Appendix A: Screening Levels

A.1 Introduction

Indiana Code (IC) 13-25-5-8.5(d)(1) directs responsible parties to specify remediation objectives for sites where releases occur. There are several general classes of remediation objectives. This section concerns one such class, specifically:

Levels of hazardous substances and petroleum calculated by the department using standard equations and default values for particular hazardous substances or petroleum.[77]

The Indiana Department of Environmental Management (IDEM) refers to the levels defined above as **screening levels**. IDEM relies on the values found in the Regional Screening Level (RSL) tables (U.S. EPA, 2011b and updates) and guidance from the *Regional Screening Level User's Guide* (U.S. EPA, 2011) when deriving screening levels. However, IDEM's screening levels are not necessarily the same as those that appear in the RSLs. This section describes the derivation of IDEM screening levels from RSLs and provides the rationale for any differences.

When adapting screening levels from the RSLs, IDEM adjusts the target cancer risk for carcinogens from 10^{-6} to 10^{-5}. The standard target hazard quotient for noncarcinogenic risk is 1. The noncancer toxicity model assumes that a threshold exists for toxic effects and that there are no noncancer toxic effects when the hazard quotient is less than 1.

Screening levels are not necessarily closure levels. They are simply one type of remediation objective. However, when appropriate investigation of a release shows sample results below screening levels, the release is typically eligible for closure. Table A-6 contains screening levels for more than seven hundred individual chemicals or mixtures of chemicals.

IDEM will revise its screening levels yearly, using the procedures described herein. IDEM will base the revision for each year on the U.S. EPA RSL table that is in effect on the last day of the preceding year. All versions of the IDEM screening level tables will be available through links on the Risk-based closure web page.[78]

A.2 Chemical Names and Numbers

Table A-6 contains eleven columns. Up to nine of those columns contain screening levels for each chemical, specific to certain exposure scenarios. Subsequent subsections describe how IDEM derives each type of screening level.

The first column contains the names of individual chemicals or mixtures of chemicals. Chemicals in the 2013 and subsequent tables appear in alphabetical order. In the 2012 table, some classes of chemicals appear under a common, overarching name. For example, polynuclear aromatic hydrocarbons appear as a group, under that name. Note that many chemicals have multiple names, and it may be necessary to look in more than one location in the table to find specific chemicals.

The second column contains Chemical Abstract Service (CAS) numbers for those chemicals that have them. CAS numbers are unique chemical identifiers, and may be useful for finding chemicals that have multiple common names.

[77] IC 13-25-8.5(d)(1)
[78] http://www.in.gov/idem/4153.htm

A.3 Soil Direct Contact

Soil direct contact screening levels assume exposure via ingestion, dermal contact, and inhalation of volatiles and particulates. Table A-6 contains soil direct contact screening levels for residential, commercial/industrial, and excavation worker scenarios.

The soil direct contact screening levels that appear in Table A-6 are not always health protective levels. In some cases, the soil direct contact screening levels default to one of two **limiting factors**: the soil saturation limit, or the maximum cap.

The **soil saturation limit** (C_{sat}) is the concentration in soil at which a chemical exceeds the absorptive limits of the soil particles. Chemicals at concentrations above C_{sat} may be present as free phase product, and U.S. EPA (2011) notes that the presence of free phase chemicals may violate assumptions underlying the screening levels equations. IDEM intends the soil saturation cap to prompt further evaluation of sites that may contain free phase chemicals. IDEM uses C_{sat} values from the RSL Summary Table, where available, to cap soil direct contact screening levels.

U.S. EPA (2011) notes that chemical concentrations greater than ten percent may violate some screening level equation assumptions (e.g., soil adherence and wind-borne dispersion assumptions). For this reason, IDEM caps soil direct contact screening levels at 100,000 milligrams per kilogram (mg/kg; ten percent by weight). Therefore, the soil direct contact screening levels that appear in Table A-6 are the lowest of the health protective level, C_{sat} (if any), and the cap.

A.3.1 Soil Direct Contact: Residential

The third column of Table A-6 contains screening levels, expressed in mg/kg, for the residential soil direct contact exposure scenario. IDEM derives these levels from values appearing in the RSL resident soil table as follows:

1. Multiply the carcinogenic screening level (if any) appearing in the RSL resident soil table by ten to produce a carcinogenic screening level at a target cancer risk of 10^{-5}. Multiply the resulting number by a factor of 1.4 to account for IDEM's exposure frequency assumption (250 days per year) versus the U.S. EPA default exposure frequency (350 days per year).
2. Select the lower of the following as the IDEM residential soil direct contact screening level:
    - The 10^{-5} carcinogenic screening level (if any)
    - The noncarcinogenic screening level (if any) appearing in the RSL resident soil table, multiplied by 1.4
    - C_{sat}
    - 100,000 mg/kg

For the residential soil direct contact exposure scenario, IDEM adopted U.S. EPA's residential screening level for lead. U.S. EPA considers this level protective of young children in a residential setting (U.S. EPA, 1994).

A.3.2 Soil Direct Contact: Commercial/Industrial

The fourth column of Table A-6 contains screening levels, expressed in mg/kg, for the commercial/industrial soil direct contact exposure scenario. IDEM derives these levels from values that appear in the RSL Industrial Soil Table as follows:

1. Multiply the value (if any) appearing in the carcinogenic screening level column of the RSL Industrial Soil Table by ten to produce a carcinogenic screening level at a target cancer risk of 10^{-5}.
2. Select the lower of the following as the IDEM commercial/industrial soil direct contact screening level:
   - The 10^{-5} carcinogenic screening level (if any)
   - The noncarcinogenic screening level (if any) from the RSL Industrial Soil Table
   - C_{sat}
   - 100,000 mg/kg

IDEM calculates lead screening levels for the commercial/industrial scenario using U.S. EPA's Adult Lead Model (U.S. EPA, 2003b).

A.3.3 Soil Direct Contact: Excavation Worker

The fifth column of Table A-6 contains screening levels, expressed in mg/kg, for the excavation worker soil direct contact scenario. The RSLs do not contain screening levels for the excavation worker scenario. Therefore, IDEM calculates excavation worker soil direct contact screening levels using the industrial soil equations in U.S. EPA (2011) and somewhat different exposure assumptions than those that U.S. EPA uses to derive commercial/industrial soil direct contact screening levels. Table A-1 illustrates differences in the assumptions that IDEM uses to calculate commercial/industrial and excavation worker soil direct contact screening levels.

Table A-1: Exposure Assumptions

	Commercial/ Industrial	Excavation Worker
Averaging Time (years)	25	1
Exposure Frequency (days/year)	250	45
Exposure Duration (years)	25	1
Ingestion Rate (milligrams/day)	100	330

Application of these parameter assumptions and the equations in Section 4.2 of U.S. EPA (2011) yields the following relationships between screening levels for the excavation worker and commercial/industrial worker exposure scenarios:

Equation A-1: Ingestion of Noncarcinogens for the Excavation Worker Scenario

$$SL_{Exc-Ing-NC} = \left(\frac{500}{297}\right) SL_{CI-Ing-NC}$$

Where $SL_{Exc\text{-}Ing\text{-}NC}$ is IDEM's excavation worker screening level for the noncarcinogenic ingestion exposure pathway and $SL_{CI\text{-}Ing\text{-}NC}$ is IDEM's commercial/industrial screening level for the noncarcinogenic ingestion exposure pathway.

Equation A-2: Dermal Contact with Noncarcinogens for the Excavation Worker Scenario

$$SL_{Exc-Der-NC} = \left(\frac{50}{9}\right) SL_{CI-Der-NC}$$

Where $SL_{Exc\text{-}Der\text{-}NC}$ is IDEM's excavation worker screening level for the noncarcinogenic dermal contact exposure pathway and $SL_{CI\text{-}Der\text{-}NC}$ is IDEM's commercial/industrial screening level for the noncarcinogenic dermal contact exposure pathway.

Equation A-3: Inhalation of Noncarcinogens for the Excavation Worker Scenario

$$SL_{Exc-Inh-NC} = \left(\frac{50}{9}\right) SL_{CI-Inh-NC}$$

Where $SL_{Exc\text{-}Inh\text{-}NC}$ is IDEM's excavation worker screening level for the noncarcinogenic inhalation exposure pathway and $SL_{CI\text{-}Inh\text{-}NC}$ is IDEM's commercial/industrial screening level for the noncarcinogenic inhalation exposure pathway.

Equation A-4: Ingestion of Carcinogens for the Excavation Worker Scenario

$$SL_{Exc-Ing-Carc} = \left(\frac{12{,}500}{297}\right) SL_{CI-Ing-Carc}$$

Where $SL_{Exc\text{-}Ing\text{-}Carc}$ is IDEM's excavation worker screening level for the carcinogenic ingestion exposure pathway and $SL_{CI\text{-}Ing\text{-}Carc}$ is IDEM's commercial/industrial screening level for the carcinogenic ingestion exposure pathway.

Equation A-5: Dermal Contact with Carcinogens for the Excavation Worker Scenario

$$SL_{Exc-Der-Carc} = \left(\frac{1250}{9}\right) SL_{CI-Der-Carc}$$

Where $SL_{Exc\text{-}Der\text{-}Carc}$ is IDEM's excavation worker screening level for the carcinogenic dermal contact exposure pathway and $SL_{CI\text{-}Der\text{-}Carc}$ is IDEM's commercial/industrial screening level for the carcinogenic dermal contact exposure pathway.

Equation A-6: Inhalation of Carcinogens for the Excavation Worker Scenario

$$SL_{Exc-Inh-Carc} = \left(\frac{1250}{9}\right) SL_{CI-Inh-Carc}$$

Where $SL_{Exc\text{-}Inh\text{-}Carc}$ is IDEM's excavation worker screening level for the carcinogenic inhalation exposure pathway and $SL_{CI\text{-}Inh\text{-}Carc}$ is IDEM's commercial/industrial screening level for the carcinogenic inhalation exposure pathway.

Equation A-7: Noncarcinogenic Screening Level for the Excavation Worker Scenario

$$SL_{Exc-NC} = \frac{1}{\left(\frac{1}{SL_{Exc-Ing-NC}}\right)+\left(\frac{1}{SL_{Exc-Der-NC}}\right)+\left(\frac{1}{SL_{Exc-Inh-NC}}\right)}$$

Where the value of any quotient in parentheses is set to zero when its denominator is zero.

Equation A-8: Carcinogenic Screening Level for the Excavation Worker Scenario

$$SL_{Exc-Carc} = \frac{1}{\left(\frac{1}{SL_{Exc-Ing-Carc}}\right)+\left(\frac{1}{SL_{Exc-Der-Carc}}\right)+\left(\frac{1}{SL_{Exc-Inh-Carc}}\right)}$$

Where the value of any quotient in parentheses is set to zero when its denominator is zero.

IDEM selects the lower of the noncarcinogenic screening level (Equation A-7) and carcinogenic screening level (Equation A-8), C_{sat}, and 100,000 mg/kg as the IDEM excavation worker screening level. IDEM calculates lead screening levels for the excavation worker scenario using U.S. EPA's Adult Lead Model (U.S. EPA, 2003b).

Note that this approach uses the same chronic toxicity parameter values employed in the derivation of commercial/industrial screening levels. Where available, subchronic toxicity parameter values may be more appropriate when deriving excavation worker screening levels.

A.4 Ground Water

Table A-6 includes screening levels for both residential ground water direct contact and residential migration to ground water. Residential ground water direct contact screening levels account for exposure through ingestion of water, dermal contact with water, and inhalation of volatiles arising from ground water use in the home.

Residential migration to ground water screening levels apply to chemicals present in vadose zone soils. Exceedance of residential migration to ground water screening levels suggests the potential for chemicals in the soil to leach to ground water at concentrations that exceed residential ground water direct contact screening levels. Consistent with U.S. EPA, IDEM does not provide screening levels for commercial/industrial ground water direct contact or commercial/industrial migration to ground water scenarios.

A.4.1 Ground Water: Residential Migration to Ground Water

The sixth column of Table A-6 contains residential migration to ground water screening levels, expressed in mg/kg. IDEM calculates these screening levels using Equation A-9:

Equation A-9: Migration to Ground Water Screening Levels

$$SL_{MTG} = SL_{GW} \times DAF \times \left[\left(K_{OC} \times f_{OC} \right) + \frac{\theta_W + (\theta_A \times H')}{\rho_b} \right]$$

Where

SL_{MTG} = Migration to ground water screening level, in mg/kg

SL_{GW} = Ground water screening level, in micrograms per liter (µg/L), from column seven of Table A-6. This level may be a maximum contaminant level (MCL) for some chemicals.

DAF = Dilution attenuation factor (DAF, unitless). As recommended in US E.P.A. (2011) for source areas of 0.5 acres, IDEM uses a default DAF value of 20. IDEM will accept other values that are appropriately derived using site-specific data. See Section 4.11.5 of US E.P.A. (2011) for additional information.

K_{OC} = Chemical-specific organic carbon partition coefficient, in liters per kilogram (L/kg). For most chemicals, IDEM uses K_{oc} values from the RSL Chemical-specific Parameters Supporting Table when calculating IDEM migration to ground water screening levels. For metals, IDEM uses the K_d values appearing in Section 4.11 of U.S. EPA (2011) in place of *(K_{oc} x f_{oc})*.

f_{OC} = Fraction of organic carbon, in grams per gram (g/g). IDEM uses a default value of 0.002 when calculating IDEM migration to ground water screening levels. IDEM will accept other values that are appropriately derived from site-specific data.

θ_W = Water filled soil porosity, in liters of water per liters of soil. IDEM uses a default value of 0.3 when calculating IDEM migration to ground water screening levels. IDEM will accept other values that are appropriately derived from site-specific data.

θ_A = Air filled soil porosity, in liters of air per liters of soil. IDEM uses a default value of 0.13 when calculating IDEM migration to ground water screening levels. IDEM will accept other values that are appropriately derived from site-specific data.

H' = Chemical-specific dimensionless Henry's Law constant (unitless). IDEM uses values from the RSL Chemical-specific Parameters Supporting Table when calculating IDEM migration to ground water screening levels.

ρ_b = Dry soil bulk density, in kilograms per liter (kg/L). IDEM uses a default value of 1.5 when calculating IDEM migration to ground water screening levels. IDEM will accept other values that are appropriately derived from site-specific data.

pH has a significant effect on the ability of metals and ionizing organics (i.e., carboxylic acids, phenols, and amines) to migrate through the soil column, and thus to ground water. The RSLs for migration to ground water assume a pH of 6.8[79]. The migration to ground water screening levels are not applicable outside a soil pH range of 6.0 to 8.0. Site soils outside this range merit development of site-specific migration to ground water screening levels for ionizing organics or metals at the site. U.S. EPA (1996b) provides guidance for determining pH-specific K_d values. Alternatively, see Section 9.10 for guidance on the synthetic precipitation leaching procedure.

