52	NA	0.52
Ammonium Sulfamate	7773-06-0	31,000	NA	NA	31,000
Aniline	62-53-3	880	1,900	NA	880
Anthracene	120-12-7	36,000	NA	NA	36,000

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Chemical of Concern					
Aroclor 1016	12674-11-2	8.2	130	NA	8.2
Aroclor 1221	11104-28-2	NA	3.9	NA	3.9
Aroclor 1232	11141-16-5	NA	3.7	NA	3.7
Aroclor 1242	53469-21-9	NA	4.6	NA	4.6
Aroclor 1248	12672-29-6	NA	4.6	NA	4.6
Aroclor 1254	11097-69-1	2.3	4.8	NA	2.3
Aroclor 1260	11096-82-5	NA	4.8	NA	4.8
Atrazine	1912-24-9	380	47	NA	47
Auramine	492-80-8	NA	12	NA	12
Benomyl	17804-35-2	6,300	NA	NA	6,300
Benzenethiol	108-98-5	160	NA	1,300	160
Benzidine	92-87-5	380	0.011	NA	0.011
Benz[a]anthracene	56-55-3	NA	23	NA	23
Benzo[a]pyrene	50-32-8	36	2.3	NA	2.3
Benzo[b]fluoranthene	205-99-2	NA	23	NA	23
Benzo[k]fluoranthene	207-08-9	NA	230	NA	230
Benzoic Acid	65-85-0	460,000	NA	NA	460,000
Biphenyl, 1,1'-	92-52-4	78,000	1,700	NA	1,700
Bis(2-chloroethoxy)methane	111-91-1	380	NA	NA	380
Bis(2-chloroethyl)ether	111-44-4	NA	5.3	5,000	5.3
Bis(chloromethyl)ether	542-88-1	NA	0.0021	4,200	0.0021
Bis(2-ethylhexyl)phthalate	117-81-7	160	780	NA	160
Butyl Benzyl Phthlate	85-68-7	25,000	5,700	NA	5,700
Cacodylic Acid	75-60-5	2,500	NA	NA	2,500

<u>Table I</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Captan	133-06-2	16,000	4,700	NA	4,700
Carbaryl	63-25-2	13,000	NA	NA	13,000
Carbofuran	1563-66-2	630	NA	NA	630
Carbosulfan	55285-14-8	1,300	NA	NA	1,300
Chloramben	133-90-4	1,900	NA	NA	1,900
Chlordane	12789-03-6	69	34	NA	34
Chlordecone (Kepone)	143-50-0	38	1.1	NA	1.1
Chloro-2-methylaniline HCl, 4-	3165-93-3	NA	24	NA	24
Chloroacetic Acid	79-11-8	440	NA	NA	440
Chloroacetophenone, 2-	532-27-4	7,400	NA	NA	7,400
Chloroaniline, p-	106-47-8	63	54	NA	54
Chlorobenzilate	510-15-6	2,500	99	NA	99
Chloronaphthalene, Beta-	91-58-7	9,600	NA	NA	9,600
Chlorophenol, 2-	95-57-8	780	NA	27,000	780
Chlorpyrifos	2921-88-2	130	NA	NA	130
Chrysene	218-01-9	NA	2,300	NA	2,300
Cresol, m-	108-39-4	6,300	NA	NA	6,300
Cresol, o-	95-48-7	6,300	NA	NA	6,300
Cresol, p-	106-44-5	2,500	NA	NA	2,500
Cresol, p-chloro-m-	59-50-7	13,000	NA	NA	13,000
Cresols	1319-77-3	13,000	NA	NA	13,000
DDD	72-54-8	63	45	NA	45
DDE, p,p'-	72-55-9	78	40	NA	40
DDT	50-29-3	73	38	NA	38

<u>Table I</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Diallate	2303-16-4	NA	180	NA	180
Diazinon	333-41-5	88	NA	NA	88
Dibenz[a,h]anthracene	53-70-3	NA	2.3	NA	2.3
Dibutyl Phthalate	84-74-2	13,000	NA	NA	13,000
Dicamba	1918-00-9	3,800	NA	NA	3,800
Dichlorobenzene, 1,2-	95-50-1	4,300	NA	380	380
Dichlorobenzene, 1,4-	106-46-7	7,300	65	NA	65
Dichlorobenzidine, 3,3'-	91-94-1	NA	23	NA	23
Dichlorophenol, 2,4-	120-83-2	380	NA	NA	380
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	1,400	NA	NA	1,400
Dichloropropionic acid, 2,2-	75-99-0	3,800	NA	NA	3,800
Dichlorvos	62-73-7	63	37	NA	37
Dieldrin	60-57-1	6.3	0.68	NA	0.68
Diethanolamine	111-42-2	250	NA	NA	250
Diethyl Phthalate	84-66-2	100,000	NA	NA	100,000
Diethylstilbestrol	56-53-1	NA	0.031	NA	0.031
Dimethoate	60-51-5	280	NA	NA	280
Dimethoxybenzidine, 3,3'-	119-90-4	NA	6.8	NA	6.8
Dimethylamino azobenzene [p-]	60-11-7	NA	2.4	NA	2.4
Dimethylbenz(a)anthracene, 7,12-	57-97-6	NA	0.0092	NA	0.0092
Dimethylbenzidine, 3,3'-	119-93-7	NA	0.99	NA	0.99
Dimethylphenol, 2,4-	105-67-9	2,500	NA	NA	2,500
Dinitrobenzene, 1,2-	528-29-0	13	NA	NA	13
Dinitrobenzene, 1,3-	99-65-0	13	NA	NA	13

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Chemical of Concern					
Dinitrobenzene, 1,4-	100-25-4	13	NA	NA	13
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	250	NA	NA	250
Dinitrophenol, 2,4-	51-28-5	250	NA	NA	250
Dinitrotoluene, 2,4-	121-14-2	250	35	NA	35
Dinitrotoluene, 2,6-	606-20-2	NA	7.3	NA	7.3
Dinitrotoluene Mixture, 2,4/2,6	25321-14-6	NA	16	NA	16
Dinoseb	88-85-7	130	NA	NA	130
Diphenylhydrazine, 1,2-	122-66-7	NA	14	NA	14
Diquat	2764-72-9	280	NA	NA	280
Disulfoton	298-04-4	5.1	NA	NA	5.1
Diuron	330-54-1	250	NA	NA	250
Endothall	145-73-3	2,500	NA	NA	2,500
Endosulfan	115-29-7	940	NA	NA	940
Endrin	72-20-8	38	NA	NA	38
Epichlorohydrin	106-89-8	47	620	11,000	47
Ethion	563-12-2	63	NA	NA	63
Ethylene Glycol	107-21-1	100,000	NA	NA	100,000
Ethylene Thiourea	96-45-7	10	240	NA	10
Fluoranthene	206-44-0	4,800	NA	NA	4,800
Fluorene	86-73-7	1,200	NA	NA	1,200
Furan	110-00-9	160	NA	6,200	160
Furfural	98-01-1	440	NA	10,000	440
Glyphosate	1071-83-6	13,000	NA	NA	13,000
Guthion	86-50-0	380	NA	NA	380

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Chemical of Concern					
Heptachlor	76-44-8	16	2.8	NA	2.8
Heptachlor Epoxide	1024-57-3	2	1.4	NA	1.4
Hexachlorobenzene	118-74-1	1.6	4.7	NA	1.6
Hexachlorobutadiene	87-68-3	160	29	17	17
Hexachlorocyclohexane, Alpha-	319-84-6	110	1.7	NA	1.7
Hexachlorocyclohexane, Beta-	319-85-7	NA	6	NA	6
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	43	11	NA	11
Hexachlorocyclohexane, Technical	608-73-1	NA	6	NA	6
Hexachlorocyclopentadiene	77-47-4	4.4	NA	16	4.4
Hexachloroethane	67-72-1	93	45	NA	45
Hexachlorophene	70-30-4	38	NA	NA	38
Hexamethylene Diisocyanate, 1,6-	822-06-0	7.9	NA	3,400	7.9
Hexamethylphosphoramide	680-31-9	51	NA	NA	51
Hexanedioic Acid	124-04-9	250,000	NA	NA	250,000
Hydroquinone	123-31-9	5,100	180	NA	180
Indeno[1,2,3-cd]pyrene	193-39-5	NA	23	NA	23
Isophorone	78-59-1	25,000	11,000	NA	11,000
Malathion	121-75-5	2,500	NA	NA	2,500
Maleic Anhydride	108-31-6	13,000	NA	NA	13,000
Maleic Hydrazide	123-33-1	63,000	NA	NA	63,000
Malononitrile	109-77-3	13	NA	NA	13
Methomyl	16752-77-5	3,200	NA	NA	3,200
Methoxychlor	72-43-5	630	NA	NA	630

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Chemical of Concern					
Methyl Parathion	298-00-0	32	NA	NA	32
Methylaniline Hydrochloride, 2-	636-21-5	NA	83	NA	83
Methylcholanthrene, 3-	56-49-5	NA	0.11	NA	0.11
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	250	24	NA	24
Methylenebisbenzenamine, 4,4'-	101-77-9	1,000,000	6.8	NA	6.8
Methylenediphenyl Diisocyanate	101-68-8	4,900	NA	NA	4,900
Methylnaphthalene, 1-	90-12-0	0.46	NA	390	0.46
Methylnaphthalene, 2-	91-57-6	480	NA	NA	480
Methyl-N-nitro-N-nitrosoguanidine, N- Naled	70-25-7	NA	1.3	NA	1.3
	300-76-5	310	NA	NA	310
Naphthylamine, 2-	91-59-8	NA	6	NA	6
Nitroaniline, 4-	100-01-6	510	540	NA	510
Nitrobenzene	98-95-3	260	130	3,000	130
Nitroglycerin	55-63-0	13	640	NA	13
Nitropropane, 2-	79-46-9	690	NA	4,900	690
Nitrosodiethanolamine, N-	1116-54-7	NA	3.9	NA	3.9
Nitrosodiethylamine, N-	55-18-5	NA	0.016	NA	0.016
Nitrosodimethylamine, N-	62-75-9	1.3	0.043	240,000	0.043
Nitroso-di-N-butylamine, N-	924-16-3	NA	2.1	NA	2.1
Nitroso-di-N-propylamine, N-	621-64-7	NA	1.6	NA	1.6
Nitrosodiphenylamine, N-	86-30-6	NA	2,200	NA	2,200
Nitrosomorpholine [N-]	59-89-2	NA	1.6	NA	1.6
Nitroso-N-ethylurea, N-	759-73-9	NA	0.09	NA	0.09
Nitroso-N-methylurea, N-	684-93-5	NA	0.02	NA	0.02

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Chemical of Concern					
Nitrosopiperidine [N-]	100-75-4	NA	1.2	NA	1.2
Nitrosopyrrolidine, N-	930-55-2	NA	5.2	NA	5.2
Nitrotoluene, o-	88-72-2	140	63	1,500	63
Nitrotoluene, p-	99-99-0	510	680	NA	510
Octamethylpyrophosphoramide	152-16-9	250	NA	NA	250
Octyl Phthalate, di-N-	117-84-0	1,300	NA	NA	1,300
Oxamyl	23135-22-0	3,200	NA	NA	3,200
Parathion	56-38-2	760	NA	NA	760
Pentachlorobenzene	608-93-5	130	NA	NA	130
Pentachloroethane	76-01-7	NA	150	460	150
Pentachloronitrobenzene	82-68-8	380	42	NA	42
Pentachlorophenol	87-86-5	490	20	NA	20
Phenacetin	62-44-2	NA	4,900	NA	4,900
Phenol	108-95-2	38,000	NA	NA	38,000
Phenylmercuric Acetate	62-38-4	10	NA	NA	10
Phorate	298-02-2	25	NA	NA	25
Phosphoric Acid	7664-38-2	160,000	NA	NA	160,000
Phthalic Anhydride	85-44-9	250,000	NA	NA	250,000
Picloram	1918-02-1	8,800	NA	NA	8,800
Polychlorinated Biphenyls, Total	1336-36-3	NA	4.6	NA	4.6
Pronamide	23950-58-5	9,500	NA	NA	9,500
Propargite	2312-35-8	5,100	57	NA	57
Propham	122-42-9	2,500	NA	NA	2,500
Propoxur (Baygon)	114-26-1	510	NA	NA	510

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Chemical of Concern					
Pyrene	129-00-0	3,600	NA	NA	3,600
Pyridine	110-86-1	160	NA	530,000	160
Quinoline	91-22-5	NA	3.6	NA	3.6
Safrole	94-59-7	NA	11	NA	11
Simazine	122-34-9	630	90	NA	90
Strychnine	57-24-9	38	NA	NA	38
TCDD, 2,3,7,8-	1746-01-6	0.0001	0.000096	NA	0.000096
Tetrachlorophenol, 2,3,4,6-	58-90-2	3,800	NA	NA	3,800
Tetraethyl Dithiopyrophosphate	3689-24-5	63	NA	NA	63
Tetrahydrofuran	109-99-9	43,000	NA	170,000	43,000
Thiofanox	39196-18-4	38	NA	NA	38
Thiophanate, Methyl	23564-05-8	20,000	900	NA	900
Thiram	137-26-8	1,900	NA	NA	1,900
Toluene-2,4-diisocyanate	584-84-9	0.67	130	NA	0.67
Toluene-2,6-diisocyanate	91-08-7	13	330	1,700	13
Toluidine, p-	106-49-0	NA	360	NA	360
Toxaphene	8001-35-2	11	9.9	NA	9.9
Triallate	2303-17-5	3,900	190	NA	190
Trichlorobenzene, 1,2,4-	120-82-1	140	480	400	140
Trichlorophenol, 2,4,5-	95-95-4	13,000	NA	NA	13,000
Trichlorophenol, 2,4,6-	88-06-2	130	990	NA	130
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	1,300	NA	NA	1,300
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	1,000	NA	NA	1,000
Trifluralin	1582-09-8	1,200	1,800	NA	1,200

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Chemical of Concern					
Trimethylbenzene, 1,2,3-	526-73-8	760	NA	290	290
Trimethylbenzene, 1,2,4-	95-63-6	690	NA	220	220
Trimethylbenzene, 1,3,5-	108-67-8	620	NA	180	180
Trinitrobenzene, 1,3,5-	99-35-4	1,100	NA	NA	1,100
Urethane	51-79-6	NA	2.4	NA	2.4
Warfarin	81-81-2	38	NA	NA	38
Volatile Organic Compounds (VOCs)					
Acetaldehyde	75-07-0	210	280	110,000	210
Acetone	67-64-1	140,000	NA	110,000	110,000
Acetonitrile	75-05-8	2,000	NA	130,000	2,000
Acrolein	107-02-8	0.36	NA	23,000	0.36
Acrylic Acid	79-10-7	50	NA	110,000	50
Acrylonitrile	107-13-1	32	6.1	11,000	6.1
Allyl Alcohol	107-18-6	140	NA	110,000	140
Allyl Chloride	107-05-1	4.1	18	1,400	4.1
Benzene	71-43-2	190	28	1,800	28
Benzotrichloride	98-07-7	NA	1.1	320	1.1
Benzyl Chloride	100-44-7	55	25	1,500	25
Bis(2-chloro-1-methylethyl) Ether	108-60-1	6,300	NA	1,000	1,000
Bromodichloromethane	75-27-4	310	7.3	930	7.3
Bromoform	75-25-2	3,100	460	910	460
Bromomethane	74-83-9	17	NA	3,600	17
Butadiene, 1,3-	106-99-0	4.5	1.9	670	1.9
Butanol, N-	71-36-3	16,000	NA	7,600	7,600

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Chemical of Concern					
Butylbenzene, n-	104-51-8	7,800	NA	110	110
Carbon Disulfide	75-15-0	1,900	NA	740	740
Carbon Tetrachloride	56-23-5	240	16	460	16
Carbonyl Sulfide	463-58-1	170	NA	5,900	170
Chlorobenzene	108-90-7	660	NA	760	660
Chloro-1,3-butadiene, 2-	126-99-8	55	0.25	790	0.25
Chloroform	67-66-3	470	7.9	2,500	7.9
Chloromethane	74-87-3	280	NA	1,300	280
Chloromethyl Methyl Ether	107-30-2	NA	0.5	9,300	0.5
Crotonaldehyde, trans-	123-73-9	160	7.3	17,000	7.3
Cumene	98-82-8	2,200	NA	270	270
Cyclohexane	110-82-7	16,000	NA	120	120
Cyclohexanone	108-94-1	70,000	NA	5,100	5,100
Dibromo-3-chloropropane, 1,2-	96-12-8	11	0.13	980	0.13
Dibromochloromethane	124-48-1	3,100	170	800	170
Dibromoethane, 1,2-	106-93-4	69	0.89	1,300	0.89
Dichloro-2-butene, 1,4-	764-41-0	NA	0.054	550	0.054
Dichlorodifluoromethane	75-71-8	31,000	NA	850	850
Dichloroethane, 1,1-	75-34-3	31,000	89	1,700	89
Dichloroethane, 1,2-	107-06-2	84	11	3,000	11
Dichloroethylene, 1,1-	75-35-4	19	NA	1,200	19
Dichloroethylene, 1,2-cis-	156-59-2	310	NA	2,400	310
Dichloroethylene, 1,2-trans-	156-60-5	3,100	NA	1,900	1,900
Dichloropropane, 1,2-	78-87-5	39	61	1,400	39

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Chemical of Concern					
Dichloropropane, 1,3-	142-28-9	3,100	NA	1,500	1,500
Dichloropropene, 1,3-	542-75-6	180	43	1,600	43
Dihydrosafrole	94-58-6	NA	210	NA	210
Dimethylaniline, N,N-	121-69-7	310	510	830	310
Dimethylformamide	68-12-2	6,100	NA	110,000	6,100
Dimethylhydrazine, 1,2-	540-73-8	NA	0.019	190,000	0.019
Dioxane, 1,4-	123-91-1	1,900	110	120,000	110
Epoxybutane, 1,2-	106-88-7	400	NA	15,000	400
Ethoxyethanol, 2-	110-80-5	6,000	NA	110,000	6,000
Ethyl Acetate	141-78-6	1,600	NA	11,000	1,600
Ethyl Acrylate	140-88-5	110	NA	2,500	110
Ethyl Chloride (Chloroethane)	75-00-3	14,000	NA	2,100	2,100
Ethyl Ether	60-29-7	31,000	NA	10,000	10,000
Ethyl Methacrylate	97-63-2	4,500	NA	1,100	1,100
Ethylbenzene	100-41-4	5,100	140	480	140
Ethylene Diamine	107-15-3	14,000	NA	190,000	14,000
Ethylene Oxide	75-21-8	480	0.051	120,000	0.051
Ethyleneimine	151-56-4	NA	0.063	150,000	0.063
Formaldehyde	50-00-0	1,900	260	42,000	260
Formic Acid	64-18-6	340	NA	110,000	340
Glycidaldehyde	765-34-4	49	NA	110,000	49
Hexane, N-	110-54-3	1,500	NA	140	140
Hydrazine	302-01-2	5.1	0.78	110,000	0.78
Isobutyl Alcohol	78-83-1	47,000	NA	10,000	10,000

