

**Appendix A - § 35-APX-A2 - Vapor Intrusion Standards**

Analyte	CAS Number	Indoor Air Standards (TR=1E-06, HQ=1.0)		Vapor Intrusion Standards - Sub-slab Soil Gas		Vapor Intrusion Standards - Groundwater	
		Resident (µg/m <sup>3</sup> )	Non-resident (µg/m <sup>3</sup> )	Resident (µg/m <sup>3</sup> )	Non-resident (µg/m <sup>3</sup> )	Resident (µg/L)	Non-resident (µg/L)
Benzene	71-43-2	0.13	1.05	4.3	35	0.92	7.4
Carbon Tetrachloride	56-23-5	0.17	1.36	5.7	45	0.24	1.9
Chloroethane	75-00-3	10,000.00	35,000.00	330,000	1,200,000	31,000	110,000
Chloroform	67-66-3	0.04	0.36	1.4	12	0.44	3.7
Dichloroethane, 1,1-	75-34-3	0.63	5.11	21	170	4.2	34
Dichloroethylene, 1,1-	75-35-4	200.00	700.80	6,700	23,000	270	950
Ethylbenzene	100-41-4	0.40	3.27	13	110	2.2	19
Mercury (elemental)	7439-97-6	0.30	0.3 <sup>(a)</sup>	10	10	2.0	2.0
Methylene Chloride	75-09-2	60.34	817.60	2,000	27,000	680	9,300
Naphthalene	91-20-3	0.262 <sup>(b)</sup>	0.262 <sup>(b)</sup>	1.0 <sup>(f)</sup>	8 <sup>(f)</sup>	3.5 <sup>(f)</sup>	28 <sup>(f)</sup>
Tetrachloroethylene	127-18-4	0.63	5.11	21	170	1.5	12
Trichloroethylene	79-01-6	0.20	0.7 <sup>(c)</sup>	6.7	23	0.82	2.9
Trimethylbenzene, 1,2,3-	526-73-8	60 <sup>(d)</sup>	210.24 <sup>(d)</sup>	2000 <sup>(d)</sup>	7000 <sup>(d)</sup>	790	2,800
Trimethylbenzene, 1,2,4-	95-63-6					470	1,700
Trimethylbenzene, 1,3,5-	108-67-8					330	1,200
Vinyl Chloride	75-01-4	0.11	1.86 <sup>(e)</sup>	3.7	62	0.13	2.2

**Notes:**

µg/m<sup>3</sup> - micrograms per cubic meter

µg/L - micrograms per liter

1. The VI Screening Values for soil gas and groundwater were calculated from the indoor air standards using the USEPA Vapor Intrusion Screening Level Calculator. The shallow soil gas concentration is the target indoor air concentration divided by the generic attenuation factor for soil gas. Target groundwater concentrations were calculated based on an ambient groundwater temperature of 15° C.

(a) Due to the developmental toxicity associated with mercury exposure, the reference concentration is used as the nonresidential air value without adjusting for the exposure period.

(b) The indoor air values have been adjusted from the risk based values (0.03/0.24) to reflect the laboratory method detection limit value.

(c) Due to the nature and severity of the non-cancer endpoint (fetal cardiac malformations) that may be associated with a brief window of susceptibility, there is significant uncertainty regarding the exposure period of concern. Thus, a target hazard quotient of 0.1 was used in the calculation of noncancer values.

(d) Sum of the three isomers should not exceed applicable resident or non-resident values.

(e) Inhalation Unit Risk of 4.4E<sup>06</sup> (µg/m<sup>3</sup>)-1 based on continuous lifetime exposure during adulthood used to develop cancer based value for non-residential indoor air.

(f) Calculated using residential and non-residential risk based values (0.03/0.24).