[79] Except beryllium, cadmium, mercury, nickel, and silver.

A.4.2 Ground Water: Residential Direct Contact

The seventh column of Table A-6 contains ground water screening levels for the residential consumption scenario, expressed in micrograms per liter (µg/l). For chemicals that have an MCL, IDEM uses the MCL as the residential ground water screening level. For chemicals without MCLs, IDEM derives residential ground water screening levels from values that appear in the RSL Tapwater Supporting Table as follows:

1. Multiply the value (if any) appearing in the carcinogenic screening level column of the RSL Tapwater Supporting Table by ten to produce a carcinogenic screening level at a target cancer risk of 10^{-5}.
2. Select the lower of the 10^{-5} carcinogenic screening level (if any) and value (if any) appearing in the noncarcinogenic screening level column of the RSL Tapwater Supporting Table as the IDEM residential ground water screening level.

A.5 Vapor

IDEM calculates screening levels for residential indoor air, commercial/industrial indoor air, and vapor intrusion ground water screening levels (VI GWSLs) for both residential and commercial/ industrial land uses. Indoor air screening levels assume target cancer risk of 10^{-5} for both residential and commercial/industrial scenarios. Indoor air action levels for both scenarios assume a target cancer risk of 10^{-4}. Residential land use assumes a 30-year exposure, and commercial/industrial assumes a 25-year exposure. IDEM only calculates vapor intrusion screening levels for chemicals with inhalation toxicity data.

A.5.1 Vapor: Residential Ground Water

The eighth column of Table A-6 contains residential VI GWSLs for a dozen chemicals, expressed in µg/L. IDEM calculates VI GWSLs using Equation A-10:

Equation A-10: Vapor Intrusion Ground Water Screening Levels

$$VIGWSL = \frac{C_{IA}}{\alpha_{GW} \times H'_{TS} \times 1000\,L/m^3}$$

Where:

$VIGWSL$ = Vapor intrusion ground water screening level, in µg/L.

C_{IA} = Residential indoor air screening level, in µg/m^3

α_{GW} = Ground water to indoor air attenuation factor (unitless). IDEM's default ground water to indoor air attenuation factor is 0.001.

H'_{TS} = Temperature adjusted Henry's Law constant. When calculating VI GWSLs, IDEM uses the methodology in U.S. EPA (2001a) to adjust Henry's Law constants, assuming a soil temperature of 12.5˚C.

A.5.2 Vapor: Commercial/Industrial Ground Water

The ninth column of Table A-6 contains commercial/industrial VI GWSLs for a dozen chemicals, expressed in µg/L. IDEM uses the same methodology when calculating residential and commercial/industrial VI GWSLs, except that the latter employs an attenuation factor of 0.001 and commercial/industrial indoor air screening levels instead of residential indoor air screening levels in Equation A-10.

A.5.3 Vapor: Chronic Residential Indoor Air

The tenth column of Table A-6 contains screening levels for the chronic residential indoor air scenario, expressed in $\mu g/m^3$. IDEM derives these levels from values that appear in the RSL Resident Air Supporting Table as follows:

1. Multiply the value (if any) appearing in the carcinogenic screening level column of the RSL Resident Air Supporting Table by ten to produce a residential indoor air carcinogenic screening level at a target cancer risk of 10^{-5}.
2. Select the lower of the 10^{-5} carcinogenic screening level (if any) and the value (if any) appearing in the noncarcinogenic screening level column of the RSL Resident Air Supporting Table as the IDEM residential indoor air screening level.

A.5.4 Vapor: Chronic Commercial/Industrial Indoor Air

The eleventh column of Table A-6 contains screening levels for the chronic commercial/industrial indoor air scenario, expressed in $\mu g/m^3$. IDEM derives these levels from values that appear in the RSL Industrial Air Supporting Table as follows:

1. Multiply the value (if any) appearing in the carcinogenic screening level column of the RSL Industrial Air Supporting Table by ten to produce a commercial/industrial indoor air carcinogenic screening level at a target cancer risk of 10^{-5}.
2. Select the lower of the 10^{-5} carcinogenic screening level (if any) and the value (if any) appearing in the noncarcinogenic screening level column of the RSL Industrial Air Supporting Table as the IDEM commercial/industrial indoor air screening level.

A.6 Other Screening Levels

IDEM does not provide screening levels for every conceivable exposure scenario. Evaluation of risk via some exposure pathways will require site-specific risk assessment. In other cases, responsible parties may wish to perform site-specific risk assessments for routine exposure scenarios using assumptions that more accurately reflect site conditions and exposures.

Examples of possible site-specific exposure pathways appear in Table A-2 below. For specific guidance on conducting risk assessments, refer to U.S. EPA guidance (including but not limited to U.S. EPA 1989, 1991a, 1996a, 1996b, 2002, 2004a, 2009d). Screening levels based on a site-specific risk assessment may take into account other aspects of risk management, including institutional controls. As noted in Section 11, an ecological risk assessment is appropriate for sites where releases may impact ecologically sensitive areas.

Table A-2: Site-specific Exposure Media and Associated Pathways

Medium	Examples of Associated Pathways
Soil	● Runoff to surface water ● Biota (e.g., produce consumption, plant uptake associated with meat, dairy and game)
Ground water	● Industrial process water ● Inhalation of volatiles from ground water in excavations ● Biota uptake in irrigated produce
Air	● Particulate deposition on soil ● Biota uptake from air deposition on plants and soil ● Biota uptake from air deposition on surface waters
Surface water	● Recreational ● Drinking water ● Biota
Sediment	● Recreational ● Biota

U.S. EPA provides screening level calculators for some exposure scenarios not covered in the RSL tables. These include calculators for recreational surface water exposure, fish consumption, and recreational soil direct contact exposure (Section A.6.1).

A.6.1 Recreational Exposure

Recreational exposure can occur in a wide variety of settings: sports fields, playgrounds, public parks, rail trails, etc. The vast array of potential recreational land uses makes it infeasible for IDEM to publish a single screening level applicable to every recreational scenario. Fortunately, U.S. EPA has developed a recreational screening level calculator[80] that will generate screening levels based on site-specific parameters provided by users. IDEM offers suggested parameter input values for the U.S. EPA calculator for three common recreational exposure scenarios: trails (Section A.6.1.2), sports fields (Section A.6.1.3), and community parks (Section A.6.1.4). Table A-7 also contains a small set of recreational soil direct contact screening levels for the three scenarios listed above. Alternatively, IDEM will evaluate proposals to use parameter values that are appropriate for the exposure scenario at a particular site.

A.6.1.1 Recreational Exposure: General Considerations

IDEM recommends adopting certain parameter values when using the U.S. EPA recreational screening level calculator, regardless of the recreational exposure scenario. For example, IDEM employs a target cancer risk of 10^{-5} when deriving screening levels, rather than the U.S. EPA default screening target cancer risk of 10^{-6}, and recommends that users elect to calculate recreational screening levels using a target cancer risk of 10^{-5}. The calculator also provides an opportunity for users to select particulate emission factor and volatilization factor values suited to specific climatic zones. IDEM recommends selecting factors from a city with a climate similar to that of the site under evaluation (e.g., Chicago, Illinois, Cleveland, Ohio, Harrisburg, Pennsylvania, or Huntington, West Virginia). The calculator allows adjustment of the site size parameter and the fraction of vegetative cover parameter. Users should select the site size and vegetative cover parameter values that most closely resemble the site under evaluation.

[80] Currently at http://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search

A.6.1.2 Recreational Exposure: Trail Scenario

The trail scenario applies to recreational soil direct contact at a capped trail, such as a paved multi-use path for walking, cycling, jogging, skating, and other activities.

Table A-3: Recommended Exposure Factor Inputs for Trail Scenarios

Age Segment (yr)	Adherence Factor[a] (AF) (mg/cm^2)	Body Weight[b] (BW) (kg)	Exposure Duration (ED) (yr)	Exposure Frequency[c] (EF) (day/yr)	Exposure Time[d] (ET) (hr/event)	Intake Rate[c] (IRS) (mg/day)	Skin Surface Area[e] (SA) (cm^2/day)
0 thru 2	0.04	9	2	75	1	6	2600
2 thru 6	0.04	16	4	75	1	6	2900
6-16	0.04	44	10	104	1	6	5000
16 thru 30	0.01	76	14	75	1	3	5700

Sources of parameter values:

[a]U.S. EPA. 2004b (Exhibit 3-3)
[b]U.S. EPA. 2011e (Table 8-1)
[c]IDEM. 2011. Best professional judgment.
[d]Wolter *et al*. 2001.
[e]U.S. EPA. 2004b (Exhibit C-1)

A.6.1.3 Recreational Exposure: Sports Field Scenario

The sports field scenario applies to recreational soil direct contact in areas used for organized sports (e.g., soccer, baseball, softball, lacrosse, kickball, etc.) Note that this scenario assumes an exposure frequency of thirty days. At some high-use sports fields it may be necessary to evaluate whether this assumption is reasonable. If a higher frequency is appropriate, then adjust the exposure frequency values in Table A-4 accordingly.

Table A-4: Recommended Exposure Factor Inputs for Sports Field Scenario

Age Segment (yr)	Adherence Factor[a,c] (AF) (mg/cm^2)	Body Weight[b] (BW) (kg)	Exposure Duration (ED) (yr)	Exposure Frequency[c] (EF) (day/yr)	Exposure Time[c] (ET) (hr/event)	Intake Rate[d] (IRS) (mg/day)	Skin Surface Area[e] (SA) (cm^2/day)
0 thru 2	0.12	9	2	30	2	100	2600
2 thru 6	0.12	16	4	30	2	100	2900
6-16	0.12	44	10	30	3	100	5000
16 thru 30	0.07	76	14	30	2	50	5700

Sources of parameter values:

[a]U.S. EPA. 2004b (Exhibit 3-3)
[b]U.S. EPA. 2011e (Table 8-1)
[c]IDEM. 2011. Best professional judgment.
[d]U.S. EPA. 2011e (Table 5-1)
[e]U.S. EPA. 2004b (Exhibit C-1)

A.6.1.4 Recreational Exposure: Community Park Scenario

The community park scenario applies to recreational soil direct contact at properties designed to provide a wide variety of recreational opportunities. Such properties often have multiple facilities, including trails and sports fields in addition to children's play areas, picnic shelters, basketball courts, tennis courts, baseball/softball fields, jogging trails, nature trails, dog walking areas, football fields, amphitheatres and/or other facilities. Note that residential screening levels may be better suited to playground areas that present an opportunity for high daily soil direct contact rates for pre-school children.

Table A-5: Recommended Exposure Factor Inputs for Community Park Scenario

Age Segment (yr)	Adherence Factor[a] (AF) (mg/cm^2)	Body Weight[b] (BW) (kg)	Exposure Duration (ED) (yr)	Exposure Frequency[c] (EF) (day/yr)	Exposure Time[c] (ET) (hr/event)	Intake Rate[d] (IRS) (mg/day)	Skin Surface Area[e] (SA) (cm^2/day)
0 thru 2	0.2	9	2	75	2	100	2600
2 thru 6	0.2	16	4	75	2	100	2900
6-16	0.2[c]	44	10	104	2	100	5000
16 thru 30	0.07	76	14	75	2	50	5700

Sources of parameter values:

[a]U.S. EPA. 2004b (Exhibit 3-3)
[b]U.S. EPA. 2011e (Table 8-1)
[c]IDEM. 2011. Best professional judgment.
[d]U.S. EPA. 2011e (Table 5-1)
[e]U.S. EPA. 2004b (Exhibit C-1)

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Acenaphthene	83-32-9	4800	N	33000	N	55000	N	82	N	400	N						
Acephate	30560-19-1	340	N	2000	C	4200	N	0.28	N	63	N						
Acetaldehyde	75-07-0	120	N	370	N	620	N	0.077	N	19	N			9.4	N	39	N
Acetochlor	34256-82-1	1700	N	12000	N	20000	N	4.3	N	270	N						
Acetone	67-64-1	85000	N	100000	L	100000	L	49	N	12000	N			32000	N	140000	N
Acetone Cyanohydrin	75-86-5	74	N	220	N	370	N	0.017	N	4.2	N			2.1	N	8.8	N
Acetonitrile	75-05-8	1200	N	3700	N	6200	N	0.54	N	130	N			63	N	260	N
Acetophenone	98-86-2	2500	S	2500	S	2500	S	9.1	N	1500	N						
Acetylaminofluorene, 2-	53-96-3	1.8	C	4.5	C	260	C	0.012	C	0.13	C			0.019	C	0.094	C
Acrolein	107-02-8	0.21	N	0.65	N	1.1	N	0.00017	N	0.041	N			0.021	N	0.088	N
Acrylamide	79-06-1	3.2	C	34	C	2000	C	0.0018	C	0.43	C			0.096	C	1.2	C
Acrylic Acid	79-10-7	42000	N	100000	L	100000	L	31	N	7700	N			1	N	4.4	N
Acrylonitrile	107-13-1	3.4	C	12	C	120	N	0.002	C	0.45	C			0.36	C	1.8	C
Adiponitrile	111-69-3	100000	L	100000	L	100000	L							6.3	N	26	N
Alachlor	15972-60-8	120	C	310	C	10000	N	0.033	M	2	M						
ALAR	1596-84-5	380	C	960	C	56000	C	0.16	C	37	C			4.8	C	24	C
Aldicarb	116-06-3	85	N	620	N	1000	N	0.015	M	3	M						
Aldicarb Sulfone	1646-88-4	85	N	620	N	1000	N	0.0088	M	2	M						
Aldicarb sulfoxide	1646-87-3							0.018	M	4	M						
Aldrin	309-00-2	0.41	C	1	C	31	N	0.13	C	0.04	C			0.005	C	0.025	C
Ally	74223-64-6	21000	N	100000	L	100000	L	29	N	3800	N						
Allyl Alcohol	107-18-6	420	N	3100	N	5100	N	0.32	N	78	N			0.1	N	0.44	N
Allyl Chloride	107-05-1	2.5	N	7.5	N	13	N	0.013	N	2.1	N			1	N	4.4	N
Aluminum	7429-90-5	100000	L	100000	L	100000	L	480000	N	16000	N			5.2	N	22	N
Aluminum metaphosphate	13776-88-0	100000	L	100000	L	100000	L			760000	N						
Aluminum Phosphide	20859-73-8	43	N	410	N	690	N			6.2	N						
Amdro	67485-29-4	25	N	180	N	310	N	33000	N	4.6	N						
Ametryn	834-12-8	770	N	5500	N	9300	N	2.5	N	120	N						
Aminobiphenyl, 4-	92-67-1	0.32	C	0.82	C	49	C	0.0027	C	0.026	C			0.0041	C	0.02	C
Aminophenol, m-	591-27-5	6900	N	49000	N	82000	N	9.1	N	1200	N						
Aminophenol, p-	123-30-8	1700	N	12000	N	20000	N	2.4	N	310	N						