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Chemical of Concern					
Methacrylonitrile	126-98-7	15	NA	4,600	15
Methanol	67-56-1	260,000	NA	110,000	110,000
Methyl Ethyl Ketone (2-Butanone)	78-93-3	48,000	NA	28,000	28,000
Methyl Hydrazine	60-34-4	160	NA	180,000	160
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	83,000	NA	3,400	3,400
Methyl Isocyanate	624-83-9	12	NA	10,000	12
Methyl Methacrylate	80-62-6	11,000	NA	2,400	2,400
Methyl tert-Butyl Ether (MTBE)	1634-04-4	39,000	1,100	8,900	1,100
Methylene Chloride	75-09-2	740	1,200	3,300	740
Naphthalene	91-20-3	320	45	NA	45
Nickel Carbonyl	13463-39-3	1,600	210,000	NA	1,600
Phosgene	75-44-5	0.77	NA	1,600	0.77
Propargyl Alcohol	107-19-7	310	NA	110,000	310
Propionaldehyde	123-38-6	190	NA	33,000	190
Propylene Oxide	75-56-9	810	45	78,000	45
Styrene	100-42-5	14,000	NA	870	870
Tetrachlorobenzene, 1,2,4,5-	95-94-3	4.7	NA	NA	4.7
Tetrachloroethane, 1,1,1,2-	630-20-6	4,700	49	680	49
Tetrachloroethane, 1,1,2,2-	79-34-5	3,100	15	1,900	15
Tetrachloroethylene	127-18-4	190	580	170	170
Toluene	108-88-3	10,000	NA	820	820
Trichloroethane, 1,1,1-	71-55-6	20,000	NA	640	640

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Chemical of Concern					
Trichloroethane, 1,1,2-	79-00-5	310	28	2,200	28
Trichloroethylene	79-01-6	10	24	690	10
Trichlorofluoromethane	75-69-4	4,100	NA	1,200	1,200
Triethylamine	121-44-8	290	NA	28,000	290
Vinyl Acetate	108-05-4	2,300	NA	2,700	2,300
Vinyl Bromide	593-60-2	11	6.4	2,500	6.4
Vinyl Chloride	75-01-4	160	1.3	3,900	1.3
Xylenes	1330-20-7	1,400	NA	260	260
* = See paragraph (C)(3)(a)(v) of rule 3745-300-08 of the Administrative Code.					

Table II: Generic numerical direct-contact soil standards (commercial land use with high frequency child exposure)

<u>Table II</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Inorganics/Metals					
Aluminum Phosphide	20859-73-8	180	NA	NA	180
Antimony (metallic)	7440-36-0	180	NA	NA	180
Antimony Trioxide	1309-64-4	1,000,000	NA	NA	1,000,000
Arsenic, Inorganic	7440-38-2	180	46	NA	46
Barium	7440-39-3	85,000	NA	NA	85,000

<u>Table II</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Beryllium and Compounds	7440-41-7	870	97,000	NA	870
Cadmium	7440-43-9	37	130,000	NA	37
Chlorine	7782-50-5	1.6	NA	2,800	1.6
Chromium(III), Insoluble Salts	16065-83-1	250,000	NA	NA	250,000
Chromium(VI)	18540-29-9	1,300	19	NA	19
Cobalt Compounds	7440-48-4	130	26,000	NA	130
Copper	7440-50-8	18,000	NA	NA	18,000
Disodium Phosphate	7558-79-4	440,000	NA	NA	440,000
Hydrogen Chloride	7647-01-0	1,000,000	NA	NA	1,000,000
Hydrogen Fluoride	7664-39-3	18,000	NA	NA	18,000
Hydrogen Sulfide	7783-06-4	1,000,000	NA	NA	1,000,000
Fluorine (Soluble Fluoride)	7782-41-4	26,000	NA	NA	26,000
Manganese Compounds	7439-96-5	10,000	NA	NA	10,000
Mercury and Compounds	7439-97-6	92	NA	3.1	3.1
Nickel Soluble Salts	7440-02-0	8,000	900,000	NA	8,000
Phosphine	7803-51-2	130	NA	NA	130
Selenium	7782-49-2	2,200	NA	NA	2,200
Selenious Acid	7783-00-8	2,200	NA	NA	2,200
Silver	7440-22-4	2,200	NA	NA	2,200
Sodium Azide	26628-22-8	1,800	NA	NA	1,800
Sodium Fluoride	7681-49-4	22,000	NA	NA	22,000
Sodium Fluoroacetate	62-74-8	5.9	NA	NA	5.9
Sodium tripolyphosphate	7758-29-4	440,000	NA	NA	440,000

Table II	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Sulfuric Acid	7664-93-9	1,000,000	NA	NA	1,000,000
Titanium Tetrachloride	7550-45-0	670,000	NA	NA	670,000
Trisodium Phosphate	7601-54-9	440,000	NA	NA	440,000
Vanadium Compounds	7440-62-2	2,200	NA	NA	2,200
Zinc and Compounds	7440-66-6	130,000	NA	NA	130,000
Zinc Phosphide	1314-84-7	130	NA	NA	130
Cyanides					
Calcium Cyanide	592-01-8	440	NA	NA	440
Copper Cyanide	544-92-3	2,200	NA	NA	2,200
Cyanide (CN-)	57-12-5	150	NA	950,000	150
Cyanogen	460-19-5	440	NA	NA	440
Cyanogen Bromide	506-68-3	39,000	NA	NA	39,000
Cyanogen Chloride	506-77-4	22,000	NA	NA	22,000
Hydrogen Cyanide	74-90-8	150	NA	1,000,000	150
Potassium Cyanide	151-50-8	880	NA	NA	880
Potassium Silver Cyanide	506-61-6	2,200	NA	NA	2,200
Silver Cyanide	506-64-9	44,000	NA	NA	44,000
Sodium Cyanide	143-33-9	440	NA	NA	440
Zinc Cyanide	557-21-1	22,000	NA	NA	22,000
Lead Compounds					
Lead Acetate	301-04-2	NA	170	NA	170
Lead and Compounds*	7439-92-1	NA	NA	NA	200
Lead Phosphate	7446-27-7	NA	6,000	NA	6,000
Lead Subacetate	1335-32-6	NA	910	NA	910

<u>Table II</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Tetraethyl Lead	78-00-2	0.044	NA	2.4	0.044
Semi-Volatile Organic Compounds (SVOCs)					
Acenaphthene	83-32-9	16,000	NA	NA	16,000
Acetophenone	98-86-2	44,000	NA	2,500	2,500
Acetylaminofluorene, 2-	53-96-3	NA	9.1	NA	9.1
Acrylamide	79-06-1	590	13	NA	13
Alachlor	15972-60-8	3,000	620	NA	620
Aldicarb	116-06-3	300	NA	NA	300
Aldicarb Sulfone	1646-88-4	300	NA	NA	300
Aldrin	309-00-2	13	3	NA	3
Aminobiphenyl, 4-	92-67-1	NA	1.7	NA	1.7
Ammonium Sulfamate	7773-06-0	88,000	NA	NA	88,000
Aniline	62-53-3	2,100	6,100	NA	2,100
Anthracene	120-12-7	81,000	NA	NA	81,000
Aroclor 1016	12674-11-2	18	430	NA	18
Aroclor 1221	11104-28-2	NA	15	NA	15
Aroclor 1232	11141-16-5	NA	14	NA	14
Aroclor 1242	53469-21-9	NA	15	NA	15
Aroclor 1248	12672-29-6	NA	15	NA	15
Aroclor 1254	11097-69-1	5.3	15	NA	5.3
Aroclor 1260	11096-82-5	NA	15	NA	15
Atrazine	1912-24-9	890	150	NA	150
Auramine	492-80-8	NA	39	NA	39
Benomyl	17804-35-2	15,000	NA	NA	15,000

<u>Table II</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Benzenethiol	108-98-5	440	NA	1,300	440
Benzidine	92-87-5	890	0.028	NA	0.028
Benz[a]anthracene	56-55-3	NA	59	NA	59
Benzo[a]pyrene	50-32-8	81	5.9	NA	5.9
Benzo[b]fluoranthene	205-99-2	NA	59	NA	59
Benzo[k]fluoranthene	207-08-9	NA	590	NA	590
Benzoic Acid	65-85-0	1,000,000	NA	NA	1,000,000
Biphenyl, 1,1'-	92-52-4	220,000	6,400	NA	6,400
Bis(2-chloroethoxy)methane	111-91-1	890	NA	NA	890
Bis(2-chloroethyl)ether	111-44-4	NA	30	5,000	30
Bis(chloromethyl)ether	542-88-1	NA	0.0092	4,200	0.0092
Bis(2-ethylhexyl)phthalate	117-81-7	5,900	2,500	NA	2,500
Butyl Benzyl Phthlate	85-68-7	59,000	18,000	NA	18,000
Cacodylic Acid	75-60-5	5,900	NA	NA	5,900
Captan	133-06-2	39,000	15,000	NA	15,000
Carbaryl	63-25-2	30,000	NA	NA	30,000
Carbofuran	1563-66-2	1,500	NA	NA	1,500
Carbosulfan	55285-14-8	3,000	NA	NA	3,000
Chloramben	133-90-4	4,500	NA	NA	4,500
Chlordane	12789-03-6	180	120	NA	120
Chlordecone (Kepone)	143-50-0	89	3.5	NA	3.5
Chloro-2-methylaniline HCl, 4-	3165-93-3	NA	75	NA	75
Chloroacetic Acid	79-11-8	1,000	NA	NA	1,000
Chloroacetophenone, 2-	532-27-4	200,000	NA	NA	200,000

<u>Table II</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Chloroaniline, p-	106-47-8	150	170	NA	150
Chlorobenzilate	510-15-6	5,900	320	NA	320
Chloronaphthalene, Beta-	91-58-7	22,000	NA	NA	22,000
Chlorophenol, 2-	95-57-8	2,200	NA	27,000	2,200
Chlorpyrifos	2921-88-2	300	NA	NA	300
Chrysene	218-01-9	NA	5,900	NA	5,900
Cresol, m-	108-39-4	15,000	NA	NA	15,000
Cresol, o-	95-48-7	15,000	NA	NA	15,000
Cresol, p-	106-44-5	5,900	NA	NA	5,900
Cresol, p-chloro-m-	59-50-7	30,000	NA	NA	30,000
Cresols	1319-77-3	30,000	NA	NA	30,000
DDD	72-54-8	150	140	NA	140
DDE, p,p'-	72-55-9	220	150	NA	150
DDT	50-29-3	190	130	NA	130
Diallate	2303-16-4	NA	570	NA	570
Diazinon	333-41-5	210	NA	NA	210
Dibenz[a,h]anthracene	53-70-3	NA	5.9	NA	5.9
Dibutyl Phthalate	84-74-2	30,000	NA	NA	30,000
Dicamba	1918-00-9	8,900	NA	NA	8,900
Dichlorobenzene, 1,2-	95-50-1	14,000	NA	380	380
Dichlorobenzene, 1,4-	106-46-7	22,000	290	NA	290
Dichlorobenzidine, 3,3'-	91-94-1	NA	76	NA	76
Dichlorophenol, 2,4-	120-83-2	890	NA	NA	890
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	3,500	NA	NA	3,500

<u>Table II</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Dichloropropionic acid, 2,2-	75-99-0	8,900	NA	NA	8,900
Dichlorvos	62-73-7	150	120	NA	120
Dieldrin	60-57-1	15	2.2	NA	2.2
Diethanolamine	111-42-2	590	NA	NA	590
Diethyl Phthalate	84-66-2	240,000	NA	NA	240,000
Diethylstilbestrol	56-53-1	NA	0.1	NA	0.1
Dimethoate	60-51-5	650	NA	NA	650
Dimethoxybenzidine, 3,3'-	119-90-4	NA	22	NA	22
Dimethylamino azobenzene [p-]	60-11-7	NA	7.5	NA	7.5
Dimethylbenz(a)anthracene, 7,12-	57-97-6	NA	0.024	NA	0.024
Dimethylbenzidine, 3,3'-	119-93-7	NA	3.2	NA	3.2
Dimethylphenol, 2,4-	105-67-9	5,900	NA	NA	5,900
Dinitrobenzene, 1,2-	528-29-0	30	NA	NA	30
Dinitrobenzene, 1,3-	99-65-0	30	NA	NA	30
Dinitrobenzene, 1,4-	100-25-4	30	NA	NA	30
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	590	NA	NA	590
Dinitrophenol, 2,4-	51-28-5	590	NA	NA	590
Dinitrotoluene, 2,4-	121-14-2	590	110	NA	110
Dinitrotoluene, 2,6-	606-20-2	NA	23	NA	23
Dinitrotoluene Mixture, 2,4/2,6	25321-14-6	NA	51	NA	51
Dinoseb	88-85-7	300	NA	NA	300
Diphenylhydrazine, 1,2-	122-66-7	NA	43	NA	43
Diquat	2764-72-9	650	NA	NA	650
Disulfoton	298-04-4	12	NA	NA	12

<u>Table II</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Diuron	330-54-1	590	NA	NA	590
Endothall	145-73-3	5,900	NA	NA	5,900
Endosulfan	115-29-7	2,600	NA	NA	2,600
Endrin	72-20-8	89	NA	NA	89
Epichlorohydrin	106-89-8	160	3,500	11,000	160
Ethion	563-12-2	150	NA	NA	150
Ethylene Glycol	107-21-1	240,000	NA	NA	240,000
Ethylene Thiourea	96-45-7	24	770	NA	24
Fluoranthene	206-44-0	11,000	NA	NA	11,000
Fluorene	86-73-7	11,000	NA	NA	11,000
Furan	110-00-9	440	NA	6,200	440
Furfural	98-01-1	1,200	NA	10,000	1,200
Glyphosate	1071-83-6	30,000	NA	NA	30,000
Guthion	86-50-0	890	NA	NA	890
Heptachlor	76-44-8	44	11	NA	11
Heptachlor Epoxide	1024-57-3	5.7	5.5	NA	5.5
Hexachlorobenzene	118-74-1	4.4	26	NA	4.4
Hexachlorobutadiene	87-68-3	440	140	17	17
Hexachlorocyclohexane, Alpha-	319-84-6	270	5.5	NA	5.5
Hexachlorocyclohexane, Beta-	319-85-7	NA	19	NA	19
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	110	39	NA	39
Hexachlorocyclohexane, Technical	608-73-1	NA	19	NA	19
Hexachlorocyclopentadiene	77-47-4	15	NA	16	15

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Chemical of Concern					
Hexachloroethane	67-72-1	270	210	NA	210
Hexachlorophene	70-30-4	89	NA	NA	89
Hexamethylene Diisocyanate, 1,6-	822-06-0	26	NA	3,400	26
Hexamethylphosphoramide	680-31-9	120	NA	NA	120
Hexanedioic Acid	124-04-9	590,000	NA	NA	590,000
Hydroquinone	123-31-9	12,000	580	NA	580
Indeno[1,2,3-cd]pyrene	193-39-5	NA	59	NA	59
Isophorone	78-59-1	59,000	36,000	NA	36,000
Malathion	121-75-5	5,900	NA	NA	5,900
Maleic Anhydride	108-31-6	30,000	NA	NA	30,000
Maleic Hydrazide	123-33-1	150,000	NA	NA	150,000
Malononitrile	109-77-3	30	NA	NA	30
Methomyl	16752-77-5	7,400	NA	NA	7,400
Methoxychlor	72-43-5	1,500	NA	NA	1,500
Methyl Parathion	298-00-0	74	NA	NA	74
Methylaniline Hydrochloride, 2-	636-21-5	NA	270	NA	270
Methylcholanthrene, 3-	56-49-5	NA	0.3	NA	0.3
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	590	65	NA	65
Methylenebisbenzenamine, 4,4'-	101-77-9	1,000,000	22	NA	22
Methylenediphenyl Diisocyanate	101-68-8	1,000,000	NA	NA	1,000,000
Methylnaphthalene, 1-	90-12-0	1.5	NA	390	1.5
Methylnaphthalene, 2-	91-57-6	1,100	NA	NA	1,100
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	NA	4.2	NA	4.2
Naled	300-76-5	880	NA	NA	880

<u>Table II</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Naphthylamine, 2-	91-59-8	NA	19	NA	19
Nitroaniline, 4-	100-01-6	1,200	1,700	NA	1,200
Nitrobenzene	98-95-3	760	560	3,000	560
Nitroglycerin	55-63-0	30	2,000	NA	30
Nitropropane, 2-	79-46-9	2,300	NA	4,900	2,300
Nitrosodiethanolamine, N-	1116-54-7	NA	12	NA	12
Nitrosodiethylamine, N-	55-18-5	NA	0.043	NA	0.043
Nitrosodimethylamine, N-	62-75-9	3.5	0.16	240,000	0.16
Nitroso-di-N-butylamine, N-	924-16-3	NA	8.9	NA	8.9
Nitroso-di-N-propylamine, N-	621-64-7	NA	5	NA	5
Nitrosodiphenylamine, N-	86-30-6	NA	7,100	NA	7,100
Nitrosomorpholine [N-]	59-89-2	NA	5.2	NA	5.2
Nitroso-N-ethylurea, N-	759-73-9	NA	0.24	NA	0.24
Nitroso-N-methylurea, N-	684-93-5	NA	0.054	NA	0.054
Nitrosopiperidine [N-]	100-75-4	NA	3.7	NA	3.7
Nitrosopyrrolidine, N-	930-55-2	NA	17	NA	17
Nitrotoluene, o-	88-72-2	390	230	1,500	230
Nitrotoluene, p-	99-99-0	1,200	2,200	NA	1,200
Octamethylpyrophosphoramide	152-16-9	590	NA	NA	590
Octyl Phthalate, di-N-	117-84-0	3,000	NA	NA	3,000
Oxamyl	23135-22-0	7,400	NA	NA	7,400
Parathion	56-38-2	1,800	NA	NA	1,800
Pentachlorobenzene	608-93-5	350	NA	NA	350
Pentachloroethane	76-01-7	NA	570	460	460

