



RCRA Draft Supplemental Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway (Vapor Intrusion Guidance)

Table 2: Question 4 Numerical Criteria
And Summary Sheet

December 2001

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CAS No.	Chemical	Target Indoor Air Concentration to Satisfy Both the Prescribed Risk Level and the Target Hazard Index [R=10 ⁻⁵ , HI=1) C _{target}		Measured or Reasonably Estimated Indoor Air Concentration [if available] (specify units)	Target Soil Gas Concentration Corresponding to Target Indoor Air Concentration Where the Soil Gas to Indoor Air Attenuation Factor=0.01 C _{soil-gas}		Measured or Reasonably Estimated Soil Gas Concentration at any Depth Below Building [if available] (specify units)	Target Ground Water Concentration Corresponding To Target Indoor Air Concentration Where the Soil Gas to Indoor Air Attenuation Factor = 0.01 and Partitioning Across the Water Table Obeys Henry's Law C _{gw}	Measured or Reasonably Estimated Groundwater Concentration Beneath Building [if available] (ug/L)
		(ug/m ³)	(ppbv)		(ug/m ³)	(ppbv)			
71556	1,1,1-Trichloroethane	1.0E+03	1.8E+02		1.0E+05	1.8E+04		1.4E+02	
79345	1,1,2,2-Tetrachloroethane	1.7E-01	2.5E-02		1.7E+01	2.5E+00		1.2E+00	
79005	1,1,2-Trichloroethane	6.3E-01	1.1E-01		6.3E+01	1.1E+01		1.7E+00	
75343	1,1-Dichloroethane	5.0E+02	1.2E+02		5.0E+04	1.2E+04		2.2E+02	
75354	1,1-Dichloroethylene	2.0E-01	5.0E-02		2.0E+01	5.0E+00		1.9E-02	
120821	1,2,4-Trichlorobenzene	2.0E+02	2.7E+01		2.0E+04	2.7E+03		3.4E+02	
95501	1,2-Dichlorobenzene	2.0E+02	3.3E+01		2.0E+04	3.3E+03		2.6E+02	
107062	1,2-Dichloroethane	3.8E-01	9.5E-02		3.8E+01	9.5E+00		9.6E-01	
78875	1,2-Dichloropropane	4.0E+00	8.7E-01		4.0E+02	8.7E+01		3.5E+00	
542756	1,3-Dichloropropene	2.5E+00	5.5E-01		2.5E+02	5.5E+01		3.4E-01	
106467	1,4-Dichlorobenzene	8.0E+02	1.3E+02		8.0E+04	1.3E+04		8.0E+02	
95954	2,4,5-Trichlorophenol	3.5E+02	4.3E+01		3.5E+04	4.3E+03		2.0E+05	
88062	2,4,6-Trichlorophenol	3.2E+00	4.0E-01		3.2E+02	4.0E+01		1.0E+03	
120832	2,4-Dichlorophenol	1.1E+01	1.7E+00		1.1E+03	1.7E+02		8.5E+03	
105679	2,4-Dimethylphenol	7.0E+01	1.4E+01		7.0E+03	1.4E+03		8.5E+04	
51285	2,4-Dinitrophenol	7.0E+00	9.3E-01		7.0E+02	9.3E+01		3.8E+04	
121142	2,4-Dinitrotoluene	5.3E-02	7.1E-03		5.3E+00	7.1E-01		1.4E+03	
606202	2,6-Dinitrotoluene	5.3E-02	7.1E-03		5.3E+00	7.1E-01		1.7E+02	
95578	2-Chlorophenol	1.8E+01	3.4E+00		1.8E+03	3.4E+02		1.1E+02	
95487	2-Methylphenol (o-cresol)	1.8E+02	4.1E+01		1.8E+04	4.1E+03		3.7E+05	
91941	3,3-Dichlorobenzidine	7.7E-02	7.4E-03		**	**		**	
83329	Acenaphthene	2.1E+02	3.3E+01		2.1E+04	3.3E+03		3.3E+03	
67641	Acetone	3.5E+02	1.5E+02		3.5E+04	1.5E+04		2.2E+04	
309002	Aldrin	2.0E-03	1.4E-04		2.0E-01	1.4E-02		2.9E-02	
319846	alpha-HCH (alpha-BHC)	5.6E-03	4.7E-04		5.6E-01	4.7E-02		1.3E+00	
120127	Anthracene	NA	NA		NA	NA		NA	
56553	Benz(a)anthracene	4.8E-02	5.1E-03		**	**		**	
71432	Benzene	1.3E+00	4.0E-01		1.3E+02	4.0E+01		5.6E-01	
50328	Benzo(a)pyrene	4.8E-03	4.6E-04		**	**		**	

Table 2: Question 4 Numerical Criteria and Summary Sheet.