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Amitraz	33089-61-1	210	N	1500	N	2600	N	61	N	5.9	N						
Ammonia	7664-41-7													100	N	440	N
Ammonium Perchlorate	7790-98-9	77	N	720	N	1200	N			11	N						
Ammonium polyphosphate	68333-79-9	100000	L	100000	L	100000	L			760000	N						
Ammonium Sulfamate	7773-06-0	22000	N	100000	L	100000	L			3100	N						
Aniline	62-53-3	600	N	3000	C	7300	N	0.75	N	110	N			1	N	4.4	N
Anthracene	120-12-7	24000	N	100000	L	100000	L	860	N	1300	N						
Anthraquinone, 9,10-	84-65-1	170	C	430	C	2000	N	2.5	C	12	C						
Antimony (metallic)	7440-36-0	43	N	410	N	690	N	5.4	N	6	N						
Antimony Pentoxide	1314-60-9	55	N	510	N	860	N			7.5	N						
Antimony Potassium Tartrate	11071-15-1	98	N	920	N	1500	N			13	N						
Antimony Tetroxide	1332-81-6	43	N	410	N	690	N			6	N						
Antimony Trioxide	1309-64-4	100000	L	100000	L	100000	L							0.21	N	0.88	N
Apollo	74115-24-5	1100	N	8000	N	13000	N	220	N	180	N						
Aramite	140-57-8	270	C	690	C	39000	C	2.5	C	11	C			3.4	C	17	C
Arsenic, Inorganic	7440-38-2	5.5	C	16	C	430	N	5.9	M	10	M			0.0057	C	0.029	C
Arsine	7784-42-1	0.38	N	3.6	N	6.1	N			0.054	N			0.052	N	0.22	N
Assure	76578-14-8	770	N	5500	N	9300	N	29	N	93	N						
Asulam	3337-71-1	4300	N	31000	N	52000	N	4	N	780	N						
Atrazine	1912-24-9	29	C	75	C	4200	C	0.039	M	3	M						
Auramine	492-80-8	7.7	C	20	C	1200	C	0.1	C	0.57	C			0.097	C	0.49	C
Avermectin B1	65195-55-3	34	N	250	N	420	N	220	N	6.3	N						
Azobenzene	103-33-3	71	C	230	C	11000	C	0.15	C	1	C			0.78	C	4	C
Barium	7440-39-3	21000	N	100000	L	100000	L	1700	M	2000	M			0.52	N	2.2	N
Baygon	114-26-1	340	N	2500	N	4200	N	0.39	N	61	N						
Bayleton	43121-43-3	2500	N	18000	N	31000	N	6.9	N	430	N						
Baythroid	68359-37-5	2100	N	15000	N	26000	N	450	N	87	N						
Benefin	1861-40-1	25000	N	100000	L	100000	L	790	N	1200	N						
Benomyl	17804-35-2	4300	N	31000	N	52000	N	13	N	750	N						
Bentazon	25057-89-0	2500	N	18000	N	31000	N	1.9	N	440	N						
Benz[a]anthracene	56-55-3	2.1	C	21	C	1300	C	2.1	C	0.29	C			0.087	C	1.1	C

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water				Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)		Com/Ind (ug/L)		Residential (ug/m3)		Com/Ind (ug/m3)	
Benzaldehyde	100-52-7	1200	S	1200	S	1200	S	6.7	N	1500	N								
Benzene	71-43-2	15	C	54	C	750	N	0.051	M	5	M	24	C	120	C	3.1	C	16	C
Benzenediamine-2-methyl sulfate, 1,4-	6369-59-1	17	N	120	N	200	N	0.017	N	3.1	N								
Benzenethiol	108-98-5	110	N	1000	N	1300	S	0.17	N	13	N								
Benzidine	92-87-5	0.007	C	0.075	C	4.2	C	0.000047	C	0.00092	C					0.00014	C	0.0018	C
Benzo(j)fluoranthene	205-82-3	5.3	C	13	C	800	C	13	C	0.56	C					0.22	C	1.1	C
Benzo[a]pyrene	50-32-8	0.21	C	2.1	C	130	C	4.7	M	0.2	M					0.0087	C	0.11	C
Benzo[b]fluoranthene	205-99-2	2.1	C	21	C	1300	C	7	C	0.29	C					0.087	C	1.1	C
Benzo[k]fluoranthene	207-08-9	21	C	210	C	13000	C	68	C	2.9	C					0.087	C	1.1	C
Benzoic Acid	65-85-0	100000	L	100000	L	100000	L	270	N	58000	N								
Benzotrichloride	98-07-7	0.69	C	2.2	C	93	C	0.0011	C	0.026	C								
Benzyl Alcohol	100-51-6	8500	N	62000	N	100000	L	7.3	N	1500	N								
Benzyl Chloride	100-44-7	14	C	49	C	190	N	0.017	C	0.77	C					0.5	C	2.5	C
Beryllium and compounds	7440-41-7	220	N	2000	N	3300	N	63	M	4	M					0.01	C	0.051	C
Bidrin	141-66-2	8.5	N	62	N	100	N	0.0075	N	1.6	N								
Bifenox	42576-02-3	770	N	5500	N	9300	N	11	N	75	N								
Biphenthrin	82657-04-3	1300	N	9200	N	15000	N	21000	N	230	N								
Biphenyl, 1,1'-	92-52-4	71	N	210	N	350	N	0.17	N	0.83	N					0.42	N	1.8	N
Bis(2-chloro-1-methylethyl) ether	108-60-1	64	C	220	C	1000	S	0.023	C	3.1	C					2.4	C	12	C
Bis(2-chloroethoxy)methane	111-91-1	250	N	1800	N	3100	N	0.21	N	46	N								
Bis(2-chloroethyl)ether	111-44-4	2.9	C	10	C	750	C	0.00063	C	0.12	C					0.074	C	0.37	C
Bis(2-ethylhexyl)phthalate	117-81-7	490	C	1200	C	20000	N	29	M	6	M					10	C	51	C
Bis(chloromethyl)ether	542-88-1	0.0011	C	0.0039	C	0.5	C	0.0000029	C	0.00062	C					0.00039	C	0.002	C
Bisphenol A	80-05-7	4300	N	31000	N	52000	N	880	N	580	N								
Boron And Borates Only	7440-42-8	22000	N	100000	L	100000	L	200	N	3100	N					21	N	88	N
Boron Trichloride	10294-34-5	100000	L	100000	L	100000	L			31000	N					21	N	88	N
Boron Trifluoride	7637-07-2	4300	N	41000	N	69000	N			620	N					14	N	57	N
Bromate	15541-45-4	13	C	41	C	1700	C	1.6	M	10	M								
Bromo-2-chloroethane, 1-	107-04-0	0.34	C	1.2	C	140	C	0.00036	C	0.064	C					0.041	C	0.2	C
Bromobenzene	108-86-1	420	N	680	S	680	S	0.73	N	54	N					63	N	260	N
Bromochloromethane	74-97-5	220	N	680	N	1100	N	0.41	N	83	N					42	N	180	N

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water				Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)		Com/Ind (ug/L)		Residential (ug/m3)		Com/Ind (ug/m3)	
Bromodichloromethane	75-27-4	3.8	C	14	C	930	S	0.43	M	80	M					0.66	C	3.3	C
Bromoform	75-25-2	870	C	2200	C	20000	N	0.42	M	80	M					22	C	110	C
Bromomethane	74-83-9	10	N	32	N	54	N	0.035	N	7	N					5.2	N	22	N
Bromophos	2104-96-3	430	N	3100	N	5200	N	2.2	N	26	N								
Bromoxynil	1689-84-5	1700	N	12000	N	20000	N	4.3	N	250	N								
Bromoxynil Octanoate	1689-99-2	1700	N	12000	N	20000	N	17	N	100	N								
Butadiene, 1,3-	106-99-0	0.76	C	2.6	C	14	N	0.0017	C	0.16	C					0.81	C	4.1	C
Butanol, N-	71-36-3	8500	N	62000	N	100000	L	6.2	N	1500	N								
Butyl alcohol, sec-	78-92-2	100000	L	100000	L	100000	L	130	N	31000	N					31000	N	130000	N
Butyl Benzyl Phthlate	85-68-7	3600	C	9100	C	100000	L	41	C	140	C								
Butylate	2008-41-5	4300	N	31000	N	52000	N	6.6	N	340	N								
Butylated hydroxyanisole	25013-16-5	34000	C	86000	C	100000	L	79	C	2100	C					430	C	2200	C
Butylbenzene, n-	104-51-8	110	S	110	S	110	S	50	N	780	N								
Butylphthalyl Butylglycolate	85-70-1	85000	N	100000	L	100000	L	4500	N	10000	N								
Cacodylic Acid	75-60-5	1700	N	12000	N	20000	N			310	N								
Cadmium (Diet)	7440-43-9	98	N	800	N	1300	N												
Cadmium (Water)	7440-43-9							7.5	M	5	M					0.014	C	0.068	C
Calcium Cyanide	592-01-8	110	N	1000	N	1700	N			16	N								
Calcium pyrophosphate	7790-76-3	100000	L	100000	L	100000	L			760000	N								
Caprolactam	105-60-2	43000	N	100000	L	100000	L	38	N	7700	N								
Captafol	2425-06-1	45	C	110	C	2000	N	0.12	C	3.5	C					0.57	C	2.9	C
Captan	133-06-2	2900	C	7500	C	100000	L	3.8	C	270	C					37	C	190	C
Carbaryl	63-25-2	8500	N	62000	N	100000	L	25	N	1400	N								
Carbofuran	1563-66-2	430	N	3100	N	5200	N	0.31	M	40	M								
Carbon Disulfide	75-15-0	740	S	740	S	740	S	4.2	N	720	N					730	N	3100	N
Carbon Tetrachloride	56-23-5	8.5	C	30	C	460	S	0.039	M	5	M	5.7	C	28	C	4.1	C	20	C
Carbosulfan	55285-14-8	850	N	6200	N	10000	N	18	N	37	N								
Carboxin	5234-68-4	8500	N	62000	N	100000	L	16	N	1500	N								
Ceric oxide	1306-38-3	100000	L	100000	L	100000	L									0.94	N	3.9	N
Chloral Hydrate	302-17-0	8500	N	62000	N	100000	L	6.1	N	1500	N								
Chloramben	133-90-4	1300	N	9200	N	15000	N	1.1	N	220	N								

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Chloranil	118-75-2	17	C	43	C	2500	C	0.026	C	1.6	C						
Chlordane	12789-03-6	22	C	65	C	680	N	2.7	M	2	M			0.24	C	1.2	C
Chlordecone (Kepone)	143-50-0	0.69	C	1.7	C	100	C	0.021	C	0.03	C			0.0053	C	0.027	C
Chlorfenvinphos	470-90-6	60	N	430	N	730	N	0.47	N	8.6	N						
Chlorimuron, Ethyl-	90982-32-4	1700	N	12000	N	20000	N	2.1	N	300	N						
Chlorine	7782-50-5	11000	N	91000	N	100000	L	16	N	1600	N			0.15	N	0.64	N
Chlorine Dioxide	10049-04-4	3200	N	30000	N	51000	N			470	N			0.21	N	0.88	N
Chlorite (Sodium Salt)	7758-19-2	3200	N	31000	N	52000	N			1000	M						
Chloro-1,1-difluoroethane, 1-	75-68-3	1200	S	1200	S	1200	S	990	N	100000	N			52000	N	220000	N
Chloro-1,3-butadiene, 2-	126-99-8	0.13	C	0.47	C	65	C	0.0017	C	0.16	C			0.081	C	0.41	C
Chloro-2-methylaniline HCl, 4-	3165-93-3	15	C	37	C	2200	C	0.027	C	1.5	C						
Chloro-2-methylaniline, 4-	95-69-2	69	C	170	C	3100	N	0.068	C	6	C			0.32	C	1.6	C
Chloroacetaldehyde, 2-	107-20-0	25	C	64	C	3800	C	0.01	C	2.5	C						
Chloroacetic Acid	79-11-8	170	N	1200	N	2000	N	0.24	M	60	M						
Chloroacetophenone, 2-	532-27-4	60000	N	100000	L	100000	L							0.031	N	0.13	N
Chloroaniline, p-	106-47-8	34	C	86	C	4200	N	0.027	C	3.2	C						
Chlorobenzene	108-90-7	410	N	760	S	760	S	1.4	M	100	M			52	N	220	N
Chlorobenzilate	510-15-6	62	C	160	C	9100	C	0.18	C	2.7	C			0.78	C	4	C
Chlorobenzoic Acid, p-	74-11-3	2500	N	18000	N	31000	N	2	N	390	N						
Chlorobenzotrifluoride, 4-	98-56-6	120	S	120	S	120	S	1.8	N	26	N			310	N	1300	N
Chlorobutane, 1-	109-69-3	730	S	730	S	730	S	3.9	N	480	N						
Chlorodifluoromethane	75-45-6	1700	S	1700	S	1700	S	810	N	100000	N			52000	N	220000	N
Chloroethanol, 2-	107-07-3	1700	N	12000	N	20000	N	1.3	N	310	N						
Chloroform	67-66-3	4.1	C	15	C	1800	N	0.44	M	80	M			1.1	C	5.3	C
Chloromethane	74-87-3	170	N	500	N	840	N	0.98	N	190	N			94	N	390	N
Chloromethyl Methyl Ether	107-30-2	0.27	C	0.94	C	110	C	0.00024	C	0.056	C			0.035	C	0.18	C
Chloronaphthalene, Beta-	91-58-7	8800	N	82000	N	100000	L	57	N	550	N						
Chloronitrobenzene, o-	88-73-3	22	C	57	C	3000	N	0.038	C	2	C			0.01	N	0.044	N
Chloronitrobenzene, p-	100-00-5	85	N	620	N	1000	N	0.26	N	14	N			0.63	N	2.6	N
Chlorophenol, 2-	95-57-8	550	N	5100	N	8600	N	1.2	N	71	N						
Chloropicrin	76-06-2	2.9	N	8.8	N	15	N	0.0049	N	0.83	N			0.42	N	1.8	N