<u>Table II</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Pentachloronitrobenzene	82-68-8	890	130	NA	130
Pentachlorophenol	87-86-5	1,000	58	NA	58
Phenacetin	62-44-2	NA	16,000	NA	16,000
Phenol	108-95-2	89,000	NA	NA	89,000
Phenylmercuric Acetate	62-38-4	24	NA	NA	24
Phorate	298-02-2	59	NA	NA	59
Phosphoric Acid	7664-38-2	440,000	NA	NA	440,000
Phthalic Anhydride	85-44-9	590,000	NA	NA	590,000
Picloram	1918-02-1	21,000	NA	NA	21,000
Polychlorinated Biphenyls, Total	1336-36-3	NA	15	NA	15
Pronamide	23950-58-5	22,000	NA	NA	22,000
Propargite	2312-35-8	12,000	180	NA	180
Propham	122-42-9	5,900	NA	NA	5,900
Propoxur (Baygon)	114-26-1	1,200	NA	NA	1,200
Pyrene	129-00-0	8,100	NA	NA	8,100
Pyridine	110-86-1	440	NA	530,000	440
Quinoline	91-22-5	NA	12	NA	12
Safrole	94-59-7	NA	30	NA	30
Simazine	122-34-9	1,500	290	NA	290
Strychnine	57-24-9	89	NA	NA	89
TCDD, 2,3,7,8-	1746-01-6	0.00027	0.00034	NA	0.00027
Tetrachlorophenol, 2,3,4,6-	58-90-2	8,900	NA	NA	8,900
Tetraethyl Dithiopyrophosphate	3689-24-5	150	NA	NA	150
Tetrahydrofuran	109-99-9	140,000	NA	170,000	140,000

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Chemical of Concern					
Thiofanox	39196-18-4	89	NA	NA	89
Thiophanate, Methyl	23564-05-8	48,000	2,900	NA	2,900
Thiram	137-26-8	4,500	NA	NA	4,500
Toluene-2,4-diisocyanate	584-84-9	2.2	710	NA	2.2
Toluene-2,6-diisocyanate	91-08-7	44	1,300	1,700	44
Toluidine, p-	106-49-0	NA	1,200	NA	1,200
Toxaphene	8001-35-2	27	32	NA	27
Triallate	2303-17-5	11,000	710	NA	710
Trichlorobenzene, 1,2,4-	120-82-1	470	1,800	400	400
Trichlorophenol, 2,4,5-	95-95-4	30,000	NA	NA	30,000
Trichlorophenol, 2,4,6-	88-06-2	300	3,200	NA	300
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	3,000	NA	NA	3,000
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	2,400	NA	NA	2,400
Trifluralin	1582-09-8	3,300	6,600	NA	3,300
Trimethylbenzene, 1,2,3-	526-73-8	2,300	NA	290	290
Trimethylbenzene, 1,2,4-	95-63-6	2,100	NA	220	220
Trimethylbenzene, 1,3,5-	108-67-8	1,900	NA	180	180
Trinitrobenzene, 1,3,5-	99-35-4	12,000	NA	NA	12,000
Urethane	51-79-6	NA	6.5	NA	6.5
Warfarin	81-81-2	89	NA	NA	89
Volatile Organic Compounds (VOCs)					
Acetaldehyde	75-07-0	690	1,200	110,000	690
Acetone	67-64-1	390,000	NA	110,000	110,000
Acetonitrile	75-05-8	6,800	NA	130,000	6,800

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Acrolein	107-02-8	1.2	NA	23,000	1.2
Acrylic Acid	79-10-7	170	NA	110,000	170
Acrylonitrile	107-13-1	100	30	11,000	30
Allyl Alcohol	107-18-6	1,800	NA	110,000	1,800
Allyl Chloride	107-05-1	14	80	1,400	14
Benzene	71-43-2	610	130	1,800	130
Benzotrichloride	98-07-7	NA	3.9	320	3.9
Benzyl Chloride	100-44-7	180	130	1,500	130
Bis(2-chloro-1-methylethyl) Ether	108-60-1	18,000	NA	1,000	1,000
Bromodichloromethane	75-27-4	3,500	33	930	33
Bromoform	75-25-2	8,800	2,300	910	910
Bromomethane	74-83-9	56	NA	3,600	56
Butadiene, 1,3-	106-99-0	15	8.5	670	8.5
Butanol, N-	71-36-3	44,000	NA	7,600	7,600
Butylbenzene, n-	104-51-8	22,000	NA	110	110
Carbon Disulfide	75-15-0	6,200	NA	740	740
Carbon Tetrachloride	56-23-5	750	74	460	74
Carbonyl Sulfide	463-58-1	570	NA	5,900	570
Chlorobenzene	108-90-7	2,100	NA	760	760
Chloro-1,3-butadiene, 2-	126-99-8	190	1.1	790	1.1
Chloroform	67-66-3	1,500	35	2,500	35
Chloromethane	74-87-3	930	NA	1,300	930
Chloromethyl Methyl Ether	107-30-2	NA	2.3	9,300	2.3
Crotonaldehyde, trans-	123-73-9	440	27	17,000	27

<u>Table II</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Cumene	98-82-8	15,000	NA	270	270
Cyclohexane	110-82-7	55,000	NA	120	120
Cyclohexanone	108-94-1	230,000	NA	5,100	5,100
Dibromo-3-chloropropane, 1,2-	96-12-8	34	0.95	980	0.95
Dibromochloromethane	124-48-1	8,800	610	800	610
Dibromoethane, 1,2-	106-93-4	580	4.2	1,300	4.2
Dichloro-2-butene, 1,4-	764-41-0	NA	0.24	550	0.24
Dichlorodifluoromethane	75-71-8	88,000	NA	850	850
Dichloroethane, 1,1-	75-34-3	88,000	390	1,700	390
Dichloroethane, 1,2-	107-06-2	280	52	3,000	52
Dichloroethylene, 1,1-	75-35-4	1,900	NA	1,200	1,200
Dichloroethylene, 1,2-cis-	156-59-2	880	NA	2,400	880
Dichloroethylene, 1,2-trans-	156-60-5	8,800	NA	1,900	1,900
Dichloropropane, 1,2-	78-87-5	130	290	1,400	130
Dichloropropane, 1,3-	142-28-9	8,800	NA	1,500	1,500
Dichloropropene, 1,3-	542-75-6	600	230	1,600	230
Dihydrosafrole	94-58-6	NA	1,000	NA	1,000
Dimethylaniline, N,N-	121-69-7	880	1,900	830	830
Dimethylformamide	68-12-2	19,000	NA	110,000	19,000
Dimethylhydrazine, 1,2-	540-73-8	NA	0.086	190,000	0.086
Dioxane, 1,4-	123-91-1	5,800	480	120,000	480
Epoxybutane, 1,2-	106-88-7	1,300	NA	15,000	1,300
Ethoxyethanol, 2-	110-80-5	18,000	NA	110,000	18,000
Ethyl Acetate	141-78-6	5,200	NA	11,000	5,200

<u>Table II</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Ethyl Acrylate	140-88-5	370	NA	2,500	370
Ethyl Chloride (Chloroethane)	75-00-3	46,000	NA	2,100	2,100
Ethyl Ether	60-29-7	88,000	NA	10,000	10,000
Ethyl Methacrylate	97-63-2	15,000	NA	1,100	1,100
Ethylbenzene	100-41-4	15,000	660	480	480
Ethylene Diamine	107-15-3	39,000	NA	190,000	39,000
Ethylene Oxide	75-21-8	1,600	0.39	120,000	0.39
Ethyleneimine	151-56-4	NA	0.33	150,000	0.33
Formaldehyde	50-00-0	6,200	1,400	42,000	1,400
Formic Acid	64-18-6	390,000	NA	110,000	110,000
Glycidaldehyde	765-34-4	140	NA	110,000	140
Hexane, N-	110-54-3	5,100	NA	140	140
Hydrazine	302-01-2	17	3.7	110,000	3.7
Isobutyl Alcohol	78-83-1	130,000	NA	10,000	10,000
Methacrylonitrile	126-98-7	43	NA	4,600	43
Methanol	67-56-1	750,000	NA	110,000	110,000
Methyl Ethyl Ketone (2-Butanone)	78-93-3	180,000	NA	28,000	28,000
Methyl Hydrazine	60-34-4	440	NA	180,000	440
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	280,000	NA	3,400	3,400
Methyl Isocyanate	624-83-9	39	NA	10,000	39
Methyl Methacrylate	80-62-6	37,000	NA	2,400	2,400
Methyl tert-Butyl Ether (MTBE)	1634-04-4	130,000	5,400	8,900	5,400
Methylene Chloride	75-09-2	2,100	4,300	3,300	2,100

<u>Table II</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct- Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Naphthalene	91-20-3	1,000	220	NA	220
Nickel Carbonyl	13463-39-3	4,600	900,000	NA	4,600
Phosgene	75-44-5	2.6	NA	1,600	2.6
Propargyl Alcohol	107-19-7	880	NA	110,000	880
Propionaldehyde	123-38-6	630	NA	33,000	630
Propylene Oxide	75-56-9	2,700	200	78,000	200
Styrene	100-42-5	42,000	NA	870	870
Tetrachlorobenzene, 1,2,4,5-	95-94-3	13	NA	NA	13
Tetrachloroethane, 1,1,1,2-	630-20-6	13,000	230	680	230
Tetrachloroethane, 1,1,2,2-	79-34-5	8,800	71	1,900	71
Tetrachloroethylene	127-18-4	630	2,700	170	170
Toluene	108-88-3	30,000	NA	820	820
Trichloroethane, 1,1,1-	71-55-6	67,000	NA	640	640
Trichloroethane, 1,1,2-	79-00-5	1,800	130	2,200	130
Trichloroethylene	79-01-6	33	160	690	33
Trichlorofluoromethane	75-69-4	130,000	NA	1,200	1,200
Triethylamine	121-44-8	970	NA	28,000	970
Vinyl Acetate	108-05-4	7,600	NA	2,700	2,700
Vinyl Bromide	593-60-2	36	28	2,500	28
Vinyl Chloride	75-01-4	510	2.3	3,900	2.3
Xylenes	1330-20-7	4,800	NA	260	260
* = See paragraph (C)(3)(a)(v) of rule 3745-300-08 of the Administrative Code.					

Table III: Generic numerical direct-contact soil standards (commercial or industrial land use category)

Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Inorganics/Metals					
Aluminum Phosphide	20859-73-8	1,900	NA	NA	1,900
Antimony (metallic)	7440-36-0	1,900	NA	NA	1,900
Antimony Trioxide	1309-64-4	1,000,000	NA	NA	1,000,000
Arsenic, Inorganic	7440-38-2	1,600	100	NA	100
Barium	7440-39-3	760,000	NA	NA	760,000
Beryllium and Compounds	7440-41-7	8,800	97,000	NA	8,800
Cadmium	7440-43-9	350	130,000	NA	350
Chlorine	7782-50-5	2	NA	2,800	2
Chromium (III)	16065-83-1	470,000	NA	NA	470,000
Chromium (VI)	18540-29-9	14,000	240	NA	240
Cobalt Compounds	7440-48-4	1,400	26,000	NA	1,400
Copper	7440-50-8	190,000	NA	NA	190,000
Disodium Phosphate	7558-79-4	1,000,000	NA	NA	1,000,000
Hydrogen Chloride	7647-01-0	1,000,000	NA	NA	1,000,000
Hydrogen Fluoride	7664-39-3	190,000	NA	NA	190,000
Hydrogen Sulfide	7783-06-4	1,000,000	NA	NA	1,000,000
Fluorine (Soluble Fluoride)	7782-41-4	280,000	NA	NA	280,000
Manganese Compounds	7439-96-5	88,000	NA	NA	88,000
Mercury and Compounds	7439-97-6	110	NA	3.1	3.1

<u>Table III</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Nickel Soluble Salts	7440-02-0	52,000	900,000	NA	52,000
Phosphine	7803-51-2	1,400	NA	NA	1,400
Selenium	7782-49-2	23,000	NA	NA	23,000
Selenious Acid	7783-00-8	23,000	NA	NA	23,000
Silver	7440-22-4	23,000	NA	NA	23,000
Sodium Azide	26628-22-8	19,000	NA	NA	19,000
Sodium Fluoride	7681-49-4	230,000	NA	NA	230,000
Sodium Fluoroacetate	62-74-8	51	NA	NA	51
Sodium tripolyphosphate	7758-29-4	1,000,000	NA	NA	1,000,000
Sulfuric Acid	7664-93-9	1,000,000	NA	NA	1,000,000
Titanium Tetrachloride	7550-45-0	830,000	NA	NA	830,000
Trisodium Phosphate	7601-54-9	1,000,000	NA	NA	1,000,000
Vanadium Compounds	7440-62-2	23,000	NA	NA	23,000
Zinc and Compounds	7440-66-6	1,000,000	NA	NA	1,000,000
Zinc Phosphide	1314-84-7	1,400	NA	NA	1,400
Cyanides					
Calcium Cyanide	592-01-8	4,700	NA	NA	4,700
Copper Cyanide	544-92-3	23,000	NA	NA	23,000
Cyanide (CN-)	57-12-5	400	NA	950,000	400
Cyanogen	460-19-5	4,700	NA	NA	4,700
Cyanogen Bromide	506-68-3	420,000	NA	NA	420,000
Cyanogen Chloride	506-77-4	230,000	NA	NA	230,000
Hydrogen Cyanide	74-90-8	400	NA	1,000,000	400
Potassium Cyanide	151-50-8	9,300	NA	NA	9,300

<u>Table III</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Potassium Silver Cyanide	506-61-6	23,000	NA	NA	23,000
Silver Cyanide	506-64-9	470,000	NA	NA	470,000
Sodium Cyanide	143-33-9	4,700	NA	NA	4,700
Zinc Cyanide	557-21-1	230,000	NA	NA	230,000
Lead Compounds					
Lead Acetate	301-04-2	NA	340	NA	340
Lead and Compounds*	7439-92-1	NA	NA	NA	800
Lead Phosphate	7446-27-7	NA	15,000	NA	15,000
Lead Subacetate	1335-32-6	NA	1,900	NA	1,900
Tetraethyl Lead	78-00-2	0.47	NA	2.4	0.47
Semi-Volatile Organic Compounds (SVOCs)					
Acenaphthene	83-32-9	130,000	NA	NA	130,000
Acetophenone	98-86-2	470,000	NA	2,500	2,500
Acetylaminofluorene, 2-	53-96-3	NA	19	NA	19
Acrylamide	79-06-1	5,100	140	NA	140
Alachlor	15972-60-8	25,000	1,300	NA	1,300
Aldicarb	116-06-3	2,500	NA	NA	2,500
Aldicarb Sulfone	1646-88-4	2,500	NA	NA	2,500
Aldrin	309-00-2	140	7.2	NA	7.2
Aminobiphenyl, 4-	92-67-1	NA	3.4	NA	3.4
Ammonium Sulfamate	7773-06-0	930,000	NA	NA	930,000
Aniline	62-53-3	18,000	12,000	NA	12,000
Anthracene	120-12-7	670,000	NA	NA	670,000
Aroclor 1016	12674-11-2	150	780	NA	150

<u>Table III</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Aroclor 1221	11104-28-2	NA	22	NA	22
Aroclor 1232	11141-16-5	NA	20	NA	20
Aroclor 1242	53469-21-9	NA	27	NA	27
Aroclor 1248	12672-29-6	NA	27	NA	27
Aroclor 1254	11097-69-1	43	28	NA	28
Aroclor 1260	11096-82-5	NA	28	NA	28
Atrazine	1912-24-9	7,600	310	NA	310
Auramine	492-80-8	NA	81	NA	81
Benomyl	17804-35-2	130,000	NA	NA	130,000
Benzenethiol	108-98-5	4,700	NA	1,300	1,300
Benzidine	92-87-5	7,600	0.31	NA	0.31
Benz[a]anthracene	56-55-3	NA	610	NA	610
Benzo[a]pyrene	50-32-8	640	62	NA	62
Benzo[b]fluoranthene	205-99-2	NA	620	NA	620
Benzo[k]fluoranthene	207-08-9	NA	6,200	NA	6,200
Benzoic Acid	65-85-0	1,000,000	NA	NA	1,000,000
Biphenyl, 1,1'-	92-52-4	1,000,000	16,000	NA	16,000
Bis(2-chloroethoxy)methane	111-91-1	7,600	NA	NA	7,600
Bis(2-chloroethyl)ether	111-44-4	NA	30	5,000	30
Bis(chloromethyl)ether	542-88-1	NA	0.0092	4,200	0.0092
Bis(2-ethylhexyl)phthalate	117-81-7	51,000	5,100	NA	5,100
Butyl Benzyl Phthlate	85-68-7	510,000	37,000	NA	37,000
Cacodylic Acid	75-60-5	51,000	NA	NA	51,000
Captan	133-06-2	330,000	31,000	NA	31,000

<u>Table III</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Carbaryl	63-25-2	250,000	NA	NA	250,000
Carbofuran	1563-66-2	13,000	NA	NA	13,000
Carbosulfan	55285-14-8	25,000	NA	NA	25,000
Chloramben	133-90-4	38,000	NA	NA	38,000
Chlordane	12789-03-6	1,400	260	NA	260
Chlordecone (Kepone)	143-50-0	760	7.1	NA	7.1
Chloro-2-methylaniline HCl, 4-	3165-93-3	NA	150	NA	150
Chloroacetic Acid	79-11-8	8,900	NA	NA	8,900
Chloroacetophenone, 2-	532-27-4	250,000	NA	NA	250,000
Chloroaniline, p-	106-47-8	1,300	350	NA	350
Chlorobenzilate	510-15-6	51,000	640	NA	640
Chloronaphthalene, Beta-	91-58-7	180,000	NA	NA	180,000
Chlorophenol, 2-	95-57-8	23,000	NA	27,000	23,000
Chlorpyrifos	2921-88-2	2,500	NA	NA	2,500
Chrysene	218-01-9	NA	62,000	NA	62,000
Cresol, m-	108-39-4	130,000	NA	NA	130,000
Cresol, o-	95-48-7	130,000	NA	NA	130,000
Cresol, p-	106-44-5	51,000	NA	NA	51,000
Cresol, p-chloro-m-	59-50-7	250,000	NA	NA	250,000
Cresols	1319-77-3	250,000	NA	NA	250,000
DDD	72-54-8	1,300	300	NA	300
DDE, p,p'-	72-55-9	2,300	360	NA	360
DDT	50-29-3	1,900	310	NA	310
Diallate	2303-16-4	NA	1,200	NA	1,200

