

# RULES AND REGULATIONS

## Title 25—ENVIRONMENTAL PROTECTION

### ENVIRONMENTAL QUALITY BOARD

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

#### Corrective Amendments to 25 Pa. Code §§ 250.306, 250.307 and 250.605 and Appendix A, Tables 3b, 4a, 5a and 5b

The Department of Environmental Protection has discovered discrepancies between the agency text of 25 Pa. Code §§ 250.306, 250.307 and 250.605 and Appendix A, Tables 3b, 4a, 5a and 5b, as deposited with the Legislative Reference Bureau, and published at 41 Pa.B. 230 (January 8, 2011) and the official text published in the *Pennsylvania Code Reporter* (Master Transmittal Sheet No. 436, March 2011). Amendments to 25 Pa. Code §§ 250.306, 250.307 and 250.605 and Appendix A, Tables 3b, 4a, 5a and 5b published at 41 Pa.B. 230 were incorrectly codified.

Therefore, under 45 Pa.C.S. § 901: The Department of Environmental Protection has deposited with the Legislative Reference Bureau a corrective amendment to 25 Pa. Code §§ 250.306, 250.307 and 250.605 and Appendix A, Tables 3b, 4a, 5a and 5b. The corrective amendment to 25 Pa. Code §§ 250.306, 250.307 and 250.605 and Appendix A, Tables 3b, 4a, 5a and 5b is effective as of March 5, 2011, the date the defective official text was announced in the *Pennsylvania Bulletin*.

The correct versions of 25 Pa. Code §§ 250.306, 250.307 and 250.605 and Appendix A, Tables 3b, 4a, 5a and 5b appear in Annex A, with ellipses referring to the existing text.

#### Annex A

#### TITLE 25. ENVIRONMENTAL PROTECTION

#### PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

#### Subpart D. ENVIRONMENTAL HEALTH AND SAFETY

#### ARTICLE VI. GENERAL HEALTH AND SAFETY

#### CHAPTER 250. ADMINISTRATION OF LAND RECYCLING PROGRAM

#### Subchapter C. STATEWIDE HEALTH STANDARDS

#### § 250.306. Ingestion numeric values.

\* \* \* \* \*

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

\* \* \* \* \*

(3) For vinyl chloride:

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

\* \* \* \* \*

#### § 250.307. Inhalation numeric values.

\* \* \* \* \*

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

\* \* \* \* \*

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

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

\* \* \* \* \*

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

<i>Term</i>		<i>Residential</i>		<i>Nonresidential (Onsite Worker)</i>
		<i>Systemic<sup>1</sup></i>	<i>Carcinogens<sup>2</sup></i>	
THQ	Target Hazard Quotient	1	N/A	1
RfCi	Inhal. Reference Concentration (mg/m <sup>3</sup> )	Chemical-specific	N/A	Chemical-specific
ATnc	Averaging Time for systemic toxicants (yr)	30	N/A	25

Term		Residential		Nonresidential (Onsite Worker)
		Systemic <sup>1</sup>	Carcinogens <sup>2</sup>	
TF	Transport Factor (mg/kg)/(mg/m <sup>3</sup> ) Volatilization <sup>3</sup> Particulate <sup>4</sup>	Chemical-specific 1 × 10 <sup>10</sup>	Chemical-specific 1 × 10 <sup>10</sup>	Chemical-specific 1 × 10 <sup>10</sup>
ET	Exposure Time (hr/day)	24	24	8
EF	Exposure Frequency <sup>5</sup> (d/yr)	250	250	180
ED	Exposure Duration (yr)	30	N/A	25
CF	Conversion Factor	1,000 µg/mg	1,000 µg/mg	1,000 µg/mg
TR	Target Risk	N/A	1 × 10 <sup>-5</sup>	1 × 10 <sup>-5</sup>
IUR	Inhalation Unit Risk (µg/m <sup>3</sup> ) <sup>-1</sup>	N/A	Chemical-specific	Chemical-specific
ATc	Averaging Time for carcinogens (yr)	N/A	70	70
AED	Combined Age-Dependent Adjustment Factor and Exposure Duration (yr) <sup>6</sup>	N/A	76	N/A

\* \* \* \* \*

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

\* \* \* \* \*

(3) For vinyl chloride:

