

**DRAFT – DO NOT CITE OR QUOTE  
ATTACHMENT B**

**Toxic Air Contaminant List  
Quick Reference Format  
December 1999**

**I. Substances identified as Toxic Air Contaminants by the Air Resources Board, pursuant to the provisions of AB 1807\*\* and AB 2728\*\* (includes all Hazardous Air Pollutants listed in the Federal Clean Air Act Amendments of 1990).**

Information within the square brackets refers to the corresponding subcategory on Toxic Air Contaminant List.

Acetaldehyde [IIa]	Chloramben [V]
Acetamide [IIa]	Chlordane [V]
Acetonitrile [IVa]	* Chlorinated dibenzo- <i>p</i> -dioxins and dibenzofurans (Note 5) [IIa]
Acetophenone [IVa]	2,3,7,8-Tetrachlorodibenzo- <i>p</i> -dioxin (TCDD) [IIa]
2-Acetylaminofluorene [V]	⊗ Chlorine [IIa]
⊗ Acrolein [IIa]	Chloroacetic acid [IVa]
Acrylamide [IIa]	2-Chloroacetophenone [V]
Acrylic acid [IIa]	Chlorobenzene [IIa]
Acrylonitrile [IIa]	Chlorobenzilate [IVa]
Allyl chloride [IIa]	* Chloroform [I]
4-Aminobiphenyl [V]	Chloromethyl methyl ether [V]
Aniline [IIa]	Chloroprene [IVa]
o-Anisidine [IVa]	⊗ Chromium and Compounds (Note 4) [IIa]
Antimony compounds (Note 4) [IIa]	* Chromium VI (Hexavalent chromium) [IIa]
*⊗ Inorganic Arsenic and Arsenic compounds (Note 4) [IIa]	Cobalt Compounds (Note 4) [IIa]
(inorganic including arsine)	Coke Oven Emissions [V]
* Asbestos [IIa]	Cresols/Cresylic acid (isomers and mixture) [IIa]
[asbestiform varieties of serpentine (chrysotile), riebeckite	⊗ m-Cresol [IVa]
(crocidolite), cummingtonite-grunerite (amosite), tremolite,	o-Cresol [V]
actinolite, and anthophyllite]	p-Cresol [V]
* Benzene (including benzene from gasoline) [I]	Cumene [IVa]
Benzidine [IIa]	⊗ Cyanide compounds (Note 4&11) [IIa]
Benzotrichloride [V]	⊗ 2,4-D, salts and esters [IVa]
Benzyl chloride [IIa]	DDE (p,p-Dichlorodiphenyldichloroethylene) [V]
Beryllium Compounds (Note 4) [IIa]	Diazomethane [V]
Biphenyl [IVa]	Dibenzofuran [IVa]
Bis(chloromethyl)ether [IIa]	1,2-Dibromo-3-chloropropane (DBCP) [V]
Bis(2-ethylhexyl)phthalate (DEHP) [IIa]	Dibutylphthalate [IVa]
Bromoform [IVa]	⊗ 1,4-Dichlorobenzene (p-Dichlorobenzene) [IIa]
* 1,3-Butadiene [IIa]	3,3'-Dichlorobenzidine [IIa]
* Cadmium and cadmium compounds (Note 4) [IIa]	Dichloroethyl ether (Bis(2-chloroethyl) ether) [V]
(metallic cadmium and cadmium compounds)	⊗ 1,3-Dichloropropene (Telone)[IVa]
Calcium cyanamide [V]	⊗ Dichlorvos (DDVP) [VI]
Caprolactam [V]	Diethanolamine (Note 6) [IIa]
⊗ Captan [VI]	N,N-Diethyl aniline (N,N-Dimethylaniline) [V]
⊗ Carbaryl [VI]	Diethyl sulfate [V]
Carbon disulfide [IIa]	3,3'-Dimethoxybenzidine [V]
* Carbon tetrachloride (Tetrachloromethane) [IIa]	4-Dimethyl aminoazobenzene [V]
Carbonyl sulfide [IVa]	3,3-Dimethyl benzidine (o-Tolidine) [V]
Catechol [IVa]	Dimethyl carbamoyl chloride [V]