<u>Table III</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Diazinon	333-41-5	1,800	NA	NA	1,800
Dibenz[a,h]anthracene	53-70-3	NA	62	NA	62
Dibutyl Phthalate	84-74-2	250,000	NA	NA	250,000
Dicamba	1918-00-9	76,000	NA	NA	76,000
Dichlorobenzene, 1,2-	95-50-1	24,000	NA	380	380
Dichlorobenzene, 1,4-	106-46-7	72,000	290	NA	290
Dichlorobenzidine, 3,3'-	91-94-1	NA	150	NA	150
Dichlorophenol, 2,4-	120-83-2	7,600	NA	NA	7,600
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	33,000	NA	NA	33,000
Dichloropropionic acid, 2,2-	75-99-0	76,000	NA	NA	76,000
Dichlorvos	62-73-7	1,300	240	NA	240
Dieldrin	60-57-1	130	4.4	NA	4.4
Diethanolamine	111-42-2	5,000	NA	NA	5,000
Diethyl Phthalate	84-66-2	1,000,000	NA	NA	1,000,000
Diethylstilbestrol	56-53-1	NA	0.2	NA	0.2
Dimethoate	60-51-5	5,600	NA	NA	5,600
Dimethoxybenzidine, 3,3'-	119-90-4	NA	44	NA	44
Dimethylamino azobenzene [p-]	60-11-7	NA	15	NA	15
Dimethylbenz(a)anthracene, 7,12-	57-97-6	NA	0.25	NA	0.25
Dimethylbenzidine, 3,3'-	119-93-7	NA	6.4	NA	6.4
Dimethylphenol, 2,4-	105-67-9	51,000	NA	NA	51,000
Dinitrobenzene, 1,2-	528-29-0	250	NA	NA	250
Dinitrobenzene, 1,3-	99-65-0	250	NA	NA	250
Dinitrobenzene, 1,4-	100-25-4	250	NA	NA	250

<u>Table III</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	5,100	NA	NA	5,100
Dinitrophenol, 2,4-	51-28-5	5,100	NA	NA	5,100
Dinitrotoluene, 2,4-	121-14-2	5,000	230	NA	230
Dinitrotoluene, 2,6-	606-20-2	NA	47	NA	47
Dinitrotoluene Mixture, 2,4/2,6	25321-14-6	NA	100	NA	100
Dinoseb	88-85-7	2,500	NA	NA	2,500
Diphenylhydrazine, 1,2-	122-66-7	NA	89	NA	89
Diquat	2764-72-9	5,600	NA	NA	5,600
Disulfoton	298-04-4	100	NA	NA	100
Diuron	330-54-1	5,100	NA	NA	5,100
Endothall	145-73-3	51,000	NA	NA	51,000
Endosulfan	115-29-7	28,000	NA	NA	28,000
Endrin	72-20-8	760	NA	NA	760
Epichlorohydrin	106-89-8	210	3,500	11,000	210
Ethion	563-12-2	1,300	NA	NA	1,300
Ethylene Glycol	107-21-1	1,000,000	NA	NA	1,000,000
Ethylene Thiourea	96-45-7	200	1,600	NA	200
Fluoranthene	206-44-0	89,000	NA	NA	89,000
Fluorene	86-73-7	89,000	NA	NA	89,000
Furan	110-00-9	4,700	NA	6,200	4,700
Furfural	98-01-1	9,200	NA	10,000	9,200
Glyphosate	1071-83-6	250,000	NA	NA	250,000
Guthion	86-50-0	7,600	NA	NA	7,600
Heptachlor	76-44-8	470	23	NA	23

<u>Table III</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Heptachlor Epoxide	1024-57-3	61	13	NA	13
Hexachlorobenzene	118-74-1	47	29	NA	29
Hexachlorobutadiene	87-68-3	4,700	140	17	17
Hexachlorocyclohexane, Alpha-	319-84-6	2,300	11	NA	11
Hexachlorocyclohexane, Beta-	319-85-7	NA	39	NA	39
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	1,000	89	NA	89
Hexachlorocyclohexane, Technical	608-73-1	NA	39	NA	39
Hexachlorocyclopentadiene	77-47-4	19	NA	16	16
Hexachloroethane	67-72-1	1,500	210	NA	210
Hexachlorophene	70-30-4	760	NA	NA	760
Hexamethylene Diisocyanate, 1,6-	822-06-0	33	NA	3,400	33
Hexamethylphosphoramide	680-31-9	1,000	NA	NA	1,000
Hexanedioic Acid	124-04-9	1,000,000	NA	NA	1,000,000
Hydroquinone	123-31-9	100,000	1,200	NA	1,200
Indeno[1,2,3-cd]pyrene	193-39-5	NA	620	NA	620
Isophorone	78-59-1	510,000	75,000	NA	75,000
Malathion	121-75-5	51,000	NA	NA	51,000
Maleic Anhydride	108-31-6	240,000	NA	NA	240,000
Maleic Hydrazide	123-33-1	1,000,000	NA	NA	1,000,000
Malononitrile	109-77-3	250	NA	NA	250
Methomyl	16752-77-5	63,000	NA	NA	63,000
Methoxychlor	72-43-5	13,000	NA	NA	13,000
Methyl Parathion	298-00-0	630	NA	NA	630

<u>Table III</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Methylaniline Hydrochloride, 2-	636-21-5	NA	540	NA	540
Methylcholanthrene, 3-	56-49-5	NA	3.2	NA	3.2
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	5,100	710	NA	710
Methylenebisbenzenamine, 4,4'-	101-77-9	1,000,000	44	NA	44
Methylenediphenyl Diisocyanate	101-68-8	1,000,000	NA	NA	1,000,000
Methylnaphthalene, 1-	90-12-0	1.9	NA	390	1.9
Methylnaphthalene, 2-	91-57-6	8,900	NA	NA	8,900
Methyl-N-nitro-N-nitrosoguanidine, N- Naled	70-25-7 300-76-5	NA 9,300	8.5 NA	NA NA	8.5 9,300
Naphthylamine, 2-	91-59-8	NA	39	NA	39
Nitroaniline, 4-	100-01-6	10,000	3,500	NA	3,500
Nitrobenzene	98-95-3	4,100	560	3,000	560
Nitroglycerin	55-63-0	250	4,200	NA	250
Nitropropane, 2-	79-46-9	2,900	NA	4,900	2,900
Nitrosodiethanolamine, N-	1116-54-7	NA	25	NA	25
Nitrosodiethylamine, N-	55-18-5	NA	0.47	NA	0.47
Nitrosodimethylamine, N-	62-75-9	37	1.1	240,000	1.1
Nitroso-di-N-butylamine, N-	924-16-3	NA	16	NA	16
Nitroso-di-N-propylamine, N-	621-64-7	NA	10	NA	10
Nitrosodiphenylamine, N-	86-30-6	NA	14,000	NA	14,000
Nitrosomorpholine [N-]	59-89-2	NA	11	NA	11
Nitroso-N-ethylurea, N-	759-73-9	NA	2.6	NA	2.6
Nitroso-N-methylurea, N-	684-93-5	NA	0.59	NA	0.59
Nitrosopiperidine [N-]	100-75-4	NA	7.5	NA	7.5

<u>Table III</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Nitrosopyrrolidine, N-	930-55-2	NA	34	NA	34
Nitrotoluene, o-	88-72-2	4,200	590	1,500	590
Nitrotoluene, p-	99-99-0	10,000	4,400	NA	4,400
Octamethylpyrophosphoramidate	152-16-9	5,100	NA	NA	5,100
Octyl Phthalate, di-N-	117-84-0	25,000	NA	NA	25,000
Oxamyl	23135-22-0	63,000	NA	NA	63,000
Parathion	56-38-2	15,000	NA	NA	15,000
Pentachlorobenzene	608-93-5	3,700	NA	NA	3,700
Pentachloroethane	76-01-7	NA	1,500	460	460
Pentachloronitrobenzene	82-68-8	7,600	270	NA	270
Pentachlorophenol	87-86-5	7,500	100	NA	100
Phenacetin	62-44-2	NA	32,000	NA	32,000
Phenol	108-95-2	760,000	NA	NA	760,000
Phenylmercuric Acetate	62-38-4	200	NA	NA	200
Phorate	298-02-2	510	NA	NA	510
Phosphoric Acid	7664-38-2	1,000,000	NA	NA	1,000,000
Phthalic Anhydride	85-44-9	1,000,000	NA	NA	1,000,000
Picloram	1918-02-1	180,000	NA	NA	180,000
Polychlorinated Biphenyls, Total	1336-36-3	NA	27	NA	27
Pronamide	23950-58-5	190,000	NA	NA	190,000
Propargite	2312-35-8	100,000	370	NA	370
Propham	122-42-9	51,000	NA	NA	51,000
Propoxur (Baygon)	114-26-1	10,000	NA	NA	10,000
Pyrene	129-00-0	67,000	NA	NA	67,000

<u>Table III</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Pyridine	110-86-1	4,700	NA	530,000	4,700
Quinoline	91-22-5	NA	24	NA	24
Safrole	94-59-7	NA	320	NA	320
Simazine	122-34-9	13,000	590	NA	590
Strychnine	57-24-9	760	NA	NA	760
TCDD, 2,3,7,8-	1746-01-6	0.0026	0.00076	NA	0.00076
Tetrachlorophenol, 2,3,4,6-	58-90-2	76,000	NA	NA	76,000
Tetraethyl Dithiopyrophosphate	3689-24-5	1,300	NA	NA	1,300
Tetrahydrofuran	109-99-9	250,000	NA	170,000	170,000
Thiofanox	39196-18-4	760	NA	NA	760
Thiophanate, Methyl	23564-05-8	400,000	5,900	NA	5,900
Thiram	137-26-8	38,000	NA	NA	38,000
Toluene-2,4-diisocyanate	584-84-9	2.8	710	NA	2.8
Toluene-2,6-diisocyanate	91-08-7	56	2,800	1,700	56
Toluidine, p-	106-49-0	NA	2,400	NA	2,400
Toxaphene	8001-35-2	230	64	NA	64
Triallate	2303-17-5	120,000	1,800	NA	1,800
Trichlorobenzene, 1,2,4-	120-82-1	650	4,500	400	400
Trichlorophenol, 2,4,5-	95-95-4	250,000	NA	NA	250,000
Trichlorophenol, 2,4,6-	88-06-2	2,500	6,400	NA	2,500
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	25,000	NA	NA	25,000
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	20,000	NA	NA	20,000
Trifluralin	1582-09-8	35,000	17,000	NA	17,000
Trimethylbenzene, 1,2,3-	526-73-8	5,500	NA	290	290

<u>Table III</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Trimethylbenzene, 1,2,4-	95-63-6	4,700	NA	220	220
Trimethylbenzene, 1,3,5-	108-67-8	4,000	NA	180	180
Trinitrobenzene, 1,3,5-	99-35-4	120,000	NA	NA	120,000
Urethane	51-79-6	NA	71	NA	71
Warfarin	81-81-2	760	NA	NA	760
Volatile Organic Compounds (VOCs)					
Acetaldehyde	75-07-0	860	1,200	110,000	860
Acetone	67-64-1	1,000,000	NA	110,000	110,000
Acetonitrile	75-05-8	8,600	NA	130,000	8,600
Acrolein	107-02-8	1.5	NA	23,000	1.5
Acrylic Acid	79-10-7	210	NA	110,000	210
Acrylonitrile	107-13-1	160	30	11,000	30
Allyl Alcohol	107-18-6	19,000	NA	110,000	19,000
Allyl Chloride	107-05-1	17	80	1,400	17
Benzene	71-43-2	1,100	130	1,800	130
Benzotrichloride	98-07-7	NA	10	320	10
Benzyl Chloride	100-44-7	270	130	1,500	130
Bis(2-chloro-1-methylethyl) Ether	108-60-1	190,000	NA	1,000	1,000
Bromodichloromethane	75-27-4	37,000	33	930	33
Bromoform	75-25-2	93,000	2,300	910	910
Bromomethane	74-83-9	76	NA	3,600	76
Butadiene, 1,3-	106-99-0	19	8.5	670	8.5
Butanol, N-	71-36-3	470,000	NA	7,600	7,600
Butylbenzene, n-	104-51-8	230,000	NA	110	110

<u>Table III</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Carbon Disulfide	75-15-0	8,800	NA	740	740
Carbon Tetrachloride	56-23-5	1,500	74	460	74
Carbonyl Sulfide	463-58-1	710	NA	5,900	710
Chlorobenzene	108-90-7	3,400	NA	760	760
Chloro-1,3-butadiene, 2-	126-99-8	240	1.1	790	1.1
Chloroform	67-66-3	2,700	35	2,500	35
Chloromethane	74-87-3	1,200	NA	1,300	1,200
Chloromethyl Methyl Ether	107-30-2	NA	2.3	9,300	2.3
Crotonaldehyde, trans-	123-73-9	4,700	69	17,000	69
Cumene	98-82-8	26,000	NA	270	270
Cyclohexane	110-82-7	69,000	NA	120	120
Cyclohexanone	108-94-1	320,000	NA	5,100	5,100
Dibromo-3-chloropropane, 1,2-	96-12-8	65	1.6	980	1.6
Dibromochloromethane	124-48-1	93,000	1,600	800	800
Dibromoethane, 1,2-	106-93-4	840	4.2	1,300	4.2
Dichloro-2-butene, 1,4-	764-41-0	NA	0.24	550	0.24
Dichlorodifluoromethane	75-71-8	930,000	NA	850	850
Dichloroethane, 1,1-	75-34-3	930,000	390	1,700	390
Dichloroethane, 1,2-	107-06-2	350	52	3,000	52
Dichloroethylene, 1,1-	75-35-4	2,500	NA	1,200	1,200
Dichloroethylene, 1,2-cis-	156-59-2	9,300	NA	2,400	2,400
Dichloroethylene, 1,2-trans-	156-60-5	93,000	NA	1,900	1,900
Dichloropropane, 1,2-	78-87-5	170	290	1,400	170
Dichloropropane, 1,3-	142-28-9	93,000	NA	1,500	1,500

<u>Table III</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Dichloropropene, 1,3-	542-75-6	780	230	1,600	230
Dihydrosafrole	94-58-6	NA	1,500	NA	1,500
Dimethylaniline, N,N-	121-69-7	9,300	4,800	830	830
Dimethylformamide	68-12-2	39,000	NA	110,000	39,000
Dimethylhydrazine, 1,2-	540-73-8	NA	0.14	190,000	0.14
Dioxane, 1,4-	123-91-1	12,000	850	120,000	850
Epoxybutane, 1,2-	106-88-7	1,700	NA	15,000	1,700
Ethoxyethanol, 2-	110-80-5	39,000	NA	110,000	39,000
Ethyl Acetate	141-78-6	6,600	NA	11,000	6,600
Ethyl Acrylate	140-88-5	540	NA	2,500	540
Ethyl Chloride (Chloroethane)	75-00-3	57,000	NA	2,100	2,100
Ethyl Ether	60-29-7	930,000	NA	10,000	10,000
Ethyl Methacrylate	97-63-2	19,000	NA	1,100	1,100
Ethylbenzene	100-41-4	49,000	660	480	480
Ethylene Diamine	107-15-3	420,000	NA	190,000	190,000
Ethylene Oxide	75-21-8	2,000	0.62	120,000	0.62
Ethyleneimine	151-56-4	NA	0.33	150,000	0.33
Formaldehyde	50-00-0	8,300	1,400	42,000	1,400
Formic Acid	64-18-6	1,000,000	NA	110,000	110,000
Glycidaldehyde	765-34-4	620	NA	110,000	620
Hexane, N-	110-54-3	6,400	NA	140	140
Hydrazine	302-01-2	21	3.7	110,000	3.7
Isobutyl Alcohol	78-83-1	1,000,000	NA	10,000	10,000
Methacrylonitrile	126-98-7	390	NA	4,600	390

<u>Table III</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Methanol	67-56-1	1,000,000	NA	110,000	110,000
Methyl Ethyl Ketone (2-Butanone)	78-93-3	540,000	NA	28,000	28,000
Methyl Hydrazine	60-34-4	4,700	NA	180,000	4,700
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	350,000	NA	3,400	3,400
Methyl Isocyanate	624-83-9	49	NA	10,000	49
Methyl Methacrylate	80-62-6	48,000	NA	2,400	2,400
Methyl tert-Butyl Ether (MTBE)	1634-04-4	160,000	5,400	8,900	5,400
Methylene Chloride	75-09-2	9,500	33,000	3,300	3,300
Naphthalene	91-20-3	1,500	230	NA	230
Nickel Carbonyl	13463-39-3	36,000	900,000	NA	36,000
Phosgene	75-44-5	3.2	NA	1,600	3.2
Propargyl Alcohol	107-19-7	9,300	NA	110,000	9,300
Propionaldehyde	123-38-6	790	NA	33,000	790
Propylene Oxide	75-56-9	3,400	330	78,000	330
Styrene	100-42-5	93,000	NA	870	870
Tetrachlorobenzene, 1,2,4,5-	95-94-3	140	NA	NA	140
Tetrachloroethane, 1,1,1,2-	630-20-6	140,000	230	680	230
Tetrachloroethane, 1,1,2,2-	79-34-5	93,000	71	1,900	71
Tetrachloroethylene	127-18-4	1,000	2,700	170	170
Toluene	108-88-3	140,000	NA	820	820
Trichloroethane, 1,1,1-	71-55-6	90,000	NA	640	640
Trichloroethane, 1,1,2-	79-00-5	19,000	130	2,200	130
Trichloroethylene	79-01-6	48	160	690	48

<u>Table III</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Trichlorofluoromethane	75-69-4	1,000,000	NA	1,200	1,200
Triethylamine	121-44-8	1,200	NA	28,000	1,200
Vinyl Acetate	108-05-4	9,700	NA	2,700	2,700
Vinyl Bromide	593-60-2	45	28	2,500	28
Vinyl Chloride	75-01-4	980	49	3,900	49
Xylenes	1330-20-7	6,300	NA	260	260
* = See paragraph (C)(3)(e) (C)(3)(a)(v) of rule 3745-300-08 of the Administrative Code.					