CAS No.	Chemical	Target Indoor Air Concentration to Satisfy Both the Prescribed Risk Level and the Target Hazard Index [R=10 ⁻⁵ , HI=1) C _{target}		Measured or Reasonably Estimated Indoor Air Concentration [if available] (specify units)	Target Soil Gas Concentration Corresponding to Target Indoor Air Concentration Where the Soil Gas to Indoor Air Attenuation Factor=0.01 C _{soil-gas}		Measured or Reasonably Estimated Soil Gas Concentration at any Depth Below Building [if available] (specify units)	Target Ground Water Concentration Corresponding To Target Indoor Air Concentration Where the Soil Gas to Indoor Air Attenuation Factor = 0.01 and Partitioning Across the Water Table Obeys Henry's Law C _{gw}	Measured or Reasonably Estimated Groundwater Concentration Beneath Building [if available] (ug/L)
		(ug/m ³)	(ppbv)		(ug/m ³)	(ppbv)			
205992	Benzo(b)fluoranthene	4.8E-02	4.6E-03		4.8E+00	4.6E-01		1.0E+00	
207089	Benzo(k)fluoranthene	NA	NA		NA	NA		NA	
65850	Benzoic Acid	1.4E+04	2.8E+03		**	**		**	
319857	beta-HCH (beta-BHC)	1.9E-02	1.6E-03		1.9E+00	1.6E-01		6.2E+01	
111444	Bis(2-chloroethyl)ether	3.0E-02	5.2E-03		3.0E+00	5.2E-01		4.1E+00	
117817	Bis(2-ethylhexyl)phthalate	NA	NA		NA	NA		NA	
75274	Bromodichloromethane	5.6E-01	8.3E-02		5.6E+01	8.3E+00		8.5E-01	
75252	Bromoform	9.1E+00	8.8E-01		9.1E+02	8.8E+01		4.2E+01	
71363	Butanol	3.5E+02	1.2E+02		3.5E+04	1.2E+04		9.7E+04	
85687	Butyl benzyl phthalate	NA	NA		NA	NA		NA	
86748	Carbazole	1.8E+00	2.6E-01		**	**		**	
75150	Carbon disulfide	7.0E+02	2.2E+02		7.0E+04	2.2E+04		5.6E+01	
56235	Carbon tetrachloride	6.7E-01	1.1E-01		6.7E+01	1.1E+01		5.3E-02	
57749	Chlordane	1.0E-01	6.0E-03		1.0E+01	6.0E-01		5.0E+00	
108907	Chlorobenzene	2.0E+01	4.3E+00		2.0E+03	4.3E+02		1.3E+01	
124481	Chlorodibromomethane	4.2E-01	4.9E-02		4.2E+01	4.9E+00		1.3E+00	
67663	Chloroform	4.3E-01	8.9E-02		4.3E+01	8.9E+00		2.9E-01	
218019	Chrysene	4.8E+00	5.1E-01		**	**		**	
156592	cis-1,2-Dichloroethylene	3.5E+01	8.8E+00		3.5E+03	8.8E+02		2.1E+01	
72548	DDD	1.4E-01	1.1E-02		1.4E+01	1.1E+00		8.8E+01	
72559	DDE	1.0E-01	7.9E-03		1.0E+01	7.9E-01		1.2E+01	
50293	DDT	1.0E-01	7.1E-03		**	**		**	
84742	Di-n-butyl phthalate	NA	NA		NA	NA		NA	
117840	Di-n-octyl phthalate	NA	NA		NA	NA		NA	
53703	Dibenz(a,h)anthracene	NA	NA		NA	NA		NA	
60571	Dieldrin	2.2E-03	1.4E-04		2.2E-01	1.4E-02		3.5E-01	
84662	Diethylphthalate	2.8E+03	3.1E+02		**	**		**	
115297	Endosulfan	2.1E+01	1.3E+00		**	**		**	
72208	Endrin	1.1E+00	7.1E-02		**	**		**	
100414	Ethylbenzene	1.0E+03	2.3E+02		1.0E+05	2.3E+04		3.1E+02	