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Dimethyl formamide [IIa]	1,1-Dimethyl hydrazine [IVa]
Dimethyl phthalate [IVa]	Methyl isocyanate [V]
Dimethyl sulfate [IVa]	Methyl methacrylate [IIa]
4,6-Dinitro- <i>o</i> -cresol, and salts [V]	Methyl tertiary butyl ether (MTBE) [IIa][IIIa]
2,4-Dinitrophenol [IVa]	4,4'-Methylene bis(2-chloroaniline) [IIa]
2,4-Dinitrotoluene [V]	* Methylene chloride (Dichloromethane) [I]
1,4-Dioxane (1,4-Diethyleneoxide) [I]	4,4-Methylenedianiline [IIa]
1,2-Diphenylhydrazine [V]	Methylene diphenyl diisocyanate (MDI) [IIa]
Epichlorohydrin (1-Chloro-2,3-epoxypropane) [IIa]	Naphthalene [IIa]
1,2-Epoxybutane [IIa]	* Nickel and compounds (Note 4) [I]
Ethyl acrylate [IVa]	(metallic nickel & inorganic nickel compounds)
Ethyl benzene [IIa]	Nitrobenzene [IIa]
Ethyl carbamate (Urethane) [IIa]	4-Nitrobiphenyl [V]
Ethyl chloride (Chloroethane) [IIa]	4-Nitrophenol [IVa]
* Ethylene dibromide (1,2-Dibromoethane) [IIa]	2-Nitropropane [IIa]
* Ethylene dichloride (1,2-Dichloroethane) [IIa]	N-Nitroso-N-methylurea [V]
Ethylene glycol [IIa]	N-Nitrosodimethylamine [IIa]
Ethylene imine (Aziridine) [V]	N-Nitrosomorpholine [IIa]
*⊛ Ethylene oxide (1,2-Epoxyethane) [IIa]	Parathion [V]
Ethylene thiourea [IIa]	* Particulate emissions from diesel-fueled engines [IIa]
Ethylidene dichloride (1,1-Dichloroethane) [IIa]	⊛ Pentachloronitrobenzene (Quintozene) [IVa]
Fine mineral fibers (Note 13) [IVa]	⊛ Pentachlorophenol [IIa]
*⊛ Formaldehyde [I]	* Perchloroethylene (Tetrachloroethylene) [I]
Glycol ethers (Note 7) [IIa]	Phenol [IIa]
Heptachlor [V]	p-Phenylenediamine [IVa]
Hexachlorobenzene [IIa]	Phosgene [IIa]
Hexachlorobutadiene [V]	Phosphine [IIa]
Hexachlorocyclopentadiene [V]	⊛ Phosphorus [IIa]
Hexachloroethane [IIa]	Phthalic anhydride [IIa]
Hexamethylene-1,6-diisocyanate [IIa]	Polychlorinated biphenyls (PCBs) [IIa]
Hexamethylphosphoramide [V]	Polycyclic organic matter (POM) (Note 9) [IIa][IIIa][IVa]
Hexane [IIa]	Benzo[a]pyrene (Note 10) [IIa]
Hydrazine [IIa]	1,3-Propane sultone [IIa]
⊛ Hydrochloric acid [IIa]	β-Propiolactone [V]
Hydrogen fluoride (Hydrofluoric acid) [IIa]	Propionaldehyde [IVa]
Hydroquinone [IVa]	⊛ Propoxur (Baygon) [VI]
Isophorone [IIa]	Propylene dichloride (1,2-Dichloropropane) [IVa]
* Inorganic Lead and Inorganic lead compounds	⊛ Propylene oxide [I]
(includes elemental lead) (Note 4 & 8) [IIa]	1,2-Propylenimine (2-Methyl aziridine) [IVa]
Lead and compounds (Note 4) [IIa]	Quinoline [IVa]
(does not include elemental lead)	Quinone [IVa]
⊛ Lindane [IIa]	Radionuclides (including radon) (Note 12) [IVa]
Maleic anhydride [IIa]	Selenium and compounds (Note 4) [IIa]
⊛ Manganese and compounds (Note 4) [IIa]	Styrene [IIa] [IIIa]
Mercury and compounds (Note 4) [IIa]	Styrene oxide [IIa]
⊛ Methanol [IIa]	1,1,2,2-Tetrachloroethane [IIa]
⊛ Methoxychlor [VI]	Titanium tetrachloride [IVa]
⊛ Methyl bromide (Bromomethane) [IIa]	Toluene [IIa]
Methyl chloride (Chloromethane) [IVa]	2,4-Toluene diamine (2,4-Diaminotoluene) [V]
Methyl chloroform (1,1,1-Trichloroethane) [IIa]	Toluene-2,4-diisocyanate [IIa]
Methyl ethyl ketone (2-Butanone) [IIa]	<i>o</i> -Toluidine [IVa]
Methyl hydrazine [IVa]	Toxaphene (Chlorinated camphene) [V]
Methyl iodide (Iodomethane) [V]	1,2,4-Trichlorobenzene [IVa]
Methyl isobutyl ketone (Hexone) [IVa]	1,1,2-Trichloroethane [IIa]

