TOXIC VOCs and THEIR CANCER RISK

Assumptions: converting µg/m3 to ppbv		
Pressure	1	atm
Temperature	25	°C

Compound Name	Molecular Weight (g/mol)	Cancer Risk: 1 in a million		Noncancer Risk: Hazard Quotient = 0.1	
		µg/m3	ppbv	µg/m3	ppbv
acrolein	56.06	-	-	0.002	0.00087
tetrachlorethylene	165.83	3.8	0.56	4	0.59
benzene	78.11	0.13	0.041	3	0.94
carbon tetrachloride	153.82	0.17	0.027	19	3.0
chloroform	119.38	-	-	9.8	2.0
trichloroethylene	131.40	0.21	0.039	0.2	0.037
1,3-butadiene	54.09	0.03	0.014	0.2	0.090
vinyl chloride	62.50	0.11	0.043	10	3.9
acetonitrile	41.05	-	-	6	3.6
acrylonitrile	53.06	0.015	0.007	2	0.92
bromoform	252.73	0.91	0.088	-	-
carbon disulfide	76.14	-	-	70	22
chlorobenzene	112.56	100	22	-	-
chloroprene	88.54	-	-	0.7	0.19
p-dichlorobenzene	147.01	0.091	0.015	80	13
1,3-dichloropropene	110.97	0.3	0.066	2	0.44
ethyl acrylate	100.12	0.071	0.017	-	-
ethyl benzene	106.17	-	-	100	23
hexachloro-1,3-butadiene	260.76	0.0022	0.00021	9	0.84
methyl ethyl ketone	72.11	-	-	500	170
methyl isobutyl ketone	100.16	-	-	300	73
methyl methacrylate	100.12	-	-	70	17
methyl tert-butyl ether	88.15	3.8	1.1	300	83
methylene chloride	84.93	2.1	0.60	100	29
styrene	104.15	-	-	100	23
1,1,2,2-tertachloroethane	167.85	0.017	0.0025	-	-
toluene	92.14	-	-	40	11
1,1,2-trichloroethane	133.40	0.063	0.012	40	7.3
1,2,4-trichlorobenzene	181.45	-	-	20	2.7
xylene	106.16	-	-	10	2.3
formaldehyde	30.03	0.08	0.065	0.08	0.065
acetaldehyde	44.05	0.45	0.25	0.9	0.50

NOTE: µg/m3 values from the National Air Toxics Trends StationTechnical Assistance Document