Table IV: Generic numerical direct-contact soil standards (construction activities category)

<u>Table IV</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Inorganics/Metals					
Aluminum Phosphide	20859-73-8	970	NA	NA	970
Antimony (metallic)	7440-36-0	970	NA	NA	970
Antimony Trioxide	1309-64-4	47,000	NA	NA	47,000
Arsenic, Inorganic	7440-38-2	760	1,400	NA	760
Barium	7440-39-3	350,000	NA	NA	350,000
Beryllium and Compounds	7440-41-7	3,500	71,000	NA	3,500

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Cadmium	7440-43-9	710	95,000	NA	710
Chlorine	7782-50-5	28	NA	2,800	28
Chromium(III)	16065-83-1	920,000	NA	NA	920,000
Chromium(VI)	18540-29-9	10,000	1,300	NA	1,300
Cobalt Compounds	7440-48-4	2,900	19,000	NA	2,900
Copper	7440-50-8	97,000	NA	NA	97,000
Disodium Phosphate	7558-79-4	1,000,000	NA	NA	1,000,000
Hydrogen Chloride	7647-01-0	1,000,000	NA	NA	1,000,000
Hydrogen Fluoride	7664-39-3	95,000	NA	NA	95,000
Hydrogen Sulfide	7783-06-4	72,000	NA	NA	72,000
Fluorine (Soluble Fluoride)	7782-41-4	140,000	NA	NA	140,000
Manganese Compounds	7439-96-5	12,000	NA	NA	12,000
Mercury and Compounds	7439-97-6	42	NA	3.1	3.1
Nickel Soluble Salts	7440-02-0	3,200	660,000	NA	3,200
Phosphine	7803-51-2	730	NA	NA	730
Selenium	7782-49-2	12,000	NA	NA	12,000
Selenious Acid	7783-00-8	12,000	NA	NA	12,000
Silver	7440-22-4	12,000	NA	NA	12,000
Sodium Azide	26628-22-8	9,700	NA	NA	9,700
Sodium Fluoride	7681-49-4	120,000	NA	NA	120,000
Sodium Fluoroacetate	62-74-8	32	NA	NA	32
Sodium tripolyphosphate	7758-29-4	1,000,000	NA	NA	1,000,000
Sulfuric Acid	7664-93-9	250,000	NA	NA	250,000
Titanium Tetrachloride	7550-45-0	1,000,000	NA	NA	1,000,000

<u>Table IV</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Trisodium Phosphate	7601-54-9	1,000,000	NA	NA	1,000,000
Vanadium Compounds	7440-62-2	12,000	NA	NA	12,000
Zinc and Compounds	7440-66-6	730,000	NA	NA	730,000
Zinc Phosphide	1314-84-7	7,300	NA	NA	7,300
Cyanides					
Calcium Cyanide	592-01-8	93,000	NA	NA	93,000
Copper Cyanide	544-92-3	120,000	NA	NA	120,000
Cyanide (CN-)	57-12-5	170	NA	950,000	170
Cyanogen	460-19-5	97,000	NA	NA	97,000
Cyanogen Bromide	506-68-3	220,000	NA	NA	220,000
Cyanogen Chloride	506-77-4	120,000	NA	NA	120,000
Hydrogen Cyanide	74-90-8	150	NA	1,000,000	150
Potassium Cyanide	151-50-8	120,000	NA	NA	120,000
Potassium Silver Cyanide	506-61-6	490,000	NA	NA	490,000
Silver Cyanide	506-64-9	240,000	NA	NA	240,000
Sodium Cyanide	143-33-9	120,000	NA	NA	120,000
Zinc Cyanide	557-21-1	120,000	NA	NA	120,000
Lead Compounds					
Lead Acetate	301-04-2	NA	5,300	NA	5,300
Lead and Compounds*	7439-92-1	NA	NA	NA	200
Lead Phosphate	7446-27-7	NA	200,000	NA	200,000
Lead Subacetate	1335-32-6	NA	29,000	NA	29,000
Tetraethyl Lead	78-00-2	0.24	NA	2.4	0.24
Semi-Volatile Organic Compounds (SVOCs)					

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Acenaphthene	83-32-9	290,000	NA	NA	290,000
Acetophenone	98-86-2	240,000	NA	2,500	2,500
Acetylaminofluorene, 2-	53-96-3	NA	290	NA	290
Acrylamide	79-06-1	1,600	2,200	NA	1,600
Alachlor	15972-60-8	16,000	20,000	NA	16,000
Aldicarb	116-06-3	1,600	NA	NA	1,600
Aldicarb Sulfone	1646-88-4	1,600	NA	NA	1,600
Aldrin	309-00-2	97	91	NA	91
Aminobiphenyl, 4-	92-67-1	NA	53	NA	53
Ammonium Sulfamate	7773-06-0	490,000	NA	NA	490,000
Aniline	62-53-3	11,000	200,000	NA	11,000
Anthracene	120-12-7	1,000,000	NA	NA	1,000,000
Aroclor 1016	12674-11-2	98	12,000	NA	98
Aroclor 1221	11104-28-2	NA	300	NA	300
Aroclor 1232	11141-16-5	NA	260	NA	260
Aroclor 1242	53469-21-9	NA	400	NA	400
Aroclor 1248	12672-29-6	NA	410	NA	410
Aroclor 1254	11097-69-1	42	440	NA	42
Aroclor 1260	11096-82-5	NA	450	NA	450
Atrazine	1912-24-9	4,800	4,800	NA	4,800
Auramine	492-80-8	NA	1,300	NA	1,300
Benomyl	17804-35-2	80,000	NA	NA	80,000
Benzenethiol	108-98-5	24,000	NA	1,300	1,300
Benzidine	92-87-5	4,800	4.8	NA	4.8

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Benz[a]anthracene	56-55-3	NA	9,600	NA	9,600
Benzo[a]pyrene	50-32-8	230	1,000	NA	230
Benzo[b]fluoranthene	205-99-2	NA	10,000	NA	10,000
Benzo[k]fluoranthene	207-08-9	NA	100,000	NA	100,000
Benzoic Acid	65-85-0	460,000	NA	NA	460,000
Biphenyl, 1,1'-	92-52-4	240,000	210,000	NA	210,000
Bis(2-chloroethoxy)methane	111-91-1	48,000	NA	NA	48,000
Bis(2-chloroethyl)ether	111-44-4	20,000	290	5,000	290
Bis(chloromethyl)ether	542-88-1	11	0.084	4,200	0.084
Bis(2-ethylhexyl)phthalate	117-81-7	160	79,000	NA	160
Butyl Benzyl Phthlate	85-68-7	1,000,000	590,000	NA	590,000
Cacodylic Acid	75-60-5	32,000	NA	NA	32,000
Captan	133-06-2	210,000	480,000	NA	210,000
Carbaryl	63-25-2	160,000	NA	NA	160,000
Carbofuran	1563-66-2	8,000	NA	NA	8,000
Carbosulfan	55285-14-8	16,000	NA	NA	16,000
Chloramben	133-90-4	24,000	NA	NA	24,000
Chlordane	12789-03-6	500	3,500	NA	500
Chlordecone (Kepone)	143-50-0	4,800	110	NA	110
Chloro-2-methylaniline HCl, 4-	3165-93-3	NA	2,400	NA	2,400
Chloroacetic Acid	79-11-8	5,600	NA	NA	5,600
Chloroacetophenone, 2-	532-27-4	7,400	NA	NA	7,400
Chloroaniline, p-	106-47-8	800	5,600	NA	800
Chlorobenzilate	510-15-6	32,000	10,000	NA	10,000

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chloronaphthalene, Beta-	91-58-7	290,000	NA	NA	290,000
Chlorophenol, 2-	95-57-8	19,000	NA	27,000	19,000
Chlorpyrifos	2921-88-2	4,800	NA	NA	4,800
Chrysene	218-01-9	NA	1,000,000	NA	1,000,000
Cresol, m-	108-39-4	630,000	NA	NA	630,000
Cresol, o-	95-48-7	320,000	NA	NA	320,000
Cresol, p-	106-44-5	32,000	NA	NA	32,000
Cresol, p-chloro-m-	59-50-7	160,000	NA	NA	160,000
Cresols	1319-77-3	160,000	NA	NA	160,000
DDD	72-54-8	800	4,600	NA	800
DDE, p,p'-	72-55-9	730	4,600	NA	730
DDT	50-29-3	1,100	4,300	NA	1,100
Diallate	2303-16-4	NA	18,000	NA	18,000
Diazinon	333-41-5	3,200	NA	NA	3,200
Dibenz[a,h]anthracene	53-70-3	NA	1,000	NA	1,000
Dibutyl Phthalate	84-74-2	1,000,000	NA	NA	1,000,000
Dicamba	1918-00-9	48,000	NA	NA	48,000
Dichlorobenzene, 1,2-	95-50-1	88,000	NA	380	380
Dichlorobenzene, 1,4-	106-46-7	39,000	2,600	NA	2,600
Dichlorobenzidine, 3,3'-	91-94-1	NA	2,200	NA	2,200
Dichlorophenol, 2,4-	120-83-2	32,000	NA	NA	32,000
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	380,000	NA	NA	380,000
Dichloropropionic acid, 2,2-	75-99-0	48,000	NA	NA	48,000
Dichlorvos	62-73-7	4,700	3,800	NA	3,800

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Dieldrin	60-57-1	160	69	NA	69
Diethanolamine	111-42-2	30,000	NA	NA	30,000
Diethyl Phthalate	84-66-2	1,000,000	NA	NA	1,000,000
Diethylstilbestrol	56-53-1	NA	3.2	NA	3.2
Dimethoate	60-51-5	320	NA	NA	320
Dimethoxybenzidine, 3,3'-	119-90-4	NA	700	NA	700
Dimethylamino azobenzene [p-]	60-11-7	NA	240	NA	240
Dimethylbenz(a)anthracene, 7,12-	57-97-6	NA	4	NA	4
Dimethylbenzidine, 3,3'-	119-93-7	NA	100	NA	100
Dimethylphenol, 2,4-	105-67-9	80,000	NA	NA	80,000
Dinitrobenzene, 1,2-	528-29-0	1,600	NA	NA	1,600
Dinitrobenzene, 1,3-	99-65-0	800	NA	NA	800
Dinitrobenzene, 1,4-	100-25-4	1,600	NA	NA	1,600
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	3,200	NA	NA	3,200
Dinitrophenol, 2,4-	51-28-5	32,000	NA	NA	32,000
Dinitrotoluene, 2,4-	121-14-2	11,000	3,600	NA	3,600
Dinitrotoluene, 2,6-	606-20-2	6,400	750	NA	750
Dinitrotoluene Mixture, 2,4/2,6	25321-14-6	NA	1,600	NA	1,600
Dinoseb	88-85-7	1,600	NA	NA	1,600
Diphenylhydrazine, 1,2-	122-66-7	80,000	1,400	NA	1,400
Diquat	2764-72-9	3,500	NA	NA	3,500
Disulfoton	298-04-4	140	NA	NA	140
Diuron	330-54-1	3,200	NA	NA	3,200
Endothall	145-73-3	32,000	NA	NA	32,000

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Endosulfan	115-29-7	12,000	NA	NA	12,000
Endrin	72-20-8	950	NA	NA	950
Epichlorohydrin	106-89-8	720	35,000	11,000	720
Ethion	563-12-2	3,200	NA	NA	3,200
Ethylene Glycol	107-21-1	1,000,000	NA	NA	1,000,000
Ethylene Thiourea	96-45-7	130	25,000	NA	130
Fluoranthene	206-44-0	140,000	NA	NA	140,000
Fluorene	86-73-7	1,200	NA	NA	1,200
Furan	110-00-9	24,000	NA	6,200	6,200
Furfural	98-01-1	42,000	NA	10,000	10,000
Glyphosate	1071-83-6	1,000,000	NA	NA	1,000,000
Guthion	86-50-0	4,800	NA	NA	4,800
Heptachlor	76-44-8	240	280	NA	240
Heptachlor Epoxide	1024-57-3	32	150	NA	32
Hexachlorobenzene	118-74-1	24	300	NA	24
Hexachlorobutadiene	87-68-3	2,400	1,300	17	17
Hexachlorocyclohexane, Alpha-	319-84-6	3,200	180	NA	180
Hexachlorocyclohexane, Beta-	319-85-7	950	620	NA	620
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	1.6	1,300	NA	1.6
Hexachlorocyclohexane, Technical	608-73-1	NA	620	NA	620
Hexachlorocyclopentadiene	77-47-4	3,700	NA	16	16
Hexachloroethane	67-72-1	24,000	2,000	NA	2,000
Hexachlorophene	70-30-4	4,800	NA	NA	4,800

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Hexamethylene Diisocyanate, 1,6-	822-06-0	250	NA	3,400	250
Hexamethylphosphoramide	680-31-9	6,400	NA	NA	6,400
Hexanedioic Acid	124-04-9	1,000,000	NA	NA	1,000,000
Hydroquinone	123-31-9	640,000	19,000	NA	19,000
Indeno[1,2,3-cd]pyrene	193-39-5	NA	10,000	NA	10,000
Isophorone	78-59-1	1,000,000	1,000,000	NA	1,000,000
Malathion	121-75-5	32,000	NA	NA	32,000
Maleic Anhydride	108-31-6	83,000	NA	NA	83,000
Maleic Hydrazide	123-33-1	800,000	NA	NA	800,000
Malononitrile	109-77-3	1,600	NA	NA	1,600
Methomyl	16752-77-5	40,000	NA	NA	40,000
Methoxychlor	72-43-5	8,000	NA	NA	8,000
Methyl Parathion	298-00-0	1,100	NA	NA	1,100
Methylaniline Hydrochloride, 2-	636-21-5	NA	8,600	NA	8,600
Methylcholanthrene, 3-	56-49-5	NA	51	NA	51
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	3,200	11,000	NA	3,200
Methylenebisbenzenamine, 4,4'-	101-77-9	1,000,000	690	NA	690
Methylenediphenyl Diisocyanate	101-68-8	4,900	NA	NA	4,900
Methylnaphthalene, 1-	90-12-0	7.1	NA	390	7.1
Methylnaphthalene, 2-	91-57-6	5,800	NA	NA	5,800
Methyl-N-nitro-N-nitrosoguanidine, N-Naled	70-25-7	NA	130	NA	130
	300-76-5	4,900	NA	NA	4,900
Naphthylamine, 2-	91-59-8	NA	620	NA	620
Nitroaniline, 4-	100-01-6	16,000	56,000	NA	16,000

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Nitrobenzene	98-95-3	4,100	5,100	3,000	3,000
Nitroglycerin	55-63-0	160	66,000	NA	160
Nitropropane, 2-	79-46-9	3,700	NA	4,900	3,700
Nitrosodiethanolamine, N-	1116-54-7	NA	400	NA	400
Nitrosodiethylamine, N-	55-18-5	NA	7.4	NA	7.4
Nitrosodimethylamine, N-	62-75-9	19	11	240,000	11
Nitroso-di-N-butylamine, N-	924-16-3	NA	180	NA	180
Nitroso-di-N-propylamine, N-	621-64-7	NA	160	NA	160
Nitrosodiphenylamine, N-	86-30-6	NA	230,000	NA	230,000
Nitrosomorpholine [N-]	59-89-2	NA	170	NA	170
Nitroso-N-ethylurea, N-	759-73-9	NA	41	NA	41
Nitroso-N-methylurea, N-	684-93-5	NA	9.3	NA	9.3
Nitrosopiperidine [N-]	100-75-4	NA	120	NA	120
Nitrosopyrrolidine, N-	930-55-2	NA	530	NA	530
Nitrotoluene, o-	88-72-2	24,000	7,700	1,500	1,500
Nitrotoluene, p-	99-99-0	6,400	70,000	NA	6,400
Octamethylpyrophosphoramide	152-16-9	3,200	NA	NA	3,200
Octyl Phthalate, di-N-	117-84-0	160,000	NA	NA	160,000
Oxamyl	23135-22-0	40,000	NA	NA	40,000
Parathion	56-38-2	3,700	NA	NA	3,700
Pentachlorobenzene	608-93-5	19,000	NA	NA	19,000
Pentachloroethane	76-01-7	NA	19,000	460	460
Pentachloronitrobenzene	82-68-8	4,800	4,300	NA	4,300
Pentachlorophenol	87-86-5	31,000	1,800	NA	1,800

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Phenacetin	62-44-2	NA	510,000	NA	510,000
Phenol	108-95-2	940,000	NA	NA	940,000
Phenylmercuric Acetate	62-38-4	130	NA	NA	130
Phorate	298-02-2	320	NA	NA	320
Phosphoric Acid	7664-38-2	1,000,000	NA	NA	1,000,000
Phthalic Anhydride	85-44-9	1,000,000	NA	NA	1,000,000
Picloram	1918-02-1	110,000	NA	NA	110,000
Polychlorinated Biphenyls, Total	1336-36-3	NA	410	NA	410
Pronamide	23950-58-5	120,000	NA	NA	120,000
Propargite	2312-35-8	64,000	5,900	NA	5,900
Propham	122-42-9	32,000	NA	NA	32,000
Propoxur (Baygon)	114-26-1	6,400	NA	NA	6,400
Pyrene	129-00-0	430,000	NA	NA	430,000
Pyridine	110-86-1	24,000	NA	530,000	24,000
Quinoline	91-22-5	NA	370	NA	370
Safrole	94-59-7	NA	5,100	NA	5,100
Simazine	122-34-9	8,000	9,300	NA	8,000
Strychnine	57-24-9	4,800	NA	NA	4,800
TCDD, 2,3,7,8-	1746-01-6	0.037	0.01	NA	0.01
Tetrachlorophenol, 2,3,4,6-	58-90-2	16,000	NA	NA	16,000
Tetraethyl Dithiopyrophosphate	3689-24-5	8,000	NA	NA	8,000
Tetrahydrofuran	109-99-9	92,000	NA	170,000	92,000
Thiofanox	39196-18-4	480	NA	NA	480
Thiophanate, Methyl	23564-05-8	250,000	93,000	NA	93,000

<u>Table IV</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Thiram	137-26-8	9,500	NA	NA	9,500
Toluene-2,4-diisocyanate	584-84-9	1	6,900	NA	1
Toluene-2,6-diisocyanate	91-08-7	20	34,000	1,700	20
Toluidine, p-	106-49-0	NA	37,000	NA	37,000
Toxaphene	8001-35-2	480	1,000	NA	480
Triallate	2303-17-5	32,000	24,000	NA	24,000
Trichlorobenzene, 1,2,4-	120-82-1	2,400	59,000	400	400
Trichlorophenol, 2,4,5-	95-95-4	480,000	NA	NA	480,000
Trichlorophenol, 2,4,6-	88-06-2	8,000	100,000	NA	8,000
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	160,000	NA	NA	160,000
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	13,000	NA	NA	13,000
Trifluralin	1582-09-8	18,000	220,000	NA	18,000
Trimethylbenzene, 1,2,3-	526-73-8	7,000	NA	290	290
Trimethylbenzene, 1,2,4-	95-63-6	6,000	NA	220	220
Trimethylbenzene, 1,3,5-	108-67-8	5,000	NA	180	180
Trinitrobenzene, 1,3,5-	99-35-4	1,100	NA	NA	1,100
Urethane	51-79-6	NA	1,100	NA	1,100
Warfarin	81-81-2	480	NA	NA	480
Volatile Organic Compounds (VOCs)					
Acetaldehyde	75-07-0	320	11,000	110,000	320
Acetone	67-64-1	1,000,000	NA	110,000	110,000
Acetonitrile	75-05-8	22,000	NA	130,000	22,000
Acrolein	107-02-8	2.5	NA	23,000	2.5
Acrylic Acid	79-10-7	76	NA	110,000	76

