

History of Changes ⁽¹⁾ to Vapor Action Levels (VAL) ⁽²⁾, Vapor Risk Screening Levels (VRSL) and Attenuation Factors (AF) ⁽³⁾ for Common Volatile Organic Compounds (VOC) in Wisconsin - April 2017

Notes:

1. This historical table supplements the DNR's Quick Look-Up Table and is intended to be used in understanding previous site-specific decisions regarding vapor data.
2. The VAL is either Residential or Non-residential (i.e., Small Commercial VAL = Large Commercial & Industrial VAL). "Residential setting" includes educational, child care and elder care settings per s. NR 700.03(49g), Wis. Adm. Code.
3. The AF is either Residential/Small Commercial or Large Commercial & Industrial (i.e., Residential AF = Small Commercial AF).

Tetrachloroethylene (PCE)													
Date	Residential				Small Commercial				Large Commercial & Industrial				Sub-slab AF for Res/ Sm Comm vs. Lg Comm & Industrial
	Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		
	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	
2010	4.1	0.6	--	--	21	3.1	--	--	21	3.1	--	--	AF not yet established AF = 0.1 / 0.01 AF = 0.1 / 0.01 AF = 0.03 / 0.01
May 2010	4.1	0.6	41	6	21	3.0	210	30	21	3.0	2,100	300	
May 2014	42	6.2	420	62	180	27	1,800	270	180	27	18,000	2,700	
Jun 2015	42	6.2	1,400	210	180	27	6,000	900	180	27	18,000	2,700	

Trichloroethylene (TCE)													
Date	Residential				Small Commercial				Large Commercial & Industrial				Sub-slab AF for Res/ Sm Comm vs. Lg Comm & Industrial
	Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		
	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	
2010	12	2.2	--	--	61	11.4	--	--	61	11.4	--	--	AF not yet established AF = 0.1 / 0.01 AF = 0.1 / 0.01 AF = 0.03 / 0.01
May 2010	12	2.2	120	22	61	11	610	110	61	11	6,100	1,100	
May 2014	2.1	0.39	21	3.9	8.8	1.6	88	16	8.8	1.6	880	160	
Jun 2015	2.1	0.39	70	13	8.8	1.6	290	53	8.8	1.6	880	160	

cis-1,2-dichloroethylene (cis-1,2-DCE)													
Date	Residential				Small Commercial				Large Commercial & Industrial				Sub-slab AF for Res/ Sm Comm vs. Lg Comm & Industrial
	Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		
	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	$\mu\text{g}/\text{m}^3$	ppbV	
2010	370	93	--	--	15,270	3,860	--	--	15,270	3,860	--	--	AF not yet established AF = 0.1 / 0.01
May 2010	--	--	--	--	--	--	--	--	--	--	--	--	

Key:

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter
ppbV = parts per billion by volume

-- not established
Changes noted in **BOLD**

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Vinyl Chloride (VC)													
Date	Residential				Small Commercial				Large Commercial & Industrial				Sub-slab AF for Res/ Sm Comm vs. Lg Comm & Industrial
	Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		
	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	
2010	1.6	0.6	--	--	28	11	--	--	28	11	--	--	AF not yet established
May 2010	1.6	0.62	16	6.2	28	11	280	110	28	11	2,800	1,100	AF = 0.1 / 0.01
May 2014	1.7	0.65	17	6.5	28	11	280	110	28	11	2,800	1,100	AF = 0.1 / 0.01
Jun 2015	1.7	0.65	57	22	28	11	930	370	28	11	2,800	1,100	AF = 0.03 / 0.01

Benzene													
Date	Residential				Small Commercial				Large Commercial/Industrial				Sub-slab AF for Res/ Sm Comm vs. Lg Comm & Industrial
	Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		
	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	
2010	3.1	1.0	--	--	16	5	--	--	16	5	--	--	AF not yet established
May 2010	3.1	0.95	31	9.5	16.0	4.9	160	49	16.0	4.9	1,600	490	AF = 0.1 / 0.01
May 2014	3.6	1.1	36	11	16.0	4.9	160	49	16.0	4.9	1,600	490	AF = 0.1 / 0.01
Jun 2015	3.6	1.1	120	37	16	4.9	530	160	16	4.9	1,600	490	AF = 0.03 / 0.01

Naphthalene													
Date	Residential				Small Commercial				Large Commercial/Industrial				Sub-slab AF for Res/ Sm Comm vs. Lg Comm & Industrial
	Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		Indoor Air VAL		Sub-slab VRSL		
	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	µg/m ³	ppbV	
May 2010	0.72	0.14	7.2	1.4	3.6	0.68	36	6.8	3.6	0.68	360	68	AF = 0.1 / 0.01
May 2014	0.83	0.16	8.3	1.6	3.6	0.68	36	6.8	3.6	0.68	360	68	AF = 0.1 / 0.01
Jun 2015	0.83	0.16	28	5.3	3.6	0.68	120	23	3.6	0.68	360	68	AF = 0.03 / 0.01

Key:

µg/m³ = micrograms per cubic meter
ppbV = parts per billion by volume

-- not established
Changes noted in **BOLD**