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Chlorothalonil	1897-45-6	1300	N	5600	C	15000	N	8.7	C	190	C			27	C	140	C
Chlorotoluene, o-	95-49-8	910	S	910	S	910	S	3.5	N	180	N						
Chlorotoluene, p-	106-43-4	250	S	250	S	250	S	3.7	N	190	N						
Chlorozotocin	54749-90-5	0.028	C	0.072	C	4.2	C	0.000012	C	0.0028	C			0.00035	C	0.0018	C
Chlorpropham	101-21-3	17000	N	100000	L	100000	L	40	N	2200	N						
Chlorpyrifos	2921-88-2	85	N	620	N	1000	N	1.8	N	6.2	N						
Chlorpyrifos Methyl	5598-13-0	850	N	6200	N	10000	N	8.2	N	89	N						
Chlorsulfuron	64902-72-3	4300	N	31000	N	52000	N	13	N	770	N						
Chlorthiophos	60238-56-4	69	N	490	N	820	N	1	N	2	N						
Chromium(III), Insoluble Salts	16065-83-1	100000	L	100000	L	100000	L	1000000	R	16000	N						
Chromium(VI)	18540-29-9	4.1	C	56	C	2400	C	0.12	C	0.31	C			0.00011	C	0.0015	C
Chromium, Total	7440-47-3							1000000	R	100	M						
Chrysene	218-01-9	210	C	2100	C	100000	L	210	C	29	C			0.87	C	11	C
Cobalt	7440-48-4	32	N	300	N	520	N	4.3	N	4.7	N			0.0027	C	0.014	C
Coke Oven Emissions	8007-45-2													0.015	C	0.2	C
Copper	7440-50-8	4300	N	41000	N	69000	N	920	M	1300	M						
Copper Cyanide	544-92-3	550	N	5100	N	8600	N			78	N						
Cresol, m-	108-39-4	4300	N	31000	N	52000	N	12	N	720	N			630	N	2600	N
Cresol, o-	95-48-7	4300	N	31000	N	52000	N	12	N	720	N			630	N	2600	N
Cresol, p-	106-44-5	8500	N	62000	N	100000	L	22	N	1400	N			630	N	2600	N
Cresol, p-chloro-m-	59-50-7	8500	N	62000	N	100000	L	26	N	1100	N						
Cresols	1319-77-3	8500	N	62000	N	100000	L	23	N	1400	N			630	N	2600	N
Crotonaldehyde, trans-	123-73-9	4.8	C	15	C	630	C	0.0014	C	0.35	C						
Cumene	98-82-8	270	S	270	S	270	S	13	N	390	N			420	N	1800	N
Cupferron	135-20-6	31	C	78	C	4600	C	0.11	C	3.1	C			0.39	C	1.9	C
Cyanazine	21725-46-2	8.1	C	21	C	1200	C	0.0071	C	0.76	C						
Cyanide (CN-)	57-12-5	31	N	140	N	230	N	40	M	200	M			0.83	N	3.5	N
Cyanogen	460-19-5	110	N	1000	N	1700	N			16	N						
Cyanogen Bromide	506-68-3	9800	N	92000	N	100000	L			1400	N						
Cyanogen Chloride	506-77-4	5500	N	51000	N	86000	N			780	N						
Cyclohexane	110-82-7	120	S	120	S	120	S	270	N	13000	N			6300	N	26000	N

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Cyclohexane, 1,2,3,4,5-pentabromo-6-chloro-	87-84-3	290	C	750	C	42000	C	2.4	C	21	C						
Cyclohexanone	108-94-1	100000	L	100000	L	100000	L	360	N	77000	N			730	N	3100	N
Cyclohexene	110-83-8	280	S	280	S	280	S	0.69	N	53	N			1000	N	4400	N
Cyclohexylamine	108-91-8	17000	N	100000	L	100000	L	16	N	3000	N						
Cyhalothrin/karate	68085-85-8	430	N	3100	N	5200	N	1100	N	78	N						
Cypermethrin	52315-07-8	850	N	6200	N	10000	N	510	N	160	N						
Cyromazine	66215-27-8	640	N	4600	N	7900	N	0.62	N	120	N						
Dacthal	1861-32-1	850	N	6200	N	10000	N	2.3	N	93	N						
Dalapon	75-99-0	2500	N	18000	N	31000	N	0.83	M	200	M						
DDD	72-54-8	28	C	72	C	4200	C	1.3	C	0.27	C			0.35	C	1.8	C
DDE, p,p'-	72-55-9	20	C	51	C	3000	C	9.4	C	2	C			0.25	C	1.3	C
DDT	50-29-3	24	C	70	C	720	N	13	C	2	C			0.25	C	1.3	C
Decabromodiphenyl ether, 2,2',3,3',4,4',5,5',6,6'- (BDE-209)	1163-19-5	600	N	4300	N	7300	N	1200	N	110	N						
Demeton	8065-48-3	3.4	N	25	N	42	N			0.52	N						
Di(2-ethylhexyl)adipate	103-23-1	5700	C	14000	C	100000	L			400	M						
Diallate	2303-16-4	110	C	280	C	16000	C	0.14	C	4.6	C						
Diammonium phosphate	7783-28-0	100000	L	100000	L	100000	L			760000	N						
Diazinon	333-41-5	60	N	430	N	730	N	0.99	N	7.9	N						
Dibenz[a,h]anthracene	53-70-3	0.21	C	2.1	C	130	C	2.2	C	0.029	C			0.008	C	0.1	C
Dibenzo(a,e)pyrene	192-65-4	0.53	C	1.3	C	80	C	15	C	0.056	C			0.022	C	0.11	C
Dibenzofuran	132-64-9	110	N	1000	N	1700	N	2.1	N	5.8	N						
Dibromo-3-chloropropane, 1,2-	96-12-8	0.076	C	0.69	C	44	N	0.0017	M	0.2	M			0.0016	C	0.02	C
Dibromobenzene, 1,4-	106-37-6	850	N	6200	N	10000	N	1.9	N	98	N						
Dibromochloromethane	124-48-1	9.5	C	33	C	800	S	0.43	M	80	M			0.9	C	4.5	C
Dibromoethane, 1,2-	106-93-4	0.48	C	1.7	C	180	C	0.00028	M	0.05	M			0.041	C	0.2	C
Dibromomethane (Methylene Bromide)	74-95-3	35	N	110	N	180	N	0.039	N	7.9	N			4.2	N	18	N
Dibutyl Phthalate	84-74-2	8500	N	62000	N	100000	L	34	N	670	N						
Dibutyltin Compounds	NA	25	N	180	N	310	N			4.7	N						
Dicalcium phosphate	7757-93-9	100000	L	100000	L	100000	L			760000	N						
Dicamba	1918-00-9	2500	N	18000	N	31000	N	2.3	N	440	N						
Dichloro-2-butene, 1,4-	764-41-0	0.097	C	0.35	C	49	C	0.00011	C	0.012	C			0.0058	C	0.029	C

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure							
		Direct Contact						Soil MTG		Tap		Ground Water				Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)		Com/Ind (ug/L)		Residential (ug/m3)		Com/Ind (ug/m3)	
Dichloro-2-butene, cis-1,4-	1476-11-5	0.097	C	0.35	C	49	C	0.00011	C	0.012	C					0.0058	C	0.029	C
Dichloro-2-butene, trans-1,4-	110-57-6	0.097	C	0.35	C	49	C	0.00011	C	0.012	C					0.0058	C	0.029	C
Dichloroacetic Acid	79-43-6	140	C	340	C	4200	N	0.25	M	60	M								
Dichlorobenzene, 1,2-	95-50-1	380	S	380	S	380	S	12	M	600	M					210	N	880	N
Dichlorobenzene, 1,4-	106-46-7	34	C	120	C	17000	C	1.4	M	75	M					2.2	C	11	C
Dichlorobenzidine, 3,3'-	91-94-1	15	C	38	C	2200	C	0.14	C	1.1	C					0.072	C	0.36	C
Dichlorobenzophenone, 4,4'-	90-98-2	770	N	5500	N	9300	N	6.9	N	57	N								
Dichlorodifluoromethane	75-71-8	130	N	400	N	670	N	5.7	N	190	N					100	N	440	N
Dichloroethane, 1,1-	75-34-3	46	C	170	C	1700	S	0.14	C	24	C	110	C	550	C	15	C	77	C
Dichloroethane, 1,2-	107-06-2	6	C	22	C	250	N	0.028	M	5	M	43	C	210	C	0.94	C	4.7	C
Dichloroethylene, 1,1-	75-35-4	340	N	1100	N	1200	S	0.05	M	7	M	300	N	1300	N	210	N	880	N
Dichloroethylene, 1,2- (Mixed Isomers)	540-59-0	980	N	1300	S	1300	S	0.76	N	130	N								
Dichloroethylene, 1,2-cis-	156-59-2	220	N	2000	N	2400	S	0.41	M	70	M								
Dichloroethylene, 1,2-trans-	156-60-5	210	N	690	N	1200	N	0.59	M	100	M					63	N	260	N
Dichlorophenol, 2,4-	120-83-2	250	N	1800	N	3100	N	0.83	N	35	N								
Dichlorophenoxy Acetic Acid, 2,4-	94-75-7	970	N	7700	N	13000	N	0.36	M	70	M								
Dichlorophenoxy)butyric Acid, 4-(2,4-	94-82-6	690	N	4900	N	8200	N	0.72	N	91	N								
Dichloropropane, 1,2-	78-87-5	13	C	47	C	120	N	0.033	M	5	M					2.4	C	12	C
Dichloropropane, 1,3-	142-28-9	1500	S	1500	S	1500	S	2	N	290	N								
Dichloropropanol, 2,3-	616-23-9	250	N	1800	N	3100	N	0.19	N	46	N								
Dichloropropene, 1,3-	542-75-6	24	C	83	C	570	N	0.029	C	4.1	C					6.1	C	31	C
Dichlorvos	62-73-7	24	C	59	C	520	N	0.014	C	2.3	C					0.29	C	1.5	C
Dicyclopentadiene	77-73-6	43	N	130	N	230	N	0.83	N	12	N					7.3	N	31	N
Dieldrin	60-57-1	0.42	C	1.1	C	52	N	0.012	C	0.015	C					0.0053	C	0.027	C
Diesel Engine Exhaust	NA															0.081	C	0.41	C
Diethanolamine	111-42-2	170	N	1200	N	2000	N	0.13	N	31	N					0.21	N	0.88	N
Diethyl Phthalate	84-66-2	69000	N	100000	L	100000	L	90	N	11000	N								
Diethylene Glycol Monobutyl Ether	112-34-5	2500	N	18000	N	30000	N	2.1	N	470	N					0.1	N	0.44	N
Diethylene Glycol Monoethyl Ether	111-90-0	5000	N	36000	N	61000	N	3.8	N	940	N					0.31	N	1.3	N
Diethylformamide	617-84-5	85	N	620	N	1000	N	0.065	N	16	N								
Diethylstilbestrol	56-53-1	0.02	C	0.049	C	2.9	C	0.0047	C	0.00043	C					0.00024	C	0.0012	C

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Difenzoquat	43222-48-6	6900	N	49000	N	82000	N			1200	N						
Diflubenzuron	35367-38-5	1700	N	12000	N	20000	N	5	N	220	N						
Difluoroethane, 1,1-	75-37-6	1400	S	1400	S	1400	S	560	N	83000	N			42000	N	180000	N
Dihydrosafrole	94-58-6	3.4	C	12	C	1700	C	0.062	C	2.6	C			1.9	C	9.4	C
Diisopropyl Ether	108-20-3	2300	S	2300	S	2300	S	7.6	N	1500	N			730	N	3100	N
Diisopropyl Methylphosphonate	1445-75-6	530	S	530	S	530	S	6.8	N	1200	N						
Dimagnesium phosphate	7782-75-4	100000	L	100000	L	100000	L			760000	N						
Dimethipin	55290-64-7	1700	N	12000	N	20000	N	1.4	N	310	N						
Dimethoate	60-51-5	17	N	120	N	200	N	0.014	N	3.1	N						
Dimethoxybenzidine, 3,3'-	119-90-4	490	C	1200	C	70000	C	1.1	C	47	C						
Dimethyl methylphosphonate	756-79-6	4100	C	10000	C	62000	N	1.6	C	390	C						
Dimethylamino azobenzene [p-]	60-11-7	1.5	C	3.7	C	220	C	0.0037	C	0.043	C			0.019	C	0.094	C
Dimethylaniline HCl, 2,4-	21436-96-4	12	C	30	C	1700	C	0.022	C	1.2	C						
Dimethylaniline, 2,4-	95-68-1	34	C	86	C	2000	N	0.036	C	3.2	C						
Dimethylaniline, N,N-	121-69-7	220	N	830	S	830	S	0.19	N	27	N						
Dimethylbenz(a)anthracene, 7,12-	57-97-6	0.006	C	0.062	C	3.7	C	0.017	C	0.00086	C			0.00014	C	0.0017	C
Dimethylbenzidine, 3,3'-	119-93-7	0.62	C	1.6	C	91	C	0.0074	C	0.056	C						
Dimethylformamide	68-12-2	8500	N	62000	N	100000	L	6.5	N	1600	N			31	N	130	N
Dimethylhydrazine, 1,1-	57-14-7	8.5	N	61	N	100	N	0.0072	N	1.6	N			0.0021	N	0.0088	N
Dimethylhydrazine, 1,2-	540-73-8	0.012	C	0.031	C	1.8	C	0.0000055	C	0.0012	C			0.00015	C	0.00077	C
Dimethylphenol, 2,4-	105-67-9	1700	N	12000	N	20000	N	6.4	N	270	N						
Dimethylphenol, 2,6-	576-26-1	52	N	370	N	620	N	0.2	N	8.1	N						
Dimethylphenol, 3,4-	95-65-8	85	N	620	N	1000	N	0.33	N	14	N						
Dimethylterephthalate	120-61-6	11000	N	100000	N	100000	L	7.3	N	1400	N						
Dimethylvinylchloride	513-37-1	2.8	C	10	C	1100	S	0.034	C	2.8	C			1.9	C	9.4	C
Dinitrobenzene, 1,2-	528-29-0	8.5	N	62	N	100	N	0.028	N	1.5	N						
Dinitrobenzene, 1,3-	99-65-0	8.5	N	62	N	100	N	0.027	N	1.5	N						
Dinitrobenzene, 1,4-	100-25-4	8.5	N	62	N	100	N	0.027	N	1.5	N						
Dinitro-o-cresol, 4,6-	534-52-1	6.9	N	49	N	82	N	0.041	N	1.2	N						
Dinitro-o-cyclohexyl Phenol, 4,6-	131-89-5	170	N	1200	N	2000	N	11	N	17	N						
Dinitrophenol, 2,4-	51-28-5	170	N	1200	N	2000	N	0.67	N	30	N						

