

APPENDIX O  
[RESERVED]

[The Department is presently evaluating substances and concentrations for inclusion on this list. A technical document containing Toxic Air Pollutants Ambient Air Concentration Standards (TAP AACS 24 hour average) under consideration for Appendix O is included.]

**TOXIC AIR POLLUTANTS AMBIENT AIR CONCENTRATION STANDARDS (TAP AACS 24 hour average)  
UNDER CONSIDERATION FOR APPENDIX O**

**Carcinogens Based on IRIS**

<b>Ref #</b>	<b>CAS</b>	<b>SUBSTANCE</b>	<b>SC41 Existing MAAC</b>	<b>SC42 10<sup>-4</sup> Risk Level</b>	<b>SC42 10<sup>-5</sup> Risk Level</b>	<b>SC42 10<sup>-6</sup> Risk Level</b>	<b>Units</b>	<b>Emissions 2002 (Tons)</b>
1	75-07-0	Acetaldehyde (Prob. C)	2	.028	.0028	.00028	ppm	76
3	107-13-1	Acrylonitrile (Prob. C)	.0006	.0005	.00005	.000005	ppm	.7
5	Group	Arsenic compounds (known C)	2	.02	.002	.0002	µg/m <sup>3</sup>	1.0
6	71-43-2	Benzene (Known C)	.01	.01	.001	.0001	ppm	299
7	Group	Beryllium compounds (Prob. C)	.02	.04	.004	.0004	µg/m <sup>3</sup>	
8	106-99-0	1,3-butadiene (Known C)	.02	.001	.0001	.00001	ppm	1.5
9	Group	Cadmium compounds (Prob. C)	.5	.06	.006	.0006	µg/m <sup>3</sup>	.06
10	56-23-5	Carbon tetrachloride (Prob. C)	.02	.001	.0001	.00001	ppm	14
11	67-66-3	Chloroform (Prob. C)	.02	.0008	.00008	.000008	ppm	27
12	Group	Chromium compounds (Known C)	.01	.008	.0008	.00008	µg/m <sup>3</sup>	.05
16	107-06-2	Ethylene dichloride (1,2-dichloroethane) (Prob. C)	.01	.001	.0001	.00001	ppm	4.0
18	50-00-0	Formaldehyde (Prob.C)	.01	.007	.0007	.00007	ppm	841
19	118-74-1	Hexachlorobenzene (Prob. C)	1.7E-6	.00002	.000002	.0000002	ppm	0
20	302-01-2	Hydrazine (Prob. C)	.0003	.00002	.000002	.0000002	ppm	0
23	75-09-2	Methylene chloride (Prob.C)	.5	.058	.0058	.00058	ppm	72
24	Group	Nickel compounds	.15	.4	.04	.004	µg/m <sup>3</sup>	6
26	79-34-5	1,1,2,2-tetrachloroethane (Pos. C)	.01	.0003	.00003	.000003	ppm	.6
29	75-01-4	Vinyl chloride (Known C)	.05	.009	.0009	.00009	ppm	2

### Non-Carcinogens Based on IRIS

Ref #	CAS	SUBSTANCE	SC41 Existing MAAC	SC42 RfC	SC 42 HEC	NOAEL Or LOAEL	Units	2002 Emissions (Tons)
2	107-02-8	Acrolein	.001	.00001	.009	LOAEL	ppm	19
4	7664-41-7	Ammonia	2.5	.00014	3.3	NOAEL	ppm	3128
14	100-41-4	Ethylbenzene	10	.00023	100	NOAEL	ppm	116
21	Group	Manganese compounds	100	.05	50	LOAEL	ug/m <sup>3</sup>	13
22	Group	Mercury compounds	.5	.3		LOAEL	ug/m <sup>3</sup>	.2
25	78-87-5	Propylene dichloride (1,2-dichloropropane)	.75	.00087	.3	LOAEL	ppm	0
30	108-88-3	Toluene	10	.00011	32	LOAEL	ppm	933

\* The above tables denote various levels stated as 24-hour averages and substances for consideration for inclusion in Appendix O. Comments from the public as to their appropriateness are requested.

**The Integrated Risk Information System (IRIS):** The EPA's database of human health effects that may result from exposure to various substances found in the environment. The website address is [www.epa.gov/iris](http://www.epa.gov/iris).

**Excess Lifetime Risk:** The additional or extra risk of developing cancer due to exposure to a toxic substance incurred over the lifetime of an individual.

**10-4 Risk Level:** Concentration that is expected to result in excess cancer risk of one in ten thousand population.

**10.5 Risk Level:** Concentration that is expected to result in excess cancer risk of one in one hundred thousand population.

**10.6 Risk Level:** Concentration that is expected to result in excess cancer risk of one in one million population.

**Reference Concentration (RfC):** An estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime. It can be derived from a NOAEL, LOAEL, or benchmark concentration, with uncertainty factors generally applied to reflect limitations of the data used. Generally used in EPA's noncancer health assessments.

**Lowest-Observed-Adverse-Effect Level (LOAEL):** The lowest exposure level at which there are biologically significant increases in frequency or severity of adverse effects between the exposed population and its appropriate control group.

**No-Observed-Adverse-Effect Level (NOAEL):** The highest exposure level at which there are no biologically significant increases in the frequency or severity of adverse effect between the exposed population and its appropriate control; some effects may be produced at this level, but they are not considered adverse or precursors of adverse effects.

**Human Equivalent Concentration (HEC) or Dose (HED):** The human concentration (for inhalation exposure) or dose (for other routes of exposure) of an agent that is believed to induce the same magnitude of toxic effect as the experimental animal species concentration or dose. This adjustment may incorporate toxicokinetic information on the particular agent, if available, or use a default procedure, such as assuming that daily oral doses experienced for a lifetime are proportional to body weight raised to the 0.75 power.

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