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		(ug/m ³)	(ppbv)		(ug/m ³)	(ppbv)			
206440	Fluoranthene	NA	NA		NA	NA		NA	
86737	Fluorene	1.4E+02	2.1E+01		**	**		**	
58899	gamma-HCH (Lindane)	2.7E-02	2.3E-03		2.7E+00	2.3E-01		4.7E+00	
76448	Heptachlor	7.7E-03	5.0E-04		7.7E-01	5.0E-02		1.7E-02	
1024573	Heptachlor epoxide	3.8E-03	2.4E-04		3.8E-01	2.4E-02		9.9E-01	
87683	Hexachloro-1,3-butadiene	4.5E-01	4.3E-02		4.5E+01	4.3E+00		1.4E-01	
118741	Hexachlorobenzene	2.2E-02	1.9E-03		2.2E+00	1.9E-01		4.0E-02	
77474	Hexachlorocyclopentadiene	2.0E-01	1.8E-02		2.0E+01	1.8E+00		1.8E-02	
67721	Hexachloroethane	2.5E+00	2.6E-01		2.5E+02	2.6E+01		1.6E+00	
193395	Indeno(1,2,3-cd)pyrene	NA	NA		NA	NA		NA	
78591	Isophorone	3.7E+01	6.6E+00		3.7E+03	6.6E+02		1.4E+04	
108383	m-Xylene	7.0E+03	1.6E+03		7.0E+05	1.6E+05		2.3E+03	
7439976	Mercury (elemental)	3.0E-01	3.7E-02		3.0E+01	3.7E+00		6.4E-02	
72435	Methoxychlor	1.8E+01	1.3E+00		**	**		**	
74839	Methyl bromide	5.0E+00	1.3E+00		5.0E+02	1.3E+02		2.0E+00	
75092	Methylene chloride	2.1E+01	6.1E+00		2.1E+03	6.1E+02		2.4E+01	
1634044	MTBE	3.0E+03	8.3E+02		3.0E+05	8.3E+04		1.3E+04	
621647	N-Nitrosodi-n-propylamine	5.0E-03	9.4E-04		5.0E-01	9.4E-02		5.4E+00	
86306	N-Nitrosodiphenylamine	7.1E+00	8.8E-01		7.1E+02	8.8E+01		3.5E+03	
91203	Naphthalene	3.0E+00	5.7E-01		3.0E+02	5.7E+01		1.5E+01	
98953	Nitrobenzene	2.0E+00	4.0E-01		2.0E+02	4.0E+01		2.0E+02	
95476	o-Xylene	7.0E+03	1.6E+03		7.0E+05	1.6E+05		3.3E+03	
106478	p-Chloroaniline	1.4E+01	2.7E+00		1.4E+03	2.7E+02		1.0E+05	
106423	p-Xylene	7.0E+03	1.6E+03		7.0E+05	1.6E+05		2.2E+03	
87865	Pentachlorophenol	2.9E-01	2.7E-02		2.9E+01	2.7E+00		2.9E+04	
108952	Phenol	2.1E+03	5.5E+02		2.1E+05	5.5E+04		1.3E+07	
129000	Pyrene	NA	NA		NA	NA		NA	
100425	Styrene	1.0E+03	2.3E+02		1.0E+05	2.3E+04		8.8E+02	
127184	Tetrachloroethylene	1.7E+01	2.5E+00		1.7E+03	2.5E+02		2.3E+00	
108883	Toluene	4.0E+02	1.1E+02		4.0E+04	1.1E+04		1.5E+02	

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		(ug/m ³)	(ppbv)		(ug/m ³)	(ppbv)			
8001352	Toxaphene	3.1E-02	1.8E-03		3.1E+00	1.8E-01		1.3E+01	
156605	trans-1,2-Dichloroethylene	7.0E+01	1.8E+01		7.0E+03	1.8E+03		1.8E+01	
79016	Trichloroethylene	5.9E+00	1.1E+00		5.9E+02	1.1E+02		1.4E+00	
108054	Vinyl acetate	2.0E+02	5.7E+01		2.0E+04	5.7E+03		9.5E+02	
75014	Vinyl chloride (chloroethene)	2.3E+00	8.9E-01		2.3E+02	8.9E+01		2.0E-01	
NA - health-based target breathing concentration exceeds maximum possible chemical vapor concentration (pathway incomplete)									
** - target soil gas concentration exceeds maximum possible vapor concentration at this 0.01 attenuation factor (pathway incomplete)									