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Dinitrotoluene Mixture, 2,4/2,6-	25321-14-6	10	C	25	C	1500	C	0.025	C	0.92	C						
Dinitrotoluene, 2,4-	121-14-2	22	C	55	C	2000	N	0.054	C	2	C			0.27	C	1.4	C
Dinitrotoluene, 2,6-	606-20-2	85	N	620	N	1000	N	0.41	N	15	N						
Dinitrotoluene, 2-Amino-4,6-	35572-78-2	210	N	2000	N	3200	N	0.46	N	30	N						
Dinitrotoluene, 4-Amino-2,6-	19406-51-0	210	N	1900	N	3200	N	0.46	N	30	N						
Dinoseb	88-85-7	85	N	620	N	1000	N	1.2	M	7	M						
Dioxane, 1,4-	123-91-1	69	C	170	C	10000	C	0.028	C	6.7	C			3.2	C	16	C
Dioxin: TCDD, 2,3,7,8-	1746-01-6	0.000063	C	0.00018	C	0.001	N	0.0003	M	0.00003	M			0.00000064	C	0.0000032	C
Diphenamid	957-51-7	2500	N	18000	N	31000	N	80	N	410	N						
Diphenyl Sulfone	127-63-9	69	N	490	N	820	N	0.53	N	11	N						
Diphenylamine	122-39-4	2100	N	15000	N	26000	N	8.9	N	240	N						
Diphenylhydrazine, 1,2-	122-66-7	8.5	C	22	C	1300	C	0.043	C	0.67	C			0.11	C	0.56	C
Dipotassium phosphate	7758-11-4	100000	L	100000	L	100000	L			760000	N						
Diquat	85-00-7	180	N	1400	N	2200	N	7.5	M	20	M						
Direct Black 38	1937-37-7	0.92	C	2.3	C	140	C	880	C	0.091	C			0.012	C	0.058	C
Direct Blue 6	2602-46-2	0.92	C	2.3	C	140	C	2900	C	0.091	C			0.012	C	0.058	C
Direct Brown 95	16071-86-6	1	C	2.6	C	150	C			0.1	C			0.013	C	0.065	C
Disodium phosphate	7558-79-4	100000	L	100000	L	100000	L			760000	N						
Disulfoton	298-04-4	3.4	N	25	N	42	N	0.014	N	0.38	N						
Dithiane, 1,4-	505-29-3	850	N	6200	N	10000	N	1.5	N	150	N						
Diuron	330-54-1	170	N	1200	N	2000	N	0.23	N	28	N						
Dodine	2439-10-3	340	N	2500	N	4200	N	6.4	N	62	N						
Endosulfan	115-29-7	520	N	3700	N	6200	N	21	N	78	N						
Endothall	145-73-3	1700	N	12000	N	20000	N	0.48	M	100	M						
Endrin	72-20-8	25	N	180	N	310	N	1.6	M	2	M						
Epichlorohydrin	106-89-8	28	N	88	N	150	N	0.0088	N	2	N			1	N	4.4	N
Epoxybutane, 1,2-	106-88-7	240	N	720	N	1200	N	0.19	N	42	N			21	N	88	N
EPTC	759-94-4	2800	N	26000	N	44000	N	3.1	N	290	N						
Ethephon	16672-87-0	430	N	3100	N	5200	N	0.33	N	78	N						
Ethion	563-12-2	43	N	310	N	520	N	0.13	N	3.2	N						
Ethoxyethanol Acetate, 2-	111-15-9	8500	N	62000	N	100000	L	6.3	N	1500	N			63	N	260	N

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Ethoxyethanol, 2-	110-80-5	34000	N	100000	L	100000	L	25	N	6200	N			210	N	880	N
Ethyl Acetate	141-78-6	11000	S	11000	S	11000	S	59	N	14000	N						
Ethyl Acrylate	140-88-5	180	C	600	C	2500	S	0.062	C	14	C						
Ethyl Chloride	75-00-3	2100	S	2100	S	2100	S	120	N	21000	N			10000	N	44000	N
Ethyl Ether	60-29-7	10000	S	10000	S	10000	S	14	N	3100	N						
Ethyl Methacrylate	97-63-2	1100	S	1100	S	1100	S	2	N	420	N			310	N	1300	N
Ethylbenzene	100-41-4	76	C	270	C	480	S	16	M	700	M			9.7	C	49	C
Ethylene Cyanohydrin	109-78-4	6000	N	43000	N	73000	N	4.4	N	1100	N						
Ethylene Diamine	107-15-3	7700	N	55000	N	93000	N	6.4	N	1400	N						
Ethylene Glycol	107-21-1	100000	L	100000	L	100000	L	130	N	31000	N			420	N	1800	N
Ethylene Glycol Monobutyl Ether	111-76-2	8500	N	62000	N	100000	L	6.2	N	1500	N			1700	N	7000	N
Ethylene Oxide	75-21-8	2.4	C	8.3	C	950	C	0.0018	C	0.44	C			0.28	C	1.4	C
Ethylene Thiourea	96-45-7	6.9	N	49	N	82	N	0.0054	N	1.2	N			1.9	C	9.4	C
Ethyleneimine	151-56-4	0.032	C	0.1	C	9.3	C	0.0000092	C	0.0021	C			0.0013	C	0.0065	C
Ethylphthalyl Ethyl Glycolate	84-72-0	100000	L	100000	L	100000	L	2000	N	45000	N						
Ethyl-p-nitrophenyl Phosphonate	2104-64-5	0.85	N	6.2	N	10	N	0.041	N	0.066	N						
Express	101200-48-0	690	N	4900	N	8200	N	0.93	N	120	N						
Fenamiphos	22224-92-6	21	N	150	N	260	N	0.068	N	3.4	N						
Fenpropathrin	39515-41-8	2100	N	15000	N	26000	N	42	N	46	N						
Fluometuron	2164-17-2	1100	N	8000	N	13000	N	2.9	N	190	N						
Fluoranthene	206-44-0	3200	N	22000	N	37000	N	1400	N	630	N						
Fluorene	86-73-7	3200	N	22000	N	37000	N	81	N	220	N						
Fluoride	16984-48-8	4300	N	41000	N	69000	N			620	N			14	N	57	N
Fluorine (Soluble Fluoride)	7782-41-4	6600	N	61000	N	100000	L	12000	M	4000	M			14	N	57	N
Fluridone	59756-60-4	6900	N	49000	N	82000	N	2500	N	1100	N						
Flurprimidol	56425-91-3	1700	N	12000	N	20000	N	24	N	260	N						
Flutolanil	66332-96-5	5200	N	37000	N	62000	N	77	N	720	N						
Fluvalinate	69409-94-5	850	N	6200	N	10000	N	4700	N	160	N						
Folpet	133-07-3	2000	C	4900	C	100000	L	0.8	C	170	C						
Fomesafen	72178-02-0	36	C	91	C	5300	C	0.22	C	3.4	C						
Fonofos	944-22-9	170	N	1200	N	2000	N	0.69	N	18	N						

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Formaldehyde	50-00-0	17000	N	100000	L	100000	L	13	N	3100	N			1.9	C	9.4	C
Formic Acid	64-18-6	69000	N	100000	L	100000	L	57	N	14000	N			0.31	N	1.3	N
Fosetyl-AL	39148-24-8	100000	L	100000	L	100000	L			47000	N						
Furan	110-00-9	110	N	1000	N	1700	N	0.11	N	15	N						
Furazolidone	67-45-8	1.8	C	4.5	C	260	C	0.0069	C	0.18	C						
Furfural	98-01-1	250	N	1800	N	3100	N	0.2	N	46	N			52	N	220	N
Furium	531-82-8	4.5	C	11	C	670	C	0.012	C	0.44	C			0.057	C	0.29	C
Furmecyclox	60568-05-0	220	C	570	C	33000	C	0.2	C	9.6	C			2.8	C	14	C
Glufosinate, Ammonium	77182-82-2	34	N	250	N	420	N	0.028	N	6.3	N						
Glutaraldehyde	111-30-8	100000	L	100000	L	100000	L							0.083	N	0.35	N
Glycidyl	765-34-4	34	N	250	N	420	N	0.025	N	6.2	N			1	N	4.4	N
Glyphosate	1071-83-6	8500	N	62000	N	100000	L	2.8	M	700	M						
Goal	42874-03-3	250	N	1800	N	3100	N	38	N	24	N						
Guthion	86-50-0	250	N	1800	N	3100	N	0.26	N	43	N			10	N	44	N
Haloxyfop, Methyl	69806-40-2	4.3	N	31	N	52	N	0.13	N	0.58	N						
Harmony	79277-27-3	1100	N	8000	N	13000	N	1.2	N	200	N						
Heptachlor	76-44-8	1.5	C	3.8	C	220	C	0.66	M	0.4	M			0.019	C	0.094	C
Heptachlor Epoxide	1024-57-3	0.74	C	1.9	C	13	N	0.082	M	0.2	M			0.0094	C	0.047	C
Hexabromobenzene	87-82-1	170	N	1200	N	2000	N	3.6	N	31	N						
Hexabromodiphenyl ether, 2,2',4,4',5,5'- (BDE-153)	68631-49-2	17	N	120	N	200	N			3.1	N						
Hexachlorobenzene	118-74-1	4.2	C	11	C	630	C	0.25	M	1	M			0.053	C	0.27	C
Hexachlorobutadiene	87-68-3	85	N	220	C	1000	N	0.1	C	2.6	C			1.1	C	5.6	C
Hexachlorocyclohexane, Alpha-	319-84-6	1.1	C	2.7	C	160	C	0.0072	C	0.062	C			0.014	C	0.068	C
Hexachlorocyclohexane, Beta-	319-85-7	3.8	C	9.6	C	560	C	0.026	C	0.22	C			0.046	C	0.23	C
Hexachlorocyclohexane, Gamma- (Lindane)	58-89-9	7.3	C	21	C	410	N	0.023	M	0.2	M			0.078	C	0.4	C
Hexachlorocyclohexane, Technical	608-73-1	3.8	C	9.6	C	560	C	0.026	C	0.22	C			0.048	C	0.24	C
Hexachlorocyclopentadiene	77-47-4	520	N	3700	N	6200	N	3.1	M	50	M			0.21	N	0.88	N
Hexachlorodibenzo-p-dioxin, Mixture	NA	0.0013	C	0.0039	C	0.18	C	0.0031	C	0.00011	C			0.000019	C	0.000094	C
Hexachloroethane	67-72-1	60	N	430	C	730	N	0.062	N	5.1	N			2.2	C	11	C
Hexachlorophene	70-30-4	25	N	180	N	310	N	130	N	4.7	N						
Hexahydro-1,3,5-trinitro-1,3,5-triazine (RDX)	121-82-4	78	C	240	C	4700	N	0.046	C	6.1	C						

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Hexamethylene Diisocyanate, 1,6-	822-06-0	4.8	N	14	N	24	N	0.0041	N	0.021	N			0.01	N	0.044	N
Hexamethylphosphoramide	680-31-9	34	N	250	N	420	N	0.027	N	6.2	N						
Hexane, N-	110-54-3	140	S	140	S	140	S	34	N	250	N			730	N	3100	N
Hexanedioic Acid	124-04-9	100000	L	100000	L	100000	L	150	N	31000	N						
Hexanone, 2-	591-78-6	290	N	1400	N	2300	N	0.16	N	34	N			31	N	130	N
Hexazinone	51235-04-2	2800	N	20000	N	34000	N	4.6	N	500	N						
Hydrazine	302-01-2	2.9	C	9.5	C	400	C			0.22	C			0.005	C	0.025	C
Hydrazine Sulfate	10034-93-2	2.9	C	9.5	C	400	C			0.22	C			0.005	C	0.025	C
Hydrogen Chloride	7647-01-0	100000	L	100000	L	100000	L							21	N	88	N
Hydrogen Cyanide	74-90-8	32	N	150	N	250	N	0.28	N	1.4	N			0.83	N	3.5	N
Hydrogen Fluoride	7664-39-3	4300	N	41000	N	69000	N			620	N			15	N	61	N
Hydrogen Sulfide	7783-06-4	100000	L	100000	L	100000	L							2.1	N	8.8	N
Hydroquinone	123-31-9	110	C	290	C	17000	C	0.15	C	11	C						
Imazalil	35554-44-0	1100	N	8000	N	13000	N	48	N	140	N						
Imazaquin	81335-37-7	21000	N	100000	L	100000	L	380	N	3800	N						
Indeno[1,2,3-cd]pyrene	193-39-5	2.1	C	21	C	1300	C	40	C	0.29	C			0.087	C	1.1	C
Iodine	7553-56-2	1100	N	10000	N	17000	N	190	N	160	N						
Iprodione	36734-19-7	3400	N	25000	N	42000	N	3.5	N	570	N						
Iron	7439-89-6	77000	N	100000	L	100000	L	5600	N	11000	N						
Isobutyl Alcohol	78-83-1	25000	N	100000	L	100000	L	19	N	4600	N						
Isophorone	78-59-1	7100	C	18000	C	100000	L	4.4	C	670	C			2100	N	8800	N
Isopropalin	33820-53-0	1300	N	9200	N	15000	N	13	N	29	N						
Isopropanol	67-63-0	100000	L	100000	L	100000	L							7300	N	31000	N
Isopropyl Methyl Phosphonic Acid	1832-54-8	8500	N	62000	N	100000	L	6.9	N	1600	N						
Isoxaben	82558-50-7	4300	N	31000	N	52000	N	31	N	560	N						
JP-7	NA	100000	L	100000	L	100000	L			630	N			310	N	1300	N
Kerb	23950-58-5	6400	N	46000	N	79000	N	18	N	900	N						
Lactofen	77501-63-4	170	N	1200	N	2000	N	18	N	19	N						
Lead acetate	301-04-2	24	C	62	C	3500	C			2.4	C			0.3	C	1.5	C
Lead and Compounds	7439-92-1	400		800		1000		270	M	15	M			0.15	N		
Lead subacetate	1335-32-6	180	C	450	C	26000	C			18	C			2.2	C	11	C