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Acrylonitrile	107-13-1	62	290	11,000	62
Allyl Alcohol	107-18-6	140	NA	110,000	140
Allyl Chloride	107-05-1	64	740	1,400	64
Benzene	71-43-2	1,100	1,200	1,800	1,100
Benzotrichloride	98-07-7	120	130	320	120
Benzyl Chloride	100-44-7	380	1,300	1,500	380
Bis(2-chloro-1-methylethyl) Ether	108-60-1	97,000	NA	1,000	1,000
Bromodichloromethane	75-27-4	310	300	930	300
Bromoform	75-25-2	73,000	22,000	910	910
Bromomethane	74-83-9	540	NA	3,600	540
Butadiene, 1,3-	106-99-0	7	79	670	7
Butanol, N-	71-36-3	1,000,000	NA	7,600	7,600
Butylbenzene, n-	104-51-8	240,000	NA	110	110
Carbon Disulfide	75-15-0	3,200	NA	740	740
Carbon Tetrachloride	56-23-5	1,100	680	460	460
Carbonyl Sulfide	463-58-1	2,600	NA	5,900	2,600
Chlorobenzene	108-90-7	12,000	NA	760	760
Chloro-1,3-butadiene, 2-	126-99-8	300	10	790	10
Chloroform	67-66-3	2,500	320	2,500	320
Chloromethane	74-87-3	14,000	NA	1,300	1,300
Chloromethyl Methyl Ether	107-30-2	NA	21	9,300	21
Crotonaldehyde, trans-	123-73-9	24,000	900	17,000	900
Cumene	98-82-8	2,200	NA	270	270
Cyclohexane	110-82-7	75,000	NA	120	120

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Cyclohexanone	108-94-1	940,000	NA	5,100	5,100
Dibromo-3-chloropropane, 1,2-	96-12-8	240	15	980	15
Dibromochloromethane	124-48-1	170,000	20,000	800	800
Dibromoethane, 1,2-	106-93-4	69	39	1,300	39
Dichloro-2-butene, 1,4-	764-41-0	NA	2.1	550	2.1
Dichlorodifluoromethane	75-71-8	3,300	NA	850	850
Dichloroethane, 1,1-	75-34-3	1,000,000	3,600	1,700	1,700
Dichloroethane, 1,2-	107-06-2	1,300	480	3,000	480
Dichloroethylene, 1,1-	75-35-4	19	NA	1,200	19
Dichloroethylene, 1,2-cis-	156-59-2	49,000	NA	2,400	2,400
Dichloroethylene, 1,2-trans-	156-60-5	49,000	NA	1,900	1,900
Dichloropropane, 1,2-	78-87-5	140	2,700	1,400	140
Dichloropropane, 1,3-	142-28-9	490,000	NA	1,500	1,500
Dichloropropene, 1,3-	542-75-6	520	2,200	1,600	520
Dihydrosafrole	94-58-6	NA	16,000	NA	16,000
Dimethylaniline, N,N-	121-69-7	4,900	63,000	830	830
Dimethylformamide	68-12-2	34,000	NA	110,000	34,000
Dimethylhydrazine, 1,2-	540-73-8	1,900	1.5	190,000	1.5
Dioxane, 1,4-	123-91-1	100,000	9,700	120,000	9,700
Epoxybutane, 1,2-	106-88-7	620	NA	15,000	620
Ethoxyethanol, 2-	110-80-5	15,000	NA	110,000	15,000
Ethyl Acetate	141-78-6	24,000	NA	11,000	11,000
Ethyl Acrylate	140-88-5	200	NA	2,500	200
Ethyl Chloride (Chloroethane)	75-00-3	19,000	NA	2,100	2,100

<u>Table IV</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Ethyl Ether	60-29-7	37,000	NA	10,000	10,000
Ethyl Methacrylate	97-63-2	18,000	NA	1,100	1,100
Ethylbenzene	100-41-4	76,000	6,100	480	480
Ethylene Diamine	107-15-3	490,000	NA	190,000	190,000
Ethylene Oxide	75-21-8	3,200	5.7	120,000	5.7
Ethyleneimine	151-56-4	NA	3.1	150,000	3.1
Formaldehyde	50-00-0	11,000	14,000	42,000	11,000
Formic Acid	64-18-6	340	NA	110,000	340
Glycidaldehyde	765-34-4	760	NA	110,000	760
Hexane, N-	110-54-3	6,600	NA	140	140
Hydrazine	302-01-2	24	35	110,000	24
Isobutyl Alcohol	78-83-1	1,000,000	NA	10,000	10,000
Methacrylonitrile	126-98-7	7,700	NA	4,600	4,600
Methanol	67-56-1	1,000,000	NA	110,000	110,000
Methyl Ethyl Ketone (2-Butanone)	78-93-3	48,000	NA	28,000	28,000
Methyl Hydrazine	60-34-4	2,400	NA	180,000	2,400
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	33,000	NA	3,400	3,400
Methyl Isocyanate	624-83-9	18	NA	10,000	18
Methyl Methacrylate	80-62-6	16,000	NA	2,400	2,400
Methyl tert-Butyl Ether (MTBE)	1634-04-4	66,000	50,000	8,900	8,900
Methylene Chloride	75-09-2	8,600	360,000	3,300	3,300
Naphthalene	91-20-3	560	2,600	NA	560
Nickel Carbonyl	13463-39-3	3,000	660,000	NA	3,000

<u>Table IV</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (mg/kg)	Standard for a Single Chemical Carcinogen (mg/kg)	Soil Saturation (mg/kg)	Generic Direct-Contact Soil Standard for a Single Chemical (mg/kg)
Chemical of Concern					
Phosgene	75-44-5	1.2	NA	1,600	1.2
Propargyl Alcohol	107-19-7	4,900	NA	110,000	4,900
Propionaldehyde	123-38-6	290	NA	33,000	290
Propylene Oxide	75-56-9	1,200	3,700	78,000	1,200
Styrene	100-42-5	91,000	NA	870	870
Tetrachlorobenzene, 1,2,4,5-	95-94-3	73	NA	NA	73
Tetrachloroethane, 1,1,1,2-	630-20-6	220,000	2,100	680	680
Tetrachloroethane, 1,1,2,2-	79-34-5	120,000	670	1,900	670
Tetrachloroethylene	127-18-4	380	25,000	170	170
Toluene	108-88-3	82,000	NA	820	820
Trichloroethane, 1,1,1-	71-55-6	33,000	NA	640	640
Trichloroethane, 1,1,2-	79-00-5	310	1,200	2,200	310
Trichloroethylene	79-01-6	19	1,500	690	19
Trichlorofluoromethane	75-69-4	4,100	NA	1,200	1,200
Triethylamine	121-44-8	440	NA	28,000	440
Vinyl Acetate	108-05-4	3,500	NA	2,700	2,700
Vinyl Bromide	593-60-2	1,600	260	2,500	260
Vinyl Chloride	75-01-4	190	490	3,900	190
Xylenes	1330-20-7	9,100	NA	260	260
* = See paragraph (C)(3)(a)(v) of rule 3745-300-08 of the Administrative Code.					

Table V: Generic indoor air standards due to vapor intrusion (residential land use category)

<u>Table V</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g}/\text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g}/\text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g}/\text{m}^3$)
Inorganics/Metals				
Hydrogen Sulfide	7783-06-4	2.1	NA	2.1
Mercury and Compounds	7439-97-6	0.31	NA	0.31
Semi-Volatile Organic Compounds (SVOCs)				
Bis(2-chloroethyl)ether	111-44-4	NA	0.085	0.085
Bis(chloromethyl)ether	542-88-1	NA	0.00045	0.00045
Dichlorobenzene, 1,2-	95-50-1	210	NA	210
Dichlorobenzene, 1,4-	106-46-7	830	2.6	2.6
Epichlorohydrin	106-89-8	1	23	1
Hexachlorobutadiene	87-68-3	NA	1.3	1.3
Hexachloroethane	67-72-1	31	2.6	2.6
Nitrobenzene	98-95-3	9.4	0.7	0.7
Nitropropane, 2-	79-46-9	21	NA	21
Nitrosodimethylamine, N-	62-75-9	NA	0.00072	0.00072
Tetrahydrofuran	109-99-9	2,100	NA	2,100
Trichlorobenzene, 1,2,4-	120-82-1	2.1	NA	2.1
Trimethylbenzene, 1,2,3-	526-73-8	63	NA	63
Trimethylbenzene, 1,2,4-	95-63-6	63	NA	63
Trimethylbenzene, 1,3,5-	108-67-8	63	NA	63

<u>Table V</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g}/\text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g}/\text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g}/\text{m}^3$)
Chemical of Concern				
Volatile Organic Compounds (VOCs)				
Acetaldehyde	75-07-0	9.4	13	9.4
Acetonitrile	75-05-8	63	NA	63
Acrolein	107-02-8	0.021	NA	0.021
Acrylic Acid	79-10-7	0.21	NA	0.21
Acrylonitrile	107-13-1	2.1	0.41	0.41
Allyl Chloride	107-05-1	1	4.7	1
Benzene	71-43-2	31	3.6	3.6
Benzyl Chloride	100-44-7	1	0.57	0.57
Bromodichloromethane	75-27-4	NA	0.76	0.76
Bromoform	75-25-2	NA	26	26
Bromomethane	74-83-9	5.2	NA	5.2
Butadiene, 1,3-	106-99-0	2.1	0.94	0.94
Carbon Disulfide	75-15-0	730	NA	730
Carbon Tetrachloride	56-23-5	100	4.7	4.7
Carbonyl Sulfide	463-58-1	100	NA	100
Chlorobenzene	108-90-7	52	NA	52
Chloro-1,3-butadiene, 2-	126-99-8	21	0.094	0.094
Chloroform	67-66-3	100	1.2	1.2
Chloromethane	74-87-3	94	NA	94
Chloromethyl Methyl Ether	107-30-2	NA	0.041	0.041
Cumene	98-82-8	420	NA	420
Cyclohexane	110-82-7	6,300	NA	6,300
Dibromo-3-chloropropane, 1,2-	96-12-8	0.21	0.0017	0.0017

<u>Table V</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g}/\text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g}/\text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g}/\text{m}^3$)
Chemical of Concern				
Dibromoethane, 1,2-	106-93-4	9.4	0.047	0.047
Dichloroethane, 1,1-	75-34-3	NA	18	18
Dichloroethane, 1,2-	107-06-2	7.3	1.1	1.1
Dichloroethylene, 1,1-	75-35-4	210	NA	210
Dichloropropane, 1,2-	78-87-5	4.2	7.6	4.2
Dichloropropene, 1,3-	542-75-6	21	7	7
Dihydrosafrole	94-58-6	NA	2.2	2.2
Dimethylformamide	68-12-2	31	NA	31
Dioxane, 1,4-	123-91-1	31	5.6	5.6
Epoxybutane, 1,2-	106-88-7	21	NA	21
Ethyl Acetate	141-78-6	73	NA	73
Ethyl Acrylate	140-88-5	8.3	NA	8.3
Ethyl Chloride (Chloroethane)	75-00-3	4,200	NA	4,200
Ethylbenzene	100-41-4	1,000	11	11
Ethylene Oxide	75-21-8	31	0.0034	0.0034
Ethyleneimine	151-56-4	NA	0.0015	0.0015
Formaldehyde	50-00-0	10	2.2	2.2
Hexane, N-	110-54-3	730	NA	730
Methanol	67-56-1	21,000	NA	21,000
Methyl Ethyl Ketone (2-Butanone)	78-93-3	5,200	NA	5,200
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	3,100	NA	3,100
Methyl Isocyanate	624-83-9	1	NA	1
Methyl Methacrylate	80-62-6	730	NA	730

<u>Table V</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g}/\text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g}/\text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g}/\text{m}^3$)
Methyl tert-Butyl Ether (MTBE)	1634-04-4	3,100	110	110
Methylene Chloride	75-09-2	630	1,000	630
Naphthalene	91-20-3	3.1	0.83	0.83
Phosgene	75-44-5	0.31	NA	0.31
Propionaldehyde	123-38-6	8.3	NA	8.3
Propylene Oxide	75-56-9	31	7.6	7.6
Styrene	100-42-5	1,000	NA	1,000
Tetrachloroethane, 1,1,1,2-	630-20-6	NA	3.8	3.8
Tetrachloroethane, 1,1,2,2-	79-34-5	NA	0.48	0.48
Tetrachloroethylene	127-18-4	42	110	42
Toluene	108-88-3	5,200	NA	5,200
Trichloroethane, 1,1,1-	71-55-6	5,200	NA	5,200
Trichloroethane, 1,1,2-	79-00-5	NA	1.8	1.8
Trichloroethylene	79-01-6	2.1	4.8	2.1
Triethylamine	121-44-8	7.3	NA	7.3
Vinyl Acetate	108-05-4	210	NA	210
Vinyl Bromide	593-60-2	3.1	1.9	1.9
Vinyl Chloride	75-01-4	100	1.7	1.7
Xylenes	1330-20-7	100	NA	100

Table VI: Generic indoor air standards due to vapor intrusion (commercial land use with high frequency child exposure)

Table VI Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g}/\text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g}/\text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g}/\text{m}^3$)
Inorganics/Metals				
Hydrogen Sulfide	7783-06-4	7	NA	7
Mercury and Compounds	7439-97-6	1.1	NA	1.1
Semi-Volatile Organic Compounds (SVOCs)				
Bis(2-chloroethyl)ether	111-44-4	NA	0.37	0.37
Bis(chloromethyl)ether	542-88-1	NA	0.002	0.002
Dichlorobenzene, 1,2-	95-50-1	700	NA	700
Dichlorobenzene, 1,4-	106-46-7	2,800	11	11
Epichlorohydrin	106-89-8	3.5	100	3.5
Hexachlorobutadiene	87-68-3	NA	5.6	5.6
Hexachloroethane	67-72-1	110	11	11
Nitrobenzene	98-95-3	32	3.1	3.1
Nitropropane, 2-	79-46-9	70	NA	70
Nitrosodimethylamine, N-	62-75-9	NA	0.0055	0.0055
Tetrahydrofuran	109-99-9	7,000	NA	7,000
Trichlorobenzene, 1,2,4-	120-82-1	7	NA	7
Trimethylbenzene, 1,2,3-	526-73-8	210	NA	210
Trimethylbenzene, 1,2,4-	95-63-6	210	NA	210
Trimethylbenzene, 1,3,5-	108-67-8	210	NA	210

<u>Table VI</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g}/\text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g}/\text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g}/\text{m}^3$)
Chemical of Concern				
Volatile Organic Compounds (VOCs)				
Acetaldehyde	75-07-0	32	56	32
Acetonitrile	75-05-8	210	NA	210
Acrolein	107-02-8	0.07	NA	0.07
Acrylic Acid	79-10-7	0.7	NA	0.7
Acrylonitrile	107-13-1	7	1.8	1.8
Allyl Chloride	107-05-1	3.5	20	3.5
Benzene	71-43-2	110	16	16
Benzyl Chloride	100-44-7	3.5	2.5	2.5
Bromodichloromethane	75-27-4	NA	3.3	3.3
Bromoform	75-25-2	NA	110	110
Bromomethane	74-83-9	18	NA	18
Butadiene, 1,3-	106-99-0	7	4.1	4.1
Carbon Disulfide	75-15-0	2,500	NA	2,500
Carbon Tetrachloride	56-23-5	350	20	20
Carbonyl Sulfide	463-58-1	350	NA	350
Chlorobenzene	108-90-7	180	NA	180
Chloro-1,3-butadiene, 2-	126-99-8	70	0.41	0.41
Chloroform	67-66-3	340	5.3	5.3
Chloromethane	74-87-3	320	NA	320
Chloromethyl Methyl Ether	107-30-2	NA	0.18	0.18
Cumene	98-82-8	1,400	NA	1,400
Cyclohexane	110-82-7	21,000	NA	21,000
Dibromo-3-chloropropane, 1,2-	96-12-8	0.7	0.013	0.013

<u>Table VI</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g}/\text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g}/\text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g}/\text{m}^3$)
Dibromoethane, 1,2-	106-93-4	32	0.2	0.2
Dichloroethane, 1,1-	75-34-3	NA	77	77
Dichloroethane, 1,2-	107-06-2	25	4.7	4.7
Dichloroethylene, 1,1-	75-35-4	700	NA	700
Dichloropropane, 1,2-	78-87-5	14	33	14
Dichloropropene, 1,3-	542-75-6	70	31	31
Dihydrosafrole	94-58-6	NA	9.4	9.4
Dimethylformamide	68-12-2	110	NA	110
Dioxane, 1,4-	123-91-1	110	25	25
Epoxybutane, 1,2-	106-88-7	70	NA	70
Ethyl Acetate	141-78-6	250	NA	250
Ethyl Acrylate	140-88-5	28	NA	28
Ethyl Chloride (Chloroethane)	75-00-3	14,000	NA	14,000
Ethylbenzene	100-41-4	3,500	49	49
Ethylene Oxide	75-21-8	110	0.026	0.026
Ethyleneimine	151-56-4	NA	0.0065	0.0065
Formaldehyde	50-00-0	34	9.4	9.4
Hexane, N-	110-54-3	2,500	NA	2,500
Methanol	67-56-1	70,000	NA	70,000
Methyl Ethyl Ketone (2-Butanone)	78-93-3	18,000	NA	18,000
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	11,000	NA	11,000
Methyl Isocyanate	624-83-9	3.5	NA	3.5
Methyl Methacrylate	80-62-6	2,500	NA	2,500