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

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

Term		Residential		Nonresidential (Onsite Worker)
		Systemic <sup>1</sup>	Carcinogens <sup>2</sup>	
THQ	Target Hazard Quotient	1	N/A	1
RfCi	Inhal. Reference Concentration (mg/m <sup>3</sup> )	Chemical-specific	N/A	Chemical-specific
ATnc	Averaging Time for systemic toxicants (yr)	30	N/A	25
ET	Exposure Time (hr/day)	24	24	8
EF	Exposure Frequency (d/yr)	350	350	250
ED	Exposure Duration (yr)	30	30	25
TF	Transfer Factor (L/m <sup>3</sup> ) <sup>3</sup>	0.5	0.5	0.5
CF	Conversion Factor	N/A	1,000 µg/mg	1,000 µg/mg
TR	Target Risk	N/A	1 × 10 <sup>-5</sup>	1 × 10 <sup>-5</sup>
IUR	Inhalation Unit Risk (ug/m <sup>3</sup> ) <sup>-1</sup>	N/A	Chemical-specific	Chemical-specific
ATc	Averaging Time for carcinogens (yr)	N/A	70	70
AED	Combined Age-Dependent adjustment Factor and Exposure Duration (yr) <sup>4</sup>	N/A	76	N/A

Notes: Modified from USEPA Region III Risk-based Concentration Table, dated October 20, 1995.

N/A = Not Applicable

<sup>1</sup> Residential exposure to systemic toxicants is based on adult exposure, consistent with USEPA (1991).

<sup>2</sup> Residential exposure to carcinogens is based on combined child and adult exposure.

<sup>3</sup> Default Transfer Factor is as presented in USEPA's RAGS, Part B.

<sup>4</sup> The Combined Age-Dependent Adjustment Factor and Exposure Duration (AED) is calculated using the equation AED = ADAF<sub><2</sub> × ED<sub><2</sub> + ADAF<sub>2-16</sub> × ED<sub>2-16</sub> + ADAF<sub>>16</sub> × ED<sub>>16</sub>, where ADAF<sub><2</sub> = 10, ED<sub><2</sub> = 2 yr, ADAF<sub>2-16</sub> = 3, ED<sub>2-16</sub> = 14 yr, ADAF<sub>>16</sub> = 1, ED<sub>>16</sub> = 14 yr.

\* \* \* \* \*

§ 250.605. Sources of toxicity information.

(a) For site-specific standards, the person shall use appropriate reference doses, reference concentrations, cancer slope factors and unit risk factors identified in Subchapter C (relating to Statewide health standards), unless the person can demonstrate that published data, available from one of the following sources, provides more current reference doses, reference concentrations, cancer slope factors or unit risk factors:

(1) Integrated Risk Information System (IRIS).

(2) United States Environmental Protection Agency, National Center for Environmental Assessment (NCEA) Provisional Peer-Reviewed Toxicity Values (PPRTV).

\* \* \* \* \*

APPENDIX A  
 TABLE 3—MEDIUM-SPECIFIC CONCENTRATIONS (MSCs) FOR ORGANIC REGULATED SUBSTANCES IN SOIL  
 B. Soil to Groundwater Numeric Values<sup>1</sup>

REGULATED SUBSTANCE	CASRN	Used Aquifers										Soil Buffer Distance (feet)			
		TDS ≤ 2500					TDS > 2500								
		Residential		Non-Residential		100 X GW MSC	Residential		Non-Residential		100 X GW MSC		Non-Residential		
CRESOL, 4,6-DINITRO-O-	534-52-1	0.37	0.28 E	1	0.75 E		37	28 E	75 E	100		75 E	370	280 E	1,000
DIBENZOFURAN	132-64-9	3.7	95 E	10	260 E	370	9,500 E	12,000 E	450	12,000 E	450	12,000 E	450	12,000 E	15
DICHLORVOS	62-73-7	0.23	0.054 E	0.9	0.21 E	23	5.4 E	21 E	90	21 E	0.23	0.054 E	0.9	0.21 E	NA

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

RELATED SUBSTANCE	CASRN	Residential MSC		Nonresidential MSCs	
		0-15 feet	0-2 feet	Surface Soil	Subsurface Soil
FLUORIDE	16984-48-8	8,800 G	110,000 G	190,000 G	190,000 G