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Linuron	330-55-2	170	N	1200	N	2000	N	0.46	N	26	N						
Lithium	7439-93-2	220	N	2000	N	3400	N	190	N	31	N						
Lithium Perchlorate	7791-03-9	77	N	720	N	1200	N			11	N						
Londax	83055-99-6	17000	N	100000	L	100000	L	16	N	3100	N						
Malathion	121-75-5	1700	N	12000	N	20000	N	1.6	N	300	N						
Maleic Anhydride	108-31-6	8500	N	61000	N	100000	N	6.1	N	1500	N			0.73	N	3.1	N
Maleic Hydrazide	123-33-1	43000	N	100000	L	100000	L	32	N	7800	N						
Malononitrile	109-77-3	8.5	N	62	N	100	N	0.0066	N	1.6	N						
Mancozeb	8018-01-7	2500	N	18000	N	31000	N	13	N	460	N						
Maneb	12427-38-2	430	N	3100	N	5200	N	2.2	N	77	N						
Manganese (Non-diet)	7439-96-5	2500	N	23000	N	39000	N	420	N	320	N			0.052	N	0.22	N
MCPA	94-74-6	43	N	310	N	520	N	0.03	N	5.7	N						
MCPB	94-81-5	850	N	6200	N	10000	N	0.87	N	110	N						
MCPP	93-65-2	85	N	620	N	1000	N	0.071	N	12	N						
Mephosfolan	950-10-7	7.7	N	55	N	93	N	0.041	N	1.4	N						
Mepiquat Chloride	24307-26-4	2500	N	18000	N	31000	N	3.1	N	470	N						
Mercuric Chloride (and other Mercury salts)	7487-94-7	32	N	310	N	520	N			2	M			0.31	N	1.3	N
Mercury (elemental)	7439-97-6	3.1	S	3.1	S	3.1	S	2.1	M	2	M			0.31	N	1.3	N
Merphos	150-50-5	2.5	N	18	N	31	N	0.92	N	0.47	N						
Merphos Oxide	78-48-8	2.5	N	18	N	31	N	0.006	N	0.061	N						
Metalaxyl	57837-19-1	5200	N	37000	N	62000	N	5.1	N	920	N						
Methacrylonitrile	126-98-7	11	N	92	N	150	N	0.0068	N	1.5	N			31	N	130	N
Methamidophos	10265-92-6	4.3	N	31	N	52	N	0.0033	N	0.78	N						
Methanol	67-56-1	43000	N	100000	L	100000	L	32	N	7800	N			4200	N	18000	N
Methidathion	950-37-8	85	N	620	N	1000	N	0.073	N	15	N						
Methomyl	16752-77-5	2100	N	15000	N	26000	N	1.7	N	390	N						
Methoxy-5-nitroaniline, 2-	99-59-2	140	C	350	C	20000	C	0.089	C	13	C			1.7	C	8.8	C
Methoxychlor	72-43-5	430	N	3100	N	5200	N	43	M	40	M						
Methoxyethanol Acetate, 2-	110-49-6	690	N	4900	N	8200	N	0.49	N	120	N			1	N	4.4	N
Methoxyethanol, 2-	109-86-4	430	N	3100	N	5200	N	0.32	N	78	N			21	N	88	N
Methyl Acetate	79-20-9	29000	S	29000	S	29000	S	66	N	16000	N						

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Methyl Acrylate	96-33-3	210	N	640	N	1100	N	0.16	N	38	N			21	N	88	N
Methyl Ethyl Ketone (2-Butanone)	78-93-3	28000	S	28000	S	28000	S	21	N	4900	N			5200	N	22000	N
Methyl Hydrazine	60-34-4	85	N	610	N	1000	N	0.073	N	16	N			0.021	N	0.088	N
Methyl Isobutyl Ketone (4-methyl-2-pentanone)	108-10-1	3400	S	3400	S	3400	S	4.5	N	1000	N			3100	N	13000	N
Methyl Isocyanate	624-83-9	7	N	21	N	35	N	0.012	N	2.1	N			1	N	4.4	N
Methyl Mercury	22967-92-6	11	N	100	N	170	N			1.6	N						
Methyl Methacrylate	80-62-6	2400	S	2400	S	2400	S	6.1	N	1400	N			730	N	3100	N
Methyl methanesulfonate	66-27-3	69	C	170	C	10000	C	0.028	C	6.8	C			0.87	C	4.4	C
Methyl Parathion	298-00-0	21	N	150	N	260	N	0.11	N	3.4	N						
Methyl Phosphonic Acid	993-13-5	5200	N	37000	N	62000	N	3.8	N	940	N						
Methyl Styrene (Mixed Isomers)	25013-15-4	340	N	390	S	390	S	1.1	N	32	N			42	N	180	N
Methyl tert-Butyl Ether (MTBE)	1634-04-4	600	C	2200	C	8900	S	0.54	C	120	C			94	C	470	C
Methyl-1,4-benzenediamine dihydrochloride, 2-	615-45-2	17	N	120	N	200	N	0.037	N	3.1	N						
Methyl-5-Nitroaniline, 2-	99-55-8	760	C	1900	C	20000	N	0.78	C	70	C						
Methylaniline Hydrochloride, 2-	636-21-5	52	C	130	C	7700	C	0.043	C	5	C			0.66	C	3.3	C
Methylarsonic acid	124-58-3	850	N	6200	N	10000	N			160	N						
Methylbenzene,1-4-diamine monohydrochloride, 2-	74612-12-7	17	N	120	N	200	N			3.1	N						
Methylbenzene-1,4-diamine sulfate, 2-	615-50-9	17	N	120	N	200	N			3.1	N						
Methylcholanthrene, 3-	56-49-5	0.073	C	0.78	C	46	C	0.38	C	0.0098	C			0.0015	C	0.019	C
Methylene Chloride	75-09-2	500	N	3100	N	3300	S	0.025	M	5	M			630	N	2600	N
Methylene-bis(2-chloroaniline), 4,4'-	101-14-4	17	C	170	C	2000	N	0.32	C	1.4	C			0.022	C	0.29	C
Methylene-bis(N,N-dimethyl) Aniline, 4,4'-	101-61-1	150	C	370	C	22000	C	0.45	C	4.1	C			1.9	C	9.4	C
Methylenebisbenzenamine, 4,4'-	101-77-9	4.2	C	11	C	630	C	0.037	C	0.41	C			0.053	C	0.27	C
Methylenediphenyl Diisocyanate	101-68-8	100000	L	100000	L	100000	L							0.63	N	2.6	N
Methylnaphthalene, 1-	90-12-0	220	C	530	C	33000	C	1	C	9.7	C						
Methylnaphthalene, 2-	91-57-6	320	N	2200	N	3700	N	2.8	N	27	N						
Methyl-N-nitro-N-nitrosoguanidine, N-	70-25-7	0.83	C	2.1	C	120	C	0.00056	C	0.081	C			0.01	C	0.051	C
Methylstyrene, Alpha-	98-83-9	500	S	500	S	500	S	19	N	580	N						
Metolachlor	51218-45-2	13000	N	92000	N	100000	L	49	N	2100	N						
Metribuzin	21087-64-9	2100	N	15000	N	26000	N	2.3	N	380	N						
Mineral oils	8012-95-1	0.34	S	0.34	S	0.34	S	36000	N	47000	N						

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure							
		Direct Contact						Soil MTG		Tap		Ground Water				Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)		Com/Ind (ug/L)		Residential (ug/m3)		Com/Ind (ug/m3)	
Mirex	2385-85-5	0.38	C	0.96	C	56	C	0.53	C	0.037	C					0.0048	C	0.024	C
Molinate	2212-67-1	170	N	1200	N	2000	N	0.26	N	23	N								
Molybdenum	7439-98-7	550	N	5100	N	8600	N	32	N	78	N								
Monoaluminum phosphate	13530-50-2	100000	L	100000	L	100000	L			760000	N								
Monoammonium phosphate	7722-76-1	100000	L	100000	L	100000	L			760000	N								
Monocalcium phosphate	7758-23-8	100000	L	100000	L	100000	L			760000	N								
Monochloramine	10599-90-3	11000	N	100000	N	100000	L			4000	M								
Monomagnesium phosphate	7757-86-0	100000	L	100000	L	100000	L			760000	N								
Monomethylaniline	100-61-8	170	N	1200	N	2000	N	0.22	N	30	N								
Monopotassium phosphate	7778-77-0	100000	L	100000	L	100000	L			760000	N								
Monosodium phosphate	7558-80-7	100000	L	100000	L	100000	L			760000	N								
N,N'-Diphenyl-1,4-benzenediamine	74-31-7	25	N	180	N	310	N	5.6	N	2.7	N								
Naled	300-76-5	170	N	1200	N	2000	N	0.28	N	31	N								
Naphtha, High Flash Aromatic (HFAN)	64724-95-6	3200	N	31000	N	52000	N			140	N					100	N	440	N
Naphthalene	91-20-3	50	C	180	C	1000	N	0.092	C	1.4	C	91	C	460	C	0.72	C	3.6	C
Naphthylamine, 2-	91-59-8	3.8	C	9.6	C	560	C	0.034	C	0.33	C								
Napropamide	15299-99-7	8500	N	62000	N	100000	L	170	N	1300	N								
Nickel Carbonyl	13463-39-3	5200	N	44000	N	73000	N			670	N					0.052	N	0.22	N
Nickel Oxide	1313-99-1	5300	N	47000	N	79000	N			780	N					0.1	N	0.44	N
Nickel Refinery Dust	NA	5200	N	44000	N	73000	N	2300	N	760	N					0.052	N	0.22	N
Nickel Soluble Salts	7440-02-0	2100	N	20000	N	32000	N	390	N	300	N					0.094	C	0.39	N
Nickel Subsulfide	12035-72-2	5.3	C	17	C	720	C			0.39	C					0.051	C	0.22	N
Nitrate	14797-55-8	100000	L	100000	L	100000	L			10000	M								
Nitrate + Nitrite (as N)	NA									10000	M								
Nitrite	14797-65-0	11000	N	100000	N	100000	L			1000	M								
Nitroaniline, 2-	88-74-4	850	N	6000	N	9900	N	1.3	N	150	N					0.052	N	0.22	N
Nitroaniline, 4-	100-01-6	340	C	860	C	4200	N	0.28	C	33	C					6.3	N	26	N
Nitrobenzene	98-95-3	67	C	240	C	2000	N	0.016	C	1.2	C					0.61	C	3.1	C
Nitrocellulose	9004-70-0	100000	L	100000	L	100000	L	210000	N	47000000	N								
Nitrofurantoin	67-20-9	6000	N	43000	N	73000	N	9.5	N	1100	N								
Nitrofurazone	59-87-0	5.2	C	13	C	770	C	0.0094	C	0.52	C					0.066	C	0.33	C

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Nitroglycerin	55-63-0	8.5	N	62	N	100	N	0.013	N	1.5	N						
Nitroguanidine	556-88-7	8500	N	62000	N	100000	L	7.7	N	1600	N						
Nitromethane	75-52-5	69	C	250	C	2700	N	0.024	C	5.4	C			2.7	C	14	C
Nitropropane, 2-	79-46-9	0.18	C	0.64	C	89	C	0.000094	C	0.018	C			0.009	C	0.045	C
Nitropyrene, 4-	57835-92-4	5.3	C	13	C	800	C	0.55	C	0.16	C			0.22	C	1.1	C
Nitrosodiethanolamine, N-	1116-54-7	2.4	C	6.2	C	350	C	0.00097	C	0.24	C			0.03	C	0.15	C
Nitrosodiethylamine, N-	55-18-5	0.011	C	0.11	C	6.7	C	0.00001	C	0.0014	C			0.00022	C	0.0029	C
Nitrosodimethylamine, N-	62-75-9	0.032	C	0.34	C	8.2	N	0.000021	C	0.0042	C			0.00069	C	0.0088	C
Nitroso-di-N-butylamine, N-	924-16-3	1.2	C	4	C	200	C	0.00097	C	0.024	C			0.015	C	0.077	C
Nitroso-di-N-propylamine, N-	621-64-7	0.97	C	2.5	C	140	C	0.0014	C	0.093	C			0.012	C	0.061	C
Nitrosodiphenylamine, N-	86-30-6	1400	C	3500	C	100000	L	11	C	100	C			9.4	C	47	C
Nitrosomethylethylamine, N-	10595-95-6	0.31	C	0.78	C	46	C	0.00017	C	0.03	C			0.0039	C	0.019	C
Nitrosomorpholine [N-]	59-89-2	1	C	2.6	C	150	C	0.00049	C	0.1	C			0.013	C	0.065	C
Nitroso-N-ethylurea, N-	759-73-9	0.06	C	0.64	C	38	C	0.000038	C	0.0079	C			0.0012	C	0.016	C
Nitroso-N-methylurea, N-	684-93-5	0.013	C	0.14	C	8.4	C	0.000008	C	0.0018	C			0.00028	C	0.0036	C
Nitrosopiperidine [N-]	100-75-4	0.73	C	1.8	C	110	C	0.00076	C	0.071	C			0.009	C	0.045	C
Nitrosopyrrolidine, N-	930-55-2	3.2	C	8.2	C	490	C	0.0025	C	0.32	C			0.04	C	0.2	C
Nitrotoluene, m-	99-08-1	8.5	N	62	N	100	N	0.024	N	1.3	N						
Nitrotoluene, o-	88-72-2	41	C	130	C	1500	S	0.051	C	2.7	C						
Nitrotoluene, p-	99-99-0	340	N	1100	C	4200	N	0.69	C	37	C						
Nonane, n-	111-84-2	6.9	S	6.9	S	6.9	S	1.3	N	4.6	N			210	N	880	N
Norflurazon	27314-13-2	3400	N	25000	N	42000	N	77	N	600	N						
Nustar	85509-19-9	60	N	430	N	730	N	27	N	8.3	N						
Octabromodiphenyl Ether	32536-52-0	250	N	1800	N	3100	N	190	N	47	N						
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetra (HMX)	2691-41-0	5300	N	49000	N	83000	N	20	N	780	N						
Octamethylpyrophosphoramide	152-16-9	170	N	1200	N	2000	N	0.15	N	31	N						
Octyl Phthalate, di-N-	117-84-0	1000	N	7400	N	12000	N	1100	N	190	N						
Oryzalin	19044-88-3	4300	N	31000	N	52000	N	23	N	620	N						
Oxadiazon	19666-30-9	430	N	3100	N	5200	N	7.1	N	35	N						
Oxamyl	23135-22-0	2100	N	15000	N	26000	N	0.88	M	200	M						
Paclobutrazol	76738-62-0	1100	N	8000	N	13000	N	7	N	170	N						