<u>Table VI</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g}/\text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g}/\text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g}/\text{m}^3$)
Chemical of Concern				
Methyl tert-Butyl Ether (MTBE)	1634-04-4	11,000	470	470
Methylene Chloride	75-09-2	2,100	7,700	2,100
Naphthalene	91-20-3	11	3.6	3.6
Phosgene	75-44-5	1.1	NA	1.1
Propionaldehyde	123-38-6	28	NA	28
Propylene Oxide	75-56-9	110	33	33
Styrene	100-42-5	3,500	NA	3,500
Tetrachloroethane, 1,1,1,2-	630-20-6	NA	17	17
Tetrachloroethane, 1,1,2,2-	79-34-5	NA	2.1	2.1
Tetrachloroethylene	127-18-4	140	470	140
Toluene	108-88-3	18,000	NA	18,000
Trichloroethane, 1,1,1-	71-55-6	18,000	NA	18,000
Trichloroethane, 1,1,2-	79-00-5	NA	7.7	7.7
Trichloroethylene	79-01-6	7	30	7
Triethylamine	121-44-8	25	NA	25
Vinyl Acetate	108-05-4	700	NA	700
Vinyl Bromide	593-60-2	11	8.2	8.2
Vinyl Chloride	75-01-4	350	2.2	2.2
Xylenes	1330-20-7	350	NA	350

Table VII: Generic indoor air standards due to vapor intrusion (commercial or industrial land use category)

<u>Table VII</u> Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g}/\text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g}/\text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g}/\text{m}^3$)
Inorganics/Metals				
Hydrogen Sulfide	7783-06-4	8.8	NA	8.8
Mercury and Compounds	7439-97-6	1.3	NA	1.3
Semi-Volatile Organic Compounds (SVOCs)				
Bis(2-chloroethyl)ether	111-44-4	NA	0.37	0.37
Bis(chloromethyl)ether	542-88-1	NA	0.002	0.002
Dichlorobenzene, 1,2-	95-50-1	880	NA	880
Dichlorobenzene, 1,4-	106-46-7	3,500	11	11
Epichlorohydrin	106-89-8	4.4	100	4.4
Hexachlorobutadiene	87-68-3	NA	5.6	5.6
Hexachloroethane	67-72-1	130	11	11
Nitrobenzene	98-95-3	39	3.1	3.1
Nitropropane, 2-	79-46-9	88	NA	88
Nitrosodimethylamine, N-	62-75-9	NA	0.0088	0.0088
Tetrahydrofuran	109-99-9	8,800	NA	8,800
Trichlorobenzene, 1,2,4-	120-82-1	8.8	NA	8.8
Trimethylbenzene, 1,2,3-	526-73-8	260	NA	260
Trimethylbenzene, 1,2,4-	95-63-6	260	NA	260
Trimethylbenzene, 1,3,5-	108-67-8	260	NA	260

<u>Table VII</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g}/\text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g}/\text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g}/\text{m}^3$)
Chemical of Concern				
Volatile Organic Compounds (VOCs)				
Acetaldehyde	75-07-0	39	56	39
Acetonitrile	75-05-8	260	NA	260
Acrolein	107-02-8	0.088	NA	0.088
Acrylic Acid	79-10-7	0.88	NA	0.88
Acrylonitrile	107-13-1	8.8	1.8	1.8
Allyl Chloride	107-05-1	4.4	20	4.4
Benzene	71-43-2	130	16	16
Benzyl Chloride	100-44-7	4.4	2.5	2.5
Bromodichloromethane	75-27-4	NA	3.3	3.3
Bromoform	75-25-2	NA	110	110
Bromomethane	74-83-9	22	NA	22
Butadiene, 1,3-	106-99-0	8.8	4.1	4.1
Carbon Disulfide	75-15-0	3,100	NA	3,100
Carbon Tetrachloride	56-23-5	440	20	20
Carbonyl Sulfide	463-58-1	440	NA	440
Chlorobenzene	108-90-7	220	NA	220
Chloro-1,3-butadiene, 2-	126-99-8	88	0.41	0.41
Chloroform	67-66-3	430	5.3	5.3
Chloromethane	74-87-3	390	NA	390
Chloromethyl Methyl Ether	107-30-2	NA	0.18	0.18
Cumene	98-82-8	1,800	NA	1,800
Cyclohexane	110-82-7	26,000	NA	26,000
Dibromo-3-chloropropane, 1,2-	96-12-8	0.88	0.02	0.02

<u>Table VII</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g} / \text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g} / \text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g} / \text{m}^3$)
Chemical of Concern				
Dibromoethane, 1,2-	106-93-4	39	0.2	0.2
Dichloroethane, 1,1-	75-34-3	NA	77	77
Dichloroethane, 1,2-	107-06-2	31	4.7	4.7
Dichloroethylene, 1,1-	75-35-4	880	NA	880
Dichloropropane, 1,2-	78-87-5	18	33	18
Dichloropropene, 1,3-	542-75-6	88	31	31
Dihydrosafrole	94-58-6	NA	9.4	9.4
Dimethylformamide	68-12-2	130	NA	130
Dioxane, 1,4-	123-91-1	130	25	25
Epoxybutane, 1,2-	106-88-7	88	NA	88
Ethyl Acetate	141-78-6	310	NA	310
Ethyl Acrylate	140-88-5	35	NA	35
Ethyl Chloride (Chloroethane)	75-00-3	18,000	NA	18,000
Ethylbenzene	100-41-4	4,400	49	49
Ethylene Oxide	75-21-8	130	0.041	0.041
Ethyleneimine	151-56-4	NA	0.0065	0.0065
Formaldehyde	50-00-0	43	9.4	9.4
Hexane, N-	110-54-3	3,100	NA	3,100
Methanol	67-56-1	88,000	NA	88,000
Methyl Ethyl Ketone (2-Butanone)	78-93-3	22,000	NA	22,000
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	13,000	NA	13,000
Methyl Isocyanate	624-83-9	4.4	NA	4.4
Methyl Methacrylate	80-62-6	3,100	NA	3,100

Chemical of Concern	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen ($\mu\text{g}/\text{m}^3$)	Standard for a Single Chemical Carcinogen ($\mu\text{g}/\text{m}^3$)	Generic Indoor Air Standards Due to Vapor Intrusion for a Single Chemical ($\mu\text{g}/\text{m}^3$)
Methyl tert-Butyl Ether (MTBE)	1634-04-4	13,000	470	470
Methylene Chloride	75-09-2	2,600	12,000	2,600
Naphthalene	91-20-3	13	3.6	3.6
Phosgene	75-44-5	1.3	NA	1.3
Propionaldehyde	123-38-6	35	NA	35
Propylene Oxide	75-56-9	130	33	33
Styrene	100-42-5	4,400	NA	4,400
Tetrachloroethane, 1,1,1,2-	630-20-6	NA	17	17
Tetrachloroethane, 1,1,2,2-	79-34-5	NA	2.1	2.1
Tetrachloroethylene	127-18-4	180	470	180
Toluene	108-88-3	22,000	NA	22,000
Trichloroethane, 1,1,1-	71-55-6	22,000	NA	22,000
Trichloroethane, 1,1,2-	79-00-5	NA	7.7	7.7
Trichloroethylene	79-01-6	8.8	30	8.8
Triethylamine	121-44-8	31	NA	31
Vinyl Acetate	108-05-4	880	NA	880
Vinyl Bromide	593-60-2	13	8.2	8.2
Vinyl Chloride	75-01-4	440	28	28
Xylenes	1330-20-7	440	NA	440

Table VIII: Generic unrestricted potable use standards based on maximum contaminant levels or other established regulatory criteria

<u>Table VIII</u>	Chemical Abstract Service Number (CAS #)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern		
Inorganics/metals		
Antimony (metallic)	7440-36-0	6
Arsenic, Inorganic	7440-38-2	10
Asbestos (fiber >10 micrometers)	1332-21-4	7 MFL (a)
Barium	7440-39-3	2,000
Beryllium and Compounds	7440-41-7	4
Cadmium	7440-43-9	5
Chromium, Total	7440-47-3	100
Copper	7440-50-8	1,300
Fluorine (Soluble Fluoride)	7782-41-4	4,000
Mercury and Compounds	7439-97-6	2
Selenium	7782-49-2	50
Thallium (Soluble Salts)	7440-28-0	2
Cyanides		
Cyanide (CN-)	57-12-5	200
Sodium Cyanide	143-33-9	200
Lead Compounds		
Lead and Compounds	7439-92-1	15
Semi-Volatile Organic Compounds (SVOCs)		

<u>Table VIII</u>	Chemical Abstract Service Number (CAS #)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern		
Alachlor	15972-60-8	2
Aldicarb	116-06-3	3
Aldicarb Sulfone	1646-88-4	2
Atrazine	1912-24-9	3
Benzo[a]pyrene	50-32-8	0.2
Bis(2-ethylhexyl)phthalate	117-81-7	6
Carbofuran	1563-66-2	40
Chlordane	12789-03-6	2
Chloroacetic Acid	79-11-8	60
Dichlorobenzene, 1,2-	95-50-1	600
Dichlorobenzene, 1,4-	106-46-7	75
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	70
Dichloropropionic acid, 2,2-	75-99-0	200
Dinoseb	88-85-7	7
Diquat	2764-72-9	20
Endothall	145-73-3	100
Endrin	72-20-8	2
Glyphosate	1071-83-6	700
Heptachlor	76-44-8	0.4
Heptachlor Epoxide	1024-57-3	0.2
Hexachlorobenzene	118-74-1	1
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	0.2
Hexachlorocyclopentadiene	77-47-4	50
Methoxychlor	72-43-5	40
Oxamyl	23135-22-0	200

<u>Table VIII</u>	Chemical Abstract Service Number (CAS #)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern		
Pentachlorophenol	87-86-5	1
Picloram	1918-02-1	500
Polychlorinated Biphenyls, Total	1336-36-3	0.5
Simazine	122-34-9	4
TCDD, 2,3,7,8-	1746-01-6	0.00003
Toxaphene	8001-35-2	3
Trichlorobenzene, 1,2,4-	120-82-1	70
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	50
Volatile Organic Compounds (VOCs)		
Benzene	71-43-2	5
Bromodichloromethane	75-27-4	80 (b)
Bromoform	75-25-2	80 (b)
Carbon Tetrachloride	56-23-5	5
Chlorobenzene	108-90-7	100
Chloroform	67-66-3	80 (b)
Dibromo-3-chloropropane, 1,2-	96-12-8	0.2
Dibromochloromethane	124-48-1	80 (b)
Dibromoethane, 1,2-	106-93-4	0.05
Dichloroethane, 1,2-	107-06-2	5
Dichloroethylene, 1,1-	75-35-4	7
Dichloroethylene, 1,2-cis-	156-59-2	70
Dichloroethylene, 1,2-trans-	156-60-5	100
Dichloropropane, 1,2-	78-87-5	5
Ethylbenzene	100-41-4	700
Methylene Chloride	75-09-2	5

<u>Table VIII</u>	Chemical Abstract Service Number (CAS #)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern		
Styrene	100-42-5	100
Tetrachloroethylene	127-18-4	5
Toluene	108-88-3	1,000
Trichloroethane, 1,1,1-	71-55-6	200
Trichloroethane, 1,1,2-	79-00-5	5
Trichloroethylene	79-01-6	5
Vinyl Chloride	75-01-4	2
Xylenes	1330-20-7	10,000
(a) MFL = million fibers per liter (b) MCL is for Total Trihalomethane		

Table IX: Risk-based generic unrestricted potable use standards

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Inorganics/metals				
Aluminum Phosphide	20859-73-8	8	NA	8
Antimony Trioxide	1309-64-4	NA	NA	NA
Chlorine	7782-50-5	0.31	NA	0.31
Cobalt Compounds	7440-48-4	6	NA	6

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Disodium Phosphate	7558-79-4	20,000	NA	20,000
Hydrogen Chloride	7647-01-0	42	NA	42
Hydrogen Fluoride	7664-39-3	28	NA	28
Hydrogen Sulfide	7783-06-4	4.2	NA	4.2
Manganese Compounds	7439-96-5	430	NA	430
Nickel Soluble Salts	7440-02-0	390	NA	390
Phosphine	7803-51-2	0.57	NA	0.57
Selenious Acid	7783-00-8	100	NA	100
Silver	7440-22-4	94	NA	94
Sodium Azide	26628-22-8	80	NA	80
Sodium Fluoride	7681-49-4	1,000	NA	1,000
Sodium Fluoroacetate	62-74-8	0.4	NA	0.4
Sodium tripolyphosphate	7758-29-4	20,000	NA	20,000
Titanium Tetrachloride	7550-45-0	0.21	NA	0.21
Trisodium Phosphate	7601-54-9	20,000	NA	20,000
Vanadium Compounds	7440-62-2	86	NA	86
Zinc and Compounds	7440-66-6	6,000	NA	6,000
Zinc Phosphide	1314-84-7	6	NA	6
Cyanides				
Calcium Cyanide	592-01-8	20	NA	20
Copper Cyanide	544-92-3	100	NA	100
Cyanogen	460-19-5	20	NA	20
Cyanogen Bromide	506-68-3	1,800	NA	1,800
Cyanogen Chloride	506-77-4	1,000	NA	1,000

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Hydrogen Cyanide	74-90-8	1.5	NA	1.5
Potassium Cyanide	151-50-8	40	NA	40
Potassium Silver Cyanide	506-61-6	82	NA	82
Silver Cyanide	506-64-9	1,800	NA	1,800
Zinc Cyanide	557-21-1	1,000	NA	1,000
Lead Compounds				
Lead Acetate	301-04-2	NA	3.7	3.7
Lead Phosphate	7446-27-7	NA	91	91
Lead Subacetate	1335-32-6	NA	21	21
Tetraethyl Lead	78-00-2	0.0013	NA	0.0013
Semi-Volatile Organic Compounds (SVOCs)				
Acenaphthene	83-32-9	530	NA	530
Acetophenone	98-86-2	1,900	NA	1,900
Acetylaminofluorene, 2-	53-96-3	NA	0.16	0.16
Acrylamide	79-06-1	40	0.5	0.5
Aldrin	309-00-2	0.6	0.0092	0.0092
Aminobiphenyl, 4-	92-67-1	NA	0.03	0.03
Ammonium Sulfamate	7773-06-0	4,000	NA	4,000
Aniline	62-53-3	140	130	130
Anthracene	120-12-7	1,800	NA	1,800
Aroclor 1016	12674-11-2	1.4	2.2	1.4
Aroclor 1221	11104-28-2	NA	0.047	0.047
Aroclor 1232	11141-16-5	NA	0.047	0.047
Aroclor 1242	53469-21-9	NA	0.079	0.079

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Aroclor 1248	12672-29-6	NA	0.079	0.079
Aroclor 1254	11097-69-1	0.4	0.079	0.079
Aroclor 1260	11096-82-5	NA	0.079	0.079
Auramine	492-80-8	NA	0.78	0.78
Benomyl	17804-35-2	970	NA	970
Benzenethiol	108-98-5	17	NA	17
Benzidine	92-87-5	59	0.0011	0.0011
Benz[a]anthracene	56-55-3	NA	0.3	0.3
Benzo[b]fluoranthene	205-99-2	NA	2.5	2.5
Benzo[k]fluoranthene	207-08-9	NA	25	25
Benzoic Acid	65-85-0	75,000	NA	75,000
Biphenyl, 1,1'-	92-52-4	4,200	39	39
Bis(2-chloroethoxy)methane	111-91-1	59	NA	59
Bis(2-chloroethyl)ether	111-44-4	NA	0.14	0.14
Bis(chloromethyl)ether	542-88-1	NA	0.00072	0.00072
Butyl Benzyl Phthlate	85-68-7	1,700	160	160
Cacodylic Acid	75-60-5	400	NA	400
Captan	133-06-2	2,400	310	310
Carbaryl	63-25-2	1,800	NA	1,800
Carbosulfan	55285-14-8	52	NA	52
Chloramben	133-90-4	290	NA	290
Chlordecone (Kepone)	143-50-0	2.9	0.035	0.035
Chloro-2-methylaniline HCl, 4-	3165-93-3	NA	1.7	1.7
Chloroaniline, p-	106-47-8	9.5	3.7	3.7

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Chlorobenzilate	510-15-6	190	3.1	3.1
Chloronaphthalene, Beta-	91-58-7	750	NA	750
Chlorophenol, 2-	95-57-8	91	NA	91
Chlorpyrifos	2921-88-2	8.4	NA	8.4
Chrysene	218-01-9	NA	250	250
Cresol, m-	108-39-4	930	NA	930
Cresol, o-	95-48-7	930	NA	930
Cresol, p-	106-44-5	370	NA	370
Cresol, p-chloro-m-	59-50-7	1,400	NA	1,400
Cresols	1319-77-3	1,500	NA	1,500
DDD	72-54-8	1.1	0.32	0.32
DDE, p,p'-	72-55-9	10	0.46	0.46
DDT	50-29-3	10	2.3	2.3
Diallate	2303-16-4	NA	5.4	5.4
Diazinon	333-41-5	10	NA	10
Dibenz[a,h]anthracene	53-70-3	NA	0.25	0.25
Dibutyl Phthalate	84-74-2	900	NA	900
Dicamba	1918-00-9	570	NA	570
Dichlorobenzidine, 3,3'-	91-94-1	NA	0.15	0.15
Dichlorophenol, 2,4-	120-83-2	46	NA	46
Dichlorvos	62-73-7	9.9	2.6	2.6
Dieldrin	60-57-1	0.38	0.018	0.018
Diethanolamine	111-42-2	40	NA	40
Diethyl Phthalate	84-66-2	15,000	NA	15,000

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Diethylstilbestrol	56-53-1	NA	0.00051	0.00051
Dimethoate	60-51-5	44	NA	44
Dimethoxybenzidine, 3,3'-	119-90-4	NA	0.47	0.47
Dimethylamino azobenzene [p-]	60-11-7	NA	0.051	0.051
Dimethylbenz(a)anthracene, 7,12-	57-97-6	NA	0.001	0.001
Dimethylbenzidine, 3,3'-	119-93-7	NA	0.065	0.065
Dimethylphenol, 2,4-	105-67-9	360	NA	360
Dinitrobenzene, 1,2-	528-29-0	1.9	NA	1.9
Dinitrobenzene, 1,3-	99-65-0	2	NA	2
Dinitrobenzene, 1,4-	100-25-4	2	NA	2
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	23	NA	23
Dinitrophenol, 2,4-	51-28-5	39	NA	39
Dinitrotoluene, 2,4-	121-14-2	38	2.4	2.4
Dinitrotoluene, 2,6-	606-20-2	NA	0.49	0.49
Dinitrotoluene Mixture, 2,4/2,6	25321-14-6	NA	0.691.1	0.691.1
Diphenylhydrazine, 1,2-	122-66-7	NA	0.78	0.78
Disulfoton	298-04-4	0.5	NA	0.5
Diuron	330-54-1	36	NA	36
Endosulfan	115-29-7	100	NA	100
Endrin	72-20-8	2	NA	2
Epichlorohydrin	106-89-8	2	29	2
Ethion	563-12-2	3.8	NA	3.8
Ethylene Glycol	107-21-1	16,000	NA	16,000
Ethylene Thiourea	96-45-7	1.6	17	1.6