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

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d) <sup>-1</sup>	RfCi (mg/m <sup>3</sup> )	IUR (µg/m <sup>3</sup> ) <sup>-1</sup>	Koc (L/Kg)	VOC?	Aqueous Sol (mg/L)	Aqueous Sol Reference <sup>1</sup>	TF Vol from Surface Soil	TF Vol from SubSurface Soil	Organic Liquid	Boiling Point (degrees C)	Degradation Coefficient (K)(yr <sup>-1</sup> )
ACENAPHTHENE	83-32-9	0.06 I				4,900		3.8	1,5,6				279	1.24
ACENAPHTHYLENE	208-96-8	0.06 S				4,500		16.1	5,6,7				280	2.11
ACEPHATE	30560-19-1	0.004 I	0.0087 I			3		818,000	6				340	
ACETALDEHYDE	75-07-0			0.009 I	0.0000022 I	4.1	X	1,000,000	1	13,100	15,100	X	20	
ACETONE	67-64-1	0.9 I		31 D		0.31	X	1,000,000	1	13,100	15,000	X	56	18.07
ACETONITRILE	75-05-8			0.06 I		0.5	X	1,000,000	1	13,100	15,000	X	82	4.50
ACETOPHENONE	98-86-2	0.1 I				170		5,500	1			X	203	
ACETYLAMINOFLUORENE, 2-(2AAF)	53-96-3		3.8 C		0.0013 C	1,600		10.13	7				303	0.69
ACROLEIN	107-02-8	0.0005 I		0.00002 I		0.56	X	208,000	1,2,4	13,100	15,100	X	53	4.50
ALDICARB SULFONE	1646-88-4	0.001 I				10		8,000	5				317	
BROMACIL	314-40-9	0.1 M				58		815	2				421	
CHLORO-1,1-DIFLUORO ETHANE, 1-	75-68-3			50 I		22	X	1,400	4	13,100	15,000	X	-9	
CHLOROBENZILATE	510-15-6	0.02 I	0.11 C		0.000031 C	2,600		13	4				415	3.60
CHLOROPRENE	126-99-8	0.02 H		0.007 H		50	X	1,736	9	13,100	15,000	X	59	0.69
CRESOL, o- (METHYLPHENOL, 2-)	95-48-7	0.05 I				22	X	2,500	3,5,6	13,000	14,900		191	18.07
DIOXANE, 1,4-	123-91-1	0.1 D	0.011 I	3.6 D	0.0000077 C	7.8	X	1,000,000	5	13,000	14,900	X	101	0.69
MALATHION	121-75-5	0.02 I				1,300		143	4			X	351	2.46
MALEIC HYDRAZIDE	123-33-1	0.5 I				2.8		6,000	4				260	
MANEB	12427-38-2	0.005 I				1		23	9,13				351	
MONOCHLOROACETIC ACID	79-11-8	0.01 M				0.24	X	858,000	17	13,000	14,900		189	
PCB-1016 (AROCOLOR)	12674-11-2	0.00007 I	0.07 I		0.00002 I	110,000		0.25	5			X	325	
PCB-1221 (AROCOLOR)	11104-28-2		2 I		0.000057 I	1,900		0.59	5			X	275	
PENTACHLOROETHANE	76-01-7		0.09 P			1,905	X	480	1,3	13,100	15,100	X	160	
TRICHLOROETHYLENE (TCE)	79-01-6	0.006 N	0.011 N	0.5 D	0.0000017 N	93	X	1,100	1	13,100	15,000	X	87	0.02

**Table 5—PHYSICAL AND TOXICOLOGICAL PROPERTIES**  
**B. Inorganic Regulated Substances**

Regulated Substance	CAS	RfDo (mg/kg-d)	CSFo (mg/kg-d) <sup>-1</sup>	RfCi (mg/m <sup>3</sup> ) <sup>-1</sup>	IUR (µg/m <sup>3</sup> ) <sup>-1</sup>	Kd
BARIUM AND COMPOUNDS	7440-39-3	0.2 I	* * * * *	0.0005 H		41
CHROMIUM VI	18540-29-9	0.003 I	* * * * *	0.000008 I	0.084 I	19

[Pa.B. Dec. No. 11-447. Filed for public inspection March 18, 2011, 9:00 a.m.]