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Paraquat Dichloride	1910-42-5	380	N	2800	N	4700	N	19	N	70	N						
Parathion	56-38-2	520	N	3700	N	6200	N	6.6	N	65	N						
PCB: Aroclor 1016	12674-11-2	5.5	N	37	N	63	N	2.1	N	1.1	N			1.2	C	6.1	C
PCB: Aroclor 1221	11104-28-2	2	C	5.4	C	390	C	0.014	C	0.04	C			0.043	C	0.21	C
PCB: Aroclor 1232	11141-16-5	2	C	5.4	C	73	S	0.014	C	0.04	C			0.043	C	0.21	C
PCB: Aroclor 1242	53469-21-9	3.1	C	7.4	C	460	C	1.1	C	0.34	C			0.043	C	0.21	C
PCB: Aroclor 1248	12672-29-6	3.1	C	7.4	C	460	C	1	C	0.34	C			0.043	C	0.21	C
PCB: Aroclor 1254	11097-69-1	1.5	N	7.4	C	18	N	1.6	N	0.31	N			0.043	C	0.21	C
PCB: Aroclor 1260	11096-82-5	3.1	C	7.4	C	460	C	4.8	C	0.34	C			0.043	C	0.21	C
PCB: Heptachlorobiphenyl, 2,3,3',4,4',5,5'- (PCB 189)	39635-31-9	1.5	C	3.8	C	30	N	2.4	C	0.17	C			0.021	C	0.11	C
PCB: Hexachlorobiphenyl, 2,3,3',4,4',5- (PCB 156)	38380-08-4	1.5	C	3.8	C	30	N	1.5	C	0.17	C			0.021	C	0.11	C
PCB: Hexachlorobiphenyl, 2,3,3',4,4',5'- (PCB 157)	69782-90-7	1.5	C	3.8	C	30	N	1.5	C	0.17	C			0.021	C	0.11	C
PCB: Hexachlorobiphenyl, 2,3',4,4',5,5'- (PCB 167)	52663-72-6	1.5	C	3.8	C	30	N	1.4	C	0.17	C			0.021	C	0.11	C
PCB: Hexachlorobiphenyl, 3,3',4,4',5,5'- (PCB 169)	32774-16-6	0.0015	C	0.0038	C	0.03	N	0.0014	C	0.00017	C			0.000021	C	0.00011	C
PCB: Pentachlorobiphenyl, 2,3,3',4,4'- (PCB 105)	32598-14-4	1.5	C	3.8	C	30	N	0.89	C	0.17	C			0.021	C	0.11	C
PCB: Pentachlorobiphenyl, 2,3,4,4',5- (PCB 114)	74472-37-0	1.5	C	3.8	C	30	N	0.89	C	0.17	C			0.021	C	0.11	C
PCB: Pentachlorobiphenyl, 2,3',4,4',5- (PCB 118)	31508-00-6	1.5	C	3.8	C	30	N	0.87	C	0.17	C			0.021	C	0.11	C
PCB: Pentachlorobiphenyl, 2',3,4,4',5- (PCB 123)	65510-44-3	1.5	C	3.8	C	30	N	0.89	C	0.17	C			0.021	C	0.11	C
PCB: Pentachlorobiphenyl, 3,3',4,4',5- (PCB 126)	57465-28-8	0.00048	C	0.0011	C	0.0088	N	0.00027	C	0.000052	C			0.0000064	C	0.000032	C
PCB: Polychlorinated Biphenyls (high risk)	1336-36-3	3.1	C	7.4	C	460	C							0.043	C	0.21	C
PCB: Polychlorinated Biphenyls (low risk)	1336-36-3							1.6	M	0.5	M			0.24	C	1.2	C
PCB: Polychlorinated Biphenyls (lowest risk)	1336-36-3													1.2	C	6.1	C
PCB: Tetrachlorobiphenyl, 3,3',4,4'- (PCB 77)	32598-13-3	0.48	C	1.1	C	8.8	N	0.16	C	0.052	C			0.0064	C	0.032	C
PCB: Tetrachlorobiphenyl, 3,4,4',5- (PCB 81)	70362-50-4	0.15	C	0.38	C	3	N	0.053	C	0.017	C			0.0021	C	0.011	C
Pebulate	1114-71-2	4300	N	31000	N	52000	N	6.7	N	420	N						
Pendimethalin	40487-42-1	3400	N	25000	N	42000	N	30	N	130	N						
Pentabromodiphenyl Ether	32534-81-9	170	N	1200	N	2000	N	27	N	31	N						
Pentabromodiphenyl ether, 2,2',4,4',5- (BDE-99)	60348-60-9	8.5	N	62	N	100	N	1.4	N	1.6	N						
Pentachlorobenzene	608-93-5	69	N	490	N	820	N	0.35	N	2.3	N						

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Pentachloroethane	76-01-7	76	C	190	C	11000	C	0.054	C	5.6	C						
Pentachloronitrobenzene	82-68-8	27	C	66	C	3100	N	0.24	C	1	C						
Pentachlorophenol	87-86-5	12	C	27	C	2000	C	0.2	M	1	M			4.8	C	24	C
Pentaerythritol tetranitrate (PETN)	78-11-5	170	N	1200	N	2000	N	0.9	N	30	N						
Pentane, n-	109-66-0	390	S	390	S	390	S	200	N	2100	N			1000	N	4400	N
Perchlorate and Perchlorate Salts	14797-73-0	77	N	720	N	1200	N			15	M						
Permethrin	52645-53-1	4300	N	31000	N	52000	N	3700	N	780	N						
Phenacetin	62-44-2	3100	C	7800	C	100000	L	1.7	C	300	C			39	C	190	C
Phenmedipham	13684-63-4	21000	N	100000	L	100000	L	320	N	3000	N						
Phenol	108-95-2	25000	N	100000	L	100000	L	52	N	4500	N			210	N	880	N
Phenothiazine	92-84-2	43	N	310	N	520	N	0.2	N	3.2	N						
Phenylenediamine, m-	108-45-2	520	N	3700	N	6200	N	0.5	N	94	N						
Phenylenediamine, o-	95-54-5	140	C	370	C	21000	C	0.075	C	14	C						
Phenylenediamine, p-	106-50-3	17000	N	100000	L	100000	L	16	N	3000	N						
Phenylmercuric Acetate	62-38-4	6.9	N	49	N	82	N	0.0075	N	1.2	N						
Phenylphenol, 2-	90-43-7	3500	C	8900	C	100000	L	71	C	260	C						
Phorate	298-02-2	17	N	120	N	200	N	0.052	N	2.3	N						
Phosgene	75-44-5	0.46	N	1.4	N	2.4	N							0.31	N	1.3	N
Phosmet	732-11-6	1700	N	12000	N	20000	N	1.3	N	290	N						
Phosphine	7803-51-2	32	N	310	N	520	N			4.7	N			0.31	N	1.3	N
Phosphoric Acid	7664-38-2	100000	L	100000	L	100000	L			760000	N			10	N	44	N
Phosphorus, White	7723-14-0	2.2	N	20	N	34	N	0.023	N	0.31	N						
Phthalic Acid, P-	100-21-0	85000	N	100000	L	100000	L	110	N	15000	N						
Phthalic Anhydride	85-44-9	100000	L	100000	L	100000	L	130	N	30000	N			21	N	88	N
Picloram	1918-02-1	6000	N	43000	N	73000	N	2.8	M	500	M						
Picramic Acid (2-Amino-4,6-dinitrophenol)	96-91-3	8.5	N	62	N	100	N	0.02	N	1.5	N						
Pirimiphos, Methyl	29232-93-7	850	N	6200	N	10000	N	1.7	N	91	N						
Polybrominated Biphenyls	59536-65-1	0.22	C	0.57	C	7.3	N			0.022	C			0.0028	C	0.014	C
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	100000	L	100000	L	100000	L							0.63	N	2.6	N
Polyphosphoric acid	8017-16-1	100000	L	100000	L	100000	L			760000	N						
Potassium Cyanide	151-50-8	220	N	2000	N	3400	N			31	N						

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Potassium Perchlorate	7778-74-7	77	N	720	N	1200	N			11	N						
Potassium Silver Cyanide	506-61-6	550	N	5100	N	8600	N			59	N						
Potassium tripolyphosphate	13845-36-8	100000	L	100000	L	100000	L			760000	N						
Prochloraz	67747-09-5	45	C	110	C	6700	C	0.32	C	3.2	C						
Profluralin	26399-36-0	520	N	3700	N	6200	N	23	N	19	N						
Prometon	1610-18-0	1300	N	9200	N	15000	N	1.8	N	190	N						
Prometryn	7287-19-6	340	N	2500	N	4200	N	1.4	N	45	N						
Propachlor	1918-16-7	1100	N	8000	N	13000	N	2.3	N	190	N						
Propanil	709-98-8	430	N	3100	N	5200	N	0.7	N	63	N						
Propargite	2312-35-8	1700	N	12000	N	20000	N	180	N	120	N						
Propargyl Alcohol	107-19-7	170	N	1200	N	2000	N	0.13	N	31	N						
Propazine	139-40-2	1700	N	12000	N	20000	N	4.6	N	260	N						
Propham	122-42-9	1700	N	12000	N	20000	N	3.4	N	270	N						
Propiconazole	60207-90-1	1100	N	8000	N	13000	N	11	N	160	N						
Propionaldehyde	123-38-6	110	N	340	N	570	N	0.069	N	17	N			8.3	N	35	N
Propyl benzene	103-65-1	260	S	260	S	260	S	20	N	530	N			1000	N	4400	N
Propylene	115-07-1	350	S	350	S	350	S	120	N	6300	N			3100	N	13000	N
Propylene Glycol	57-55-6	100000	L	100000	L	100000	L	1300	N	310000	N						
Propylene Glycol Dinitrate	6423-43-4	100000	L	100000	L	100000	L							0.28	N	1.2	N
Propylene Glycol Monoethyl Ether	1569-02-4	60000	N	100000	L	100000	L	45	N	11000	N						
Propylene Glycol Monomethyl Ether	107-98-2	60000	N	100000	L	100000	L	44	N	11000	N			2100	N	8800	N
Propylene Oxide	75-56-9	28	C	90	C	2500	N	0.0097	C	2.3	C			6.6	C	33	C
Pursuit	81335-77-5	21000	N	100000	L	100000	L	63	N	3600	N						
Pydrin	51630-58-1	2100	N	15000	N	26000	N	4900	N	390	N						
Pyrene	129-00-0	2400	N	17000	N	28000	N	190	N	87	N						
Pyridine	110-86-1	110	N	1000	N	1700	N	0.1	N	15	N						
Quinalphos	13593-03-8	43	N	310	N	520	N	0.65	N	3.8	N						
Quinoline	91-22-5	2.2	C	5.7	C	330	C	0.014	C	0.21	C						
Refractory Ceramic Fibers	NA	100000	L	100000	L	100000	L							31	N	130	N
Resmethrin	10453-86-8	2500	N	18000	N	31000	N	600	N	48	N						
Ronnel	299-84-3	4300	N	31000	N	52000	N	55	N	300	N						

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Rotenone	83-79-4	340	N	2500	N	4200	N	490	N	47	N						
Safrole	94-59-7	7.3	C	78	C	4600	C	0.01	C	0.83	C			0.15	C	1.9	C
Savey	78587-05-0	2100	N	15000	N	26000	N	7.2	N	81	N						
Selenious Acid	7783-00-8	550	N	5100	N	8600	N			78	N						
Selenium	7782-49-2	550	N	5100	N	8600	N	5.3	M	50	M			21	N	88	N
Selenium Sulfide	7446-34-6	550	N	5100	N	8600	N			78	N			21	N	88	N
Sethoxydim	74051-80-2	7700	N	55000	N	93000	N	140	N	780	N						
Silica (crystalline, respirable)	7631-86-9	100000	L	100000	L	100000	L							3.1	N	13	N
Silver	7440-22-4	550	N	5100	N	8600	N	12	N	71	N						
Silver Cyanide	506-64-9	11000	N	100000	N	100000	L			1300	N						
Simazine	122-34-9	57	C	140	C	5200	N	0.039	M	4	M						
Sodium acid pyrophosphate	7758-16-9	100000	L	100000	L	100000	L			760000	N						
Sodium Acifluorfen	62476-59-9	1100	N	8000	N	13000	N	32	N	200	N						
Sodium aluminum phosphate (acidic)	7785-88-8	100000	L	100000	L	100000	L			760000	N						
Sodium aluminum phosphate (anhydrous)	10279-59-1	100000	L	100000	L	100000	L			760000	N						
Sodium aluminum phosphate (tetrahydrate)	10305-76-7	100000	L	100000	L	100000	L			760000	N						
Sodium Azide	26628-22-8	430	N	4100	N	6900	N			62	N						
Sodium Cyanide	143-33-9	110	N	1000	N	1700	N			200	M						
Sodium Diethyldithiocarbamate	148-18-5	25	C	64	C	3800	C			2.5	C						
Sodium Fluoride	7681-49-4	5500	N	51000	N	86000	N			780	N			14	N	57	N
Sodium Fluoroacetate	62-74-8	1.7	N	12	N	20	N	0.0013	N	0.31	N						
Sodium hexametaphosphate	10124-56-8	100000	L	100000	L	100000	L			760000	N						
Sodium Metavanadate	13718-26-8	110	N	1000	N	1700	N			16	N						
Sodium Perchlorate	7601-89-0	77	N	720	N	1200	N			11	N						
Sodium polyphosphate	68915-31-1	100000	L	100000	L	100000	L			760000	N						
Sodium trimetaphosphate	7785-84-4	100000	L	100000	L	100000	L			760000	N						
Sodium tripolyphosphate	7758-29-4	100000	L	100000	L	100000	L			760000	N						
Stirofos (Tetrachlorovinphos)	961-11-5	280	C	720	C	31000	N	1.4	C	24	C						
Strontium, Stable	7440-24-6	66000	N	100000	L	100000	L	6600	N	9300	N						
Strychnine	57-24-9	25	N	180	N	310	N	1	N	4.6	N						
Styrene	100-42-5	870	S	870	S	870	S	2.2	M	100	M			1000	N	4400	N