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Fluoranthene	206-44-0	800	NA	800
Fluorene	86-73-7	290	NA	290
Furan	110-00-9	19	NA	19
Furfural	98-01-1	38	NA	38
Guthion	86-50-0	56	NA	56
Hexachlorobutadiene	87-68-3	6.5	1.4	1.4
Hexachlorocyclohexane, Alpha-	319-84-6	NA11	0.072	0.072
Hexachlorocyclohexane, Beta-	319-85-7	NA	0.25	0.25
Hexachlorocyclohexane, Technical	608-73-1	NA	0.25	0.25
Hexachloroethane	67-72-1	6.3	3.3	3.3
Hexachlorophene	70-30-4	6	NA	6
Hexamethylene Diisocyanate, 1,6-	822-06-0	0.021	NA	0.021
Hexamethylphosphoramide	680-31-9	8	NA	8
Hexanedioic Acid	124-04-9	40,000	NA	40,000
Hydroquinone	123-31-9	790	13	13
Indeno[1,2,3-cd]pyrene	193-39-5	NA	2.5	2.5
Isophorone	78-59-1	3,800	780	780
Malathion	121-75-5	390	NA	390
Maleic Anhydride	108-31-6	1,900	NA	1,900
Maleic Hydrazide	123-33-1	10,000	NA	10,000
Malononitrile	109-77-3	2	NA	2
Methomyl	16752-77-5	500	NA	500
Methyl Parathion	298-00-0	4.5	NA	4.5
Methylaniline Hydrochloride, 2-	636-21-5	NA	6	6

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Methylcholanthrene, 3-	56-49-5	NA	0.011	0.011
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	26	1.6	1.6
Methylenebisbenzenamine, 4,4'-	101-77-9	NA	0.47	0.47
Methylnaphthalene, 1-	90-12-0	0.0063	NA	0.0063
Methylnaphthalene, 2-	91-57-6	36	NA	36
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	NA	0.094	0.094
Naled	300-76-5	40	NA	40
Naphthylamine, 2-	91-59-8	NA	0.39	0.39
Nitroaniline, 4-	100-01-6	78	38	38
Nitrobenzene	98-95-3	13	1.4	1.4
Nitroglycerin	55-63-0	2	45	2
Nitropropane, 2-	79-46-9	42	NA	42
Nitrosodiethanolamine, N-	1116-54-7	NA	0.28	0.28
Nitrosodiethylamine, N-	55-18-5	NA	0.0017	0.0017
Nitrosodimethylamine, N-	62-75-9	0.16	0.0011	0.0011
Nitroso-di-N-butylamine, N-	924-16-3	NA	0.027	0.027
Nitroso-di-N-propylamine, N-	621-64-7	NA	0.11	0.11
Nitrosodiphenylamine, N-	86-30-6	NA	120	120
Nitrosomorpholine [N-]	59-89-2	NA	0.12	0.12
Nitroso-N-ethylurea, N-	759-73-9	NA	0.0092	0.0092
Nitroso-N-methylurea, N-	684-93-5	NA	0.0021	0.0021
Nitrosopiperidine [N-]	100-75-4	NA	0.082	0.082
Nitrosopyrrolidine, N-	930-55-2	NA	0.37	0.37
Nitrotoluene, o-	88-72-2	16	3.1	3.1

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Nitrotoluene, p-	99-99-0	71	43	43
Octamethylpyrophosphoramidate	152-16-9	40	NA	40
Octyl Phthalate, di-N-	117-84-0	200	NA	200
Parathion	56-38-2	86	NA	86
Pentachlorobenzene	608-93-5	3.1	NA	3.1
Pentachloroethane	76-01-7	NA	6.5	6.5
Pentachloronitrobenzene	82-68-8	26	1.2	1.2
Phenacetin	62-44-2	NA	340	340
Phenol	108-95-2	5,800	NA	5,800
Phenylmercuric Acetate	62-38-4	1.6	NA	1.6
Phorate	298-02-2	3	NA	3
Phosphoric Acid	7664-38-2	20,000	NA	20,000
Phthalic Anhydride	85-44-9	39,000	NA	39,000
Pronamide	23950-58-5	1,200	NA	1,200
Propargite	2312-35-8	320	1.6	1.6
Propham	122-42-9	350	NA	350
Propoxur (Baygon)	114-26-1	78	NA	78
Pyrene	129-00-0	120	NA	120
Pyridine	110-86-1	20	NA	20
Quinoline	91-22-5	NA	0.24	0.24
Safrole	94-59-7	NA	0.96	0.96
Strychnine	57-24-9	5.9	NA	5.9
Tetrachlorophenol, 2,3,4,6-	58-90-2	240	NA	240
Tetraethyl Dithiopyrophosphate	3689-24-5	7.1	NA	7.1

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Tetrahydrofuran	109-99-9	3,400	NA	3,400
Thiofanox	39196-18-4	5.3	NA	5.3
Thiophanate, Methyl	23564-05-8	3,200	64	64
Thiram	137-26-8	290	NA	290
Toluene-2,4-diisocyanate	584-84-9	0.017	1.4	0.017
Toluene-2,6-diisocyanate	91-08-7	0.017	3.4	0.017
Toluidine, p-	106-49-0	NA	25	25
Triallate	2303-17-5	230	4.7	4.7
Trichlorophenol, 2,4,5-	95-95-4	1,200	NA	1,200
Trichlorophenol, 2,4,6-	88-06-2	12	41	12
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	160	NA	160
Trifluralin	1582-09-8	41	26	26
Trimethylbenzene, 1,2,3-	526-73-8	55	NA	55
Trimethylbenzene, 1,2,4-	95-63-6	56	NA	56
Trimethylbenzene, 1,3,5-	108-67-8	60	NA	60
Trinitrobenzene, 1,3,5-	99-35-4	590	NA	590
Urethane	51-79-6	NA	0.25	0.25
Warfarin	81-81-2	5.6	NA	5.6
Volatile Organic Compounds (VOCs)				
Acetaldehyde	75-07-0	19	26	19
Acetone	67-64-1	18,000	NA	18,000
Acetonitrile	75-05-8	130	NA	130
Acrolein	107-02-8	0.042	NA	0.042
Acrylic Acid	79-10-7	0.42	NA	0.42

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Acrylonitrile	107-13-1	3.4	0.52	0.52
Allyl Alcohol	107-18-6	80	NA	80
Allyl Chloride	107-05-1	2.1	7.3	2.1
Benzotrichloride	98-07-7	NA	0.03	0.03
Benzyl Chloride	100-44-7	2	0.89	0.89
Bis(2-chloro-1-methylethyl) Ether	108-60-1	710	NA	710
Bromomethane	74-83-9	7.5	NA	7.5
Butadiene, 1,3-	106-99-0	4.2	0.71	0.71
Butanol, N-	71-36-3	2,000	NA	2,000
Butylbenzene, n-	104-51-8	1,000	NA	1,000
Carbon Disulfide	75-15-0	810	NA	810
Carbonyl Sulfide	463-58-1	210	NA	210
Chloro-1,3-butadiene, 2-	126-99-8	37	0.19	0.19
Chloromethane	74-87-3	190	NA	190
Chloromethyl Methyl Ether	107-30-2	NA	0.065	0.065
Crotonaldehyde, trans-	123-73-9	20	0.4	0.4
Cumene	98-82-8	450	NA	450
Cyclohexane	110-82-7	13,000	NA	13,000
Cyclohexanone	108-94-1	1,400	NA	1,400
Dichloro-2-butene, 1,4-	764-41-0	NA	0.013	0.013
Dichlorodifluoromethane	75-71-8	3,600	NA	3,600
Dichloroethane, 1,1-	75-34-3	3,800	28	28
Dichloropropane, 1,3-	142-28-9	370	NA	370
Dichloropropene, 1,3-	542-75-6	39	4.7	4.7

<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Dihydrosafrole	94-58-6	NA	3	3
Dimethylaniline, N,N-	121-69-7	35	25	25
Dimethylformamide	68-12-2	61	NA	61
Dimethylhydrazine, 1,2-	540-73-8	NA	0.00028	0.00028
Dioxane, 1,4-	123-91-1	57	4.6	4.6
Epoxybutane, 1,2-	106-88-7	42	NA	42
Ethoxyethanol, 2-	110-80-5	80	NA	80
Ethyl Acetate	141-78-6	140	NA	140
Ethyl Acrylate	140-88-5	14	NA	14
Ethyl Chloride (Chloroethane)	75-00-3	8,300	NA	8,300
Ethyl Ether	60-29-7	3,900	NA	3,900
Ethyl Methacrylate	97-63-2	630	NA	630
Ethylene Diamine	107-15-3	1,800	NA	1,800
Ethylene Oxide	75-21-8	63	0.0067	0.0067
Ethyleneimine	151-56-4	NA	0.0024	0.0024
Formaldehyde	50-00-0	20	3.9	3.9
Formic Acid	64-18-6	18,000	NA	18,000
Glycidaldehyde	765-34-4	1.7	NA	1.7
Hexane, N-	110-54-3	1,500	NA	1,500
Hydrazine	302-01-2	NA0.063	0.011	0.011
Isobutyl Alcohol	78-83-1	5,900	NA	5,900
Methacrylonitrile	126-98-7	1.9	NA	1.9
Methanol	67-56-1	20,000	NA	20,000
Methyl Ethyl Ketone (2-Butanone)	78-93-3	5,600	NA	5,600

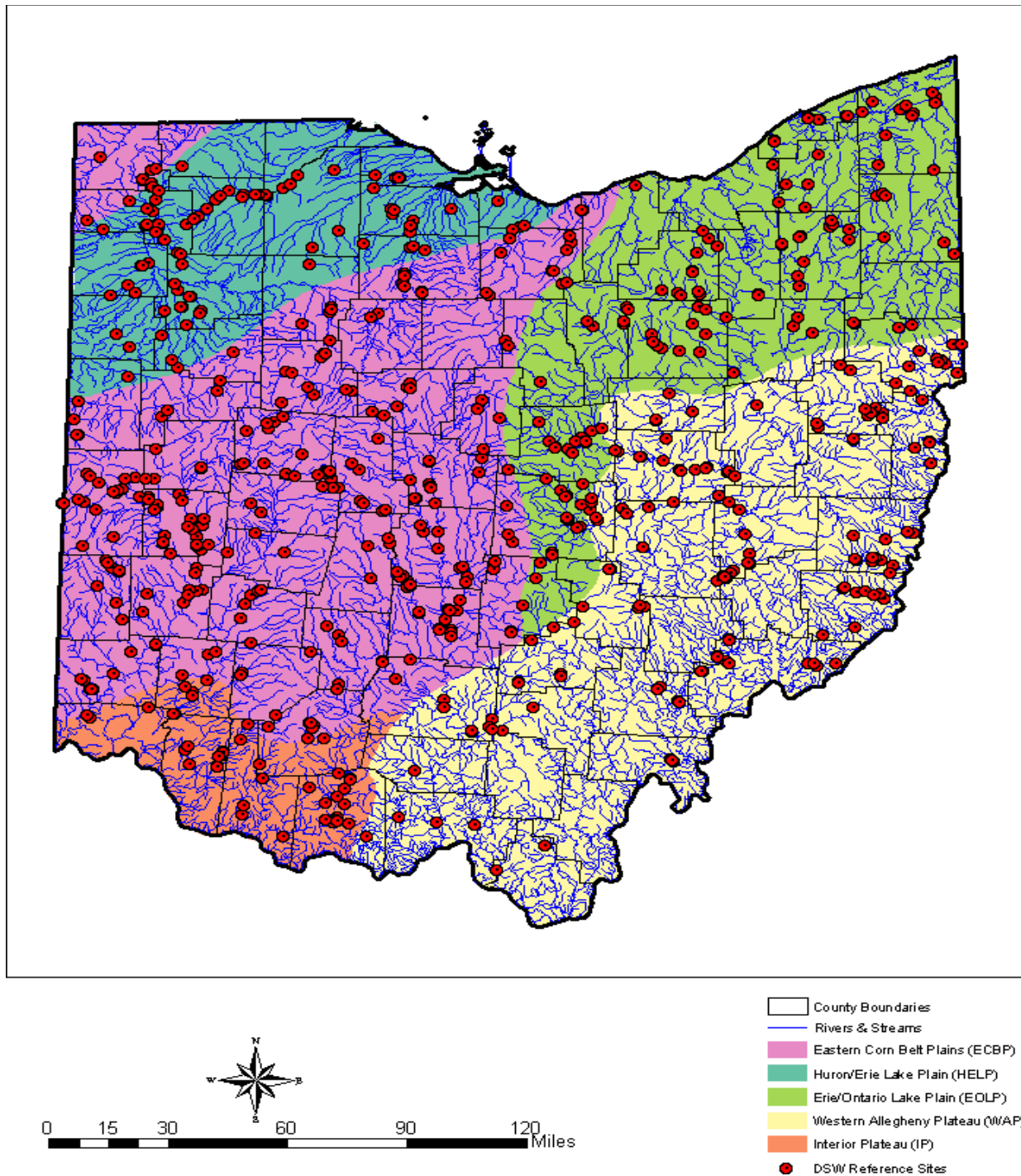
<u>Table IX</u>	Chemical Abstract Service Number (CAS #)	Standard for a Single Chemical Non-Carcinogen (µg/L)	Standard for a Single Chemical Carcinogen (µg/L)	Generic Unrestricted Potable Use Standard for a Single Chemical (µg/L)
Chemical of Concern				
Methyl Hydrazine	60-34-4	20	NA	20
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	6,300	NA	6,300
Methyl Isocyanate	624-83-9	2.1	NA	2.1
Methyl Methacrylate	80-62-6	1,400	NA	1,400
Methyl tert-Butyl Ether (MTBE)	1634-04-4	6,300	140	140
Naphthalene	91-20-3	6.1	1.2	1.2
Nickel Carbonyl	13463-39-3	0.029	0.22	0.029
<u>Phosgene</u>	<u>75-44-5</u>	<u>0.63</u>	<u>NA</u>	<u>0.63</u>
Propargyl Alcohol	107-19-7	40	NA	40
Propionaldehyde	123-38-6	17	NA	17
Propylene Oxide	75-56-9	63	2.7	2.7
Tetrachlorobenzene, 1,2,4,5-	95-94-3	0.17	NA	0.17
Tetrachloroethane, 1,1,1,2-	630-20-6	480	5.7	5.7
Tetrachloroethane, 1,1,2,2-	79-34-5	360	0.76	0.76
Trichlorofluoromethane	75-69-4	5,200	NA	5,200
Triethylamine	121-44-8	15	NA	15
Vinyl Acetate	108-05-4	410	NA	410
Vinyl Bromide	593-60-2	6.3	3.7	3.7

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this appendix, see rule 3745-300-15 of the Administrative Code titled "Incorporation by reference - voluntary action program."]

In this appendix, mg/kg means milligrams per kilogram, NA means not applicable, and µg/kg means micrograms per kilogram.

Table I: Statewide and regional sediment reference values (mg/kg)

Table I Chemical of Concern	Chemical Abstract Service Number (CAS #)	Statewide	Ecoregions (a)				
			Eastern Corn Belt Plains (ECBP)	Huron-Erie Lake Plain (HELP) Erie-Ontario Lake Plain (EOLP)	Erie-Ontario Lake Plain (EOLP) Huron-Erie Lake Plain (HELP)	Interior Plateau (IP)	Western Allegheny Plateau (WAP)
Antimony	7440-36-0	NA	0.92	1.3	0.84	NA	NA
Arsenic	7440-38-2	NA	18	25	11	11	19
Barium	7440-39-3	NA	240	190	210	170	360
Beryllium	7440-41-7	0.8	NA	NA	NA	NA	NA
Cadmium	7440-43-9	NA	0.90	0.79	0.96	0.30	0.80
Chromium, Total	7440-47-3	NA	40	29	51	30	53
Cobalt	7440-48-4	12	NA	NA	NA	NA	NA
Copper	7440-50-8	NA	34	32	42	25	33
Lead	7439-92-1	47	NA	NA	NA	NA	NA
Manganese	7439-96-5	NA	780	1,500	1,000	1,400	3,000
Mercury	7439-97-6	0.12	NA	NA	NA	NA	NA
Nickel	7440-02-0	NA	42	33	36	33	61
Selenium	7782-49-2	NA	2.3	1.7	1.4	1.6	2.6
Silver	7440-22-4	0.43	NA	NA	NA	NA	NA
Thallium	7440-28-0	4.7	NA	NA	NA	NA	NA
Vanadium	7440-62-2	40	NA	NA	NA	NA	NA
Zinc	7440-66-6	NA	160	160	190	100	170



(a) Figure 1: Ohio Ecoregions including Division of Surface Water (DSW) Sampling Locations

Table II: Consensus-based threshold effect concentrations¹

Chemical of Concern	Chemical Abstract Service Number (CAS #)	Consensus-Based Threshold Effect Concentration
Metals (mg/kg dry weight)		
Arsenic	7440-38-2	9.8
Cadmium	7440-43-9	0.99
Chromium	7440-47-3	43
Copper	7440-50-8	32
Lead	7439-92-1	36
Mercury	7439-97-6	0.18
Nickel	7440-02-0	23
Zinc	7440-66-6	121
Polycyclic Aromatic Hydrocarbons (µg/kg dry weight)		
Anthracene	120-12-7	57
Benz[a]anthracene	56-55-3	110
Benzo[a]pyrene	50-32-8	150
Chrysene	218-01-9	170
Dibenz[a,h]anthracene	53-70-3	33
Fluoranthene	206-44-0	420
Fluorene	86-73-7	77
Naphthalene	91-20-3	180
Phenanthrene	85-01-8	200
Pyrene	129-00-0	200
Total PAHs	NA	1,600
Polychlorinated Biphenyls (µg/kg dry weight)		
Polychlorinated Biphenyls, Total	1336-36-3	60
Pesticides (µg/kg dry weight)		
Chlordane	57-74-9	3.2
DDD	72-54-8	4.9
DDE, p,p'-	72-55-9	3.2
DDT	50-29-3	4.2
DDTs, Total	NA	5.3
Dieldrin	60-57-1	1.9
Endrin	72-20-8	2.2
Heptachlor Epoxide	1024-57-3	2.5
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	2.4

¹ Consensus-based threshold concentrations from MacDonald, Ingersoll and Berger's "Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems" are rounded to two significant digits.