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure			Ground Water		Vapor Exposure			
		Direct Contact			Soil MTG	Tap	Ground Water		Indoor Air	
Name	CASRN	Residential (mg/kg)	Com/Ind (mg/kg)	Excavation (mg/kg)	Residential (mg/kg)	Residential (ug/L)	Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)	Com/Ind (ug/m3)
Sulfolane	126-33-0	85 N	620 N	1000 N	0.07 N	16 N			2.1 N	8.8 N
Sulfonylbis(4-chlorobenzene), 1,1'-	80-07-9	69 N	490 N	820 N	0.98 N	8.3 N				
Sulfuric Acid	7664-93-9	100000 L	100000 L	100000 L					1 N	4.4 N
Systhane	88671-89-0	2100 N	15000 N	26000 N	86 N	350 N				
TCMTB	21564-17-0	2500 N	18000 N	31000 N	51 N	370 N				
Tebuthiuron	34014-18-1	6000 N	43000 N	73000 N	6.3 N	1100 N				
Temephos	3383-96-8	1700 N	12000 N	20000 N	1200 N	310 N				
Terbacil	5902-51-2	1100 N	8000 N	13000 N	1.2 N	200 N				
Terbufos	13071-79-9	2.1 N	15 N	26 N	0.0079 N	0.18 N				
Terbutryn	886-50-0	85 N	620 N	1000 N	0.28 N	10 N				
Tetrabromodiphenyl ether, 2,2',4,4'- (BDE-47)	5436-43-1	8.5 N	62 N	100 N	0.85 N	1.6 N				
Tetrachlorobenzene, 1,2,4,5-	95-94-3	25 N	180 N	310 N	0.11 N	1.2 N				
Tetrachloroethane, 1,1,1,2-	630-20-6	27 C	93 C	680 S	0.038 C	5 C			3.3 C	17 C
Tetrachloroethane, 1,1,2,2-	79-34-5	7.8 C	28 C	1900 S	0.0052 C	0.66 C	63 C	310 C	0.42 C	2.1 C
Tetrachloroethylene (PCE)	127-18-4	120 N	170 S	170 S	0.045 M	5 M	110 N	470 N	42 N	180 N
Tetrachlorophenol, 2,3,4,6-	58-90-2	2500 N	18000 N	31000 N	21 N	170 N				
Tetrachlorotoluene, p- alpha, alpha, alpha-	5216-25-1	0.34 C	0.86 C	49 C	0.00075 C	0.011 C				
Tetraethyl Dithiopyrophosphate	3689-24-5	43 N	310 N	520 N	0.078 N	5.3 N				
Tetraethyl Lead	78-00-2	0.0085 N	0.062 N	0.1 N	0.000069 N	0.00099 N				
Tetrafluoroethane, 1,1,1,2-	811-97-2	1100 S	1100 S	1100 S	1900 N	170000 N			83000 N	350000 N
Tetrahydrofuran	109-99-9	25000 N	95000 N	100000 L	14 N	3200 N			2100 N	8800 N
Tetrapotassium phosphate	7320-34-5	100000 L	100000 L	100000 L		760000 N				
Tetrasodium pyrophosphate	7722-88-5	100000 L	100000 L	100000 L		760000 N				
Tetryl (Trinitrophenylmethylnitramine)	479-45-8	340 N	2500 N	4200 N	11 N	61 N				
Thallium (I) Nitrate	10102-45-1	0.77 N	7.2 N	12 N		0.11 N				
Thallium (Soluble Salts)	7440-28-0	1.1 N	10 N	17 N	2.9 M	2 M				
Thallium Acetate	563-68-8	0.66 N	6.1 N	10 N		0.093 N				
Thallium Carbonate	6533-73-9	2.2 N	20 N	34 N		0.31 N				
Thallium Chloride	7791-12-0	0.66 N	6.1 N	10 N		0.093 N				
Thallium Sulfate	7446-18-6	2.2 N	20 N	34 N		0.31 N				
Thiobencarb	28249-77-6	850 N	6200 N	10000 N	8.3 N	120 N				

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure							
		Direct Contact						Soil MTG		Tap		Ground Water				Indoor Air			
		Residential		Com/Ind		Excavation		Residential		Residential		Residential		Com/Ind		Residential		Com/Ind	
Name	CASRN	(mg/kg)		(mg/kg)		(mg/kg)		(mg/kg)		(ug/L)		(ug/L)		(ug/L)		(ug/m3)		(ug/m3)	
Thiocyanate	463-56-9	22	N	200	N	340	N			3.1	N								
Thiodiglycol	111-48-8	7600	N	68000	N	100000	L	4.4	N	1100	N								
Thiofanox	39196-18-4	25	N	180	N	310	N	0.028	N	4.1	N								
Thiophanate, Methyl	23564-05-8	6900	N	49000	N	82000	N	21	N	1200	N								
Thiram	137-26-8	430	N	3100	N	5200	N	2.2	N	76	N								
Tin	7440-31-5	66000	N	100000	L	100000	L	47000	N	9300	N								
Titanium Tetrachloride	7550-45-0	100000	L	100000	L	100000	L									0.1	N	0.44	N
Toluene	108-88-3	820	S	820	S	820	S	14	M	1000	M					5200	N	22000	N
Toluene-2,5-diamine	95-70-5	52000	N	100000	L	100000	L	58	N	9300	N								
Toluidine, p-	106-49-0	220	C	570	C	4200	N	0.19	C	22	C								
Toxaphene	8001-35-2	6.2	C	16	C	910	C	9.3	M	3	M					0.076	C	0.38	C
Tralomethrin	66841-25-6	640	N	4600	N	7900	N	920	N	120	N								
Triacetin	102-76-1	100000	L	100000	L	100000	L	6800	N	1200000	N								
Triallate	2303-17-5	1100	N	8000	N	13000	N	3.9	N	87	N								
Trialuminum sodium tetra decahydrogenoctaorthophosphate (dihydrate)	15136-87-5	100000	L	100000	L	100000	L			760000	N								
Triasulfuron	82097-50-5	850	N	6200	N	10000	N	3.4	N	160	N								
Tribromobenzene, 1,2,4-	615-54-3	430	N	3100	N	5200	N	0.94	N	33	N								
Tributyl Phosphate	126-73-8	760	C	1900	C	10000	N	4.4	C	45	C								
Tributyltin Compounds	NA	25	N	180	N	310	N			4.7	N								
Tributyltin Oxide	56-35-9	25	N	180	N	310	N	4600	N	4.4	N								
Tricalcium phosphate	7758-87-4	100000	L	100000	L	100000	L			760000	N								
Trichloro-1,2,2-trifluoroethane, 1,1,2-	76-13-1	910	S	910	S	910	S	2600	N	53000	N					31000	N	130000	N
Trichloroacetic Acid	76-03-9	97	C	250	C	14000	C	0.25	M	60	M								
Trichloroaniline HCl, 2,4,6-	33663-50-2	240	C	590	C	35000	C	1.3	C	23	C								
Trichloroaniline, 2,4,6-	634-93-5	2.5	N	18	N	31	N	0.054	N	0.3	N								
Trichlorobenzene, 1,2,3-	87-61-6	69	N	490	N	820	N	0.31	N	5.2	N								
Trichlorobenzene, 1,2,4-	120-82-1	87	N	270	N	400	S	4.1	M	70	M					2.1	N	8.8	N
Trichloroethane, 1,1,1-	71-55-6	640	S	640	S	640	S	1.4	M	200	M	13000	N	54000	N	5200	N	22000	N
Trichloroethane, 1,1,2-	79-00-5	2.2	N	6.8	N	11	N	0.032	M	5	M	11	N	46	N	0.21	N	0.88	N
Trichloroethylene (TCE)	79-01-6	6.2	N	20	N	34	N	0.036	M	5	M	9.1	N	38	N	2.1	N	8.8	N
Trichlorofluoromethane	75-69-4	1100	N	1200	S	1200	S	14	N	1100	N					730	N	3100	N

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure						Ground Water				Vapor Exposure					
		Direct Contact						Soil MTG		Tap		Ground Water		Indoor Air			
Name	CASRN	Residential (mg/kg)		Com/Ind (mg/kg)		Excavation (mg/kg)		Residential (mg/kg)		Residential (ug/L)		Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)		Com/Ind (ug/m3)	
Trichlorophenol, 2,4,5-	95-95-4	8500	N	62000	N	100000	L	67	N	890	N						
Trichlorophenol, 2,4,6-	88-06-2	85	N	620	N	1000	N	0.68	N	9	N			7.8	C	40	C
Trichlorophenoxyacetic Acid, 2,4,5-	93-76-5	850	N	6200	N	10000	N	0.99	N	120	N						
Trichlorophenoxypropionic acid, -2,4,5	93-72-1	690	N	4900	N	8200	N	0.55	M	50	M						
Trichloropropane, 1,1,2-	598-77-6	550	N	1300	S	1300	S	0.53	N	68	N						
Trichloropropane, 1,2,3-	96-18-4	0.07	C	0.95	C	37	N	0.000056	C	0.0065	C			0.31	N	1.3	N
Trichloropropene, 1,2,3-	96-19-5	1.1	N	3.3	N	5.5	N	0.0061	N	0.62	N			0.31	N	1.3	N
Tridiphane	58138-08-2	250	N	1800	N	3100	N	1.8	N	13	N						
Triethylamine	121-44-8	170	N	520	N	880	N	0.091	N	15	N			7.3	N	31	N
Trifluralin	1582-09-8	640	N	2200	C	7900	N	15	C	22	C						
Trimagnesium phosphate	7757-87-1	100000	L	100000	L	100000	L			760000	N						
Trimethyl Phosphate	512-56-1	340	C	860	C	10000	N	0.15	C	34	C						
Trimethylbenzene, 1,2,3-	526-73-8	74	N	220	N	290	S	0.29	N	10	N			5.2	N	22	N
Trimethylbenzene, 1,2,4-	95-63-6	87	N	220	S	220	S	0.44	N	15	N			7.3	N	31	N
Trimethylbenzene, 1,3,5-	108-67-8	180	S	180	S	180	S	2.5	N	87	N						
Tri-n-butyltin	688-73-3	25	N	180	N	310	N	1.2	N	2.8	N						
Trinitrobenzene, 1,3,5-	99-35-4	3100	N	27000	N	46000	N	33	N	460	N						
Trinitrotoluene, 2,4,6-	118-96-7	50	N	420	N	710	N	0.89	N	7.6	N						
Triphenylphosphine Oxide	791-28-6	1700	N	12000	N	20000	N	23	N	280	N						
Tripotassium phosphate	7778-53-2	100000	L	100000	L	100000	L			760000	N						
Tris(1-chloro-2-propyl)phosphate	13674-84-5	850	N	6200	N	10000	N	10	N	150	N						
Tris(2-chloroethyl)phosphate	115-96-8	340	C	860	C	7300	N	0.64	C	33	C						
Tris(2-ethylhexyl)phosphate	78-42-2	2100	C	5400	C	100000	L	21000	C	210	C						
Trisodium phosphate	7601-54-9	100000	L	100000	L	100000	L			760000	N						
Uranium (Soluble Salts)	NA	320	N	3100	N	5200	N	270	M	30	M						
Urethane	51-79-6	1.7	C	17	C	1000	C	0.00094	C	0.21	C			0.033	C	0.42	C
Vanadium and Compounds	NA	550	N	5200	N	8800	N	1600	N	78	N						
Vanadium Pentoxide	1314-62-1	920	N	7500	N	13000	N			110	N			0.0029	C	0.015	C
Vernolate	1929-77-7	85	N	620	N	1000	N	0.13	N	8.3	N						
Vinclozolin	50471-44-8	2100	N	15000	N	26000	N	5.2	N	340	N						
Vinyl Acetate	108-05-4	1400	N	2800	S	2800	S	1.7	N	410	N			210	N	880	N

Table A-6: 2013 Screening Levels

Chemical		Soil Exposure			Ground Water		Vapor Exposure			
		Direct Contact			Soil MTG	Tap	Ground Water		Indoor Air	
Name	CASRN	Residential (mg/kg)	Com/Ind (mg/kg)	Excavation (mg/kg)	Residential (mg/kg)	Residential (ug/L)	Residential (ug/L)	Com/Ind (ug/L)	Residential (ug/m3)	Com/Ind (ug/m3)
Vinyl Bromide	593-60-2	1.5 C	5.6 C	32 N	0.0086 C	1.5 C			0.76 C	3.8 C
Vinyl Chloride	75-01-4	0.84 C	17 C	660 N	0.014 M	2 M	2 C	35 C	1.6 C	28 C
Warfarin	81-81-2	25 N	180 N	310 N	0.093 N	4.4 N				
Xylene, m-	108-38-3	390 S	390 S	390 S	3.7 N	190 N			100 N	440 N
Xylene, o-	95-47-6	430 S	430 S	430 S	3.7 N	190 N			100 N	440 N
Xylene, P-	106-42-3	390 S	390 S	390 S	3.7 N	190 N			100 N	440 N
Xylenes	1330-20-7	260 S	260 S	260 S	200 M	10000 M			100 N	440 N
Zinc and Compounds	7440-66-6	32000 N	100000 L	100000 L	5900 N	4700 N				
Zinc Cyanide	557-21-1	5500 N	51000 N	86000 N		780 N				
Zinc Phosphide	1314-84-7	32 N	310 N	520 N		4.7 N				
Zineb	12122-67-7	4300 N	31000 N	52000 N	45 N	770 N				
Zirconium	7440-67-7	8.8 N	82 N	140 N	72 N	1.2 N				

C = Carcinogenic endpoint

CASRN = Chemical Abstracts Service Reference Number

L = Capped at 100,000 mg/kg (soil direct contact only)

M = Set to maximum contaminant limit (MCL; ground water only) or based on MCL (migration to ground water)

mg/kg = milligrams per kilogram

MTG = Migration to ground water

N = Noncarcinogenic endpoint

R = Capped at 1,000,000 mg/kg (migration to ground water only)

S = Capped at soil saturation limit

ug/L = micrograms per liter

ug/m^3 = micrograms per cubic meter

Table A-7: 2013 Recreational Soil Direct Contact Screening Levels

Chemical		Trail (mg/kg)	Athletic Field (mg/kg)	Community Park (mg/kg)
Name	CASRN			
Arsenic, Inorganic	7440-38-2	500	80	30
Benzene	71-43-2	1800*	1070	420
Benzo(a)pyrene	50-32-8	5	3	1
Ethylbenzene	100-41-4	480*	480*	480*
Lead and Compounds	7439-92-1	800	800	800
Toluene	108-88-3	820*	820*	820*
Xylenes	1330-20-7	260*	260*	260*

*Soil saturation limit