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- \* Trichloroethylene [IIa]
- 2,4,5-Trichlorophenol [IVa]
- 2,4,6-Trichlorophenol [IIa]
- Triethylamine [IIa]
- ⊗ Trifluralin [VI]
- 2,2,4-Trimethylpentane [IVa]
- Vinyl acetate [IIa]
- Vinyl bromide [V]
- \* Vinyl chloride [IIa]
- Vinylidene chloride (1,1-Dichloroethylene) [IIa]
- ⊗ Xylenes (isomers and mixture) [IIa]
  - m-Xylene [IIa]
  - o-Xylene [IIa]
  - p-Xylene [IIa]

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**Footnotes**

- \* Substances which have already been identified by the Air Resources Board as Toxic Air Contaminants through a comprehensive AB 1807 risk assessment and which have health values developed by the Office of Environmental Health Hazard Assessment and approved by the Scientific Review Panel. A full risk assessment report is available.
  - \*\* AB 1807, Statutes 1983, chapter 1047, Health & Safety Code sections 39650 et. seq.  
AB 2728, Statutes 1992, chapter 1161, Health & Safety Code sections 39655 et. seq.
  - ❖ To be listed as a Toxic Air Contaminant, these substances will go through a comprehensive AB 1807 risk assessment.
  - ⊗ These substances are active ingredients in pesticides in California. For further information regarding the pesticidal uses of these compounds, please contact the Department of Pesticide Regulation.
- Note 4: For all listings above which contain the word “compounds” and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical (i.e., antimony, arsenic, etc.) as part of that chemical’s infrastructure.
- Note 5: Chlorinated dibenzo-*p*-dioxins and dibenzofurans: The cancer potency value for 2,3,7,8-tetrachlorodibenzo-*p*-dioxin was determined for the identification of chlorinated dioxins and dibenzofurans as toxic air contaminants in 1986. At that time, the Board identified dibenzo-*p*-dioxins and dibenzofurans chlorinated in the 2,3,7, and 8 positions and containing 4,5,6, or 7 chlorine atoms as toxic air contaminants. Since 1986, International Toxicity Equivalency Factors (ITEFs) have been developed which are used to evaluate the cancer risk due to exposure to samples containing mixtures of chlorinated dibenzo-*p*-dioxins and dibenzofurans. ITEFs are numerical factors that express the toxicity of an individual chlorinated dibenzo-*p*-dioxin or dibenzofuran relative to the toxicity of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin. ITEFs are listed for 16 chlorinated dibenzo-*p*-dioxins and dibenzofurans.
- Note 6: Diethanolamine: There is a 1997 draft report by the National Toxicology Program that shows evidence of carcinogenic activity in mice. (This may result in a change of the cancer classification.)
- Note 7: Glycol ethers: Includes mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol (R(OCH<sub>2</sub>CH<sub>2</sub>)<sub>n</sub> -OR' where  
n = 1,2 or 3  
R = alkyl or aryl groups  
R' = R,H, or groups which, when removed, yield glycol ethers with the structure;  
R(OCH<sub>2</sub>CH)<sub>n</sub>-OH. Polymers are excluded from the glycol category.
- Note 8: Inorganic Lead: Due to information on non-cancer health effects showing no identified threshold, no Reference Exposure Level has been developed. However, guidelines for assessing noncancer health impacts are currently being developed by ARB staff.
- Note 9: Polycyclic organic matter: Includes organic compounds with more than one benzene ring, and which have a boiling point greater than or equal to 100 °C.
- Note 10: Benzo[a]pyrene: Potency Equivalency Factors (PEF) have been developed for 24 polycyclic aromatic hydrocarbons (PAHs). Using benzo[a]pyrene as a reference compound, a weighting scheme for PAHs was developed in the 1994 Air Resources Board document entitled, *Benzo[a]pyrene as a Toxic Air Contaminant*. When a specific potency value is developed for a chemical, it should be used in place of the PEF.

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**Footnotes Continued**

- Note 11: Cyanide compounds: X'CN where X=H' or any other group where a formal dissociation may occur. For example, KCN or Ca(CN)<sub>2</sub>
- Note 12: Radionuclides: A type of atom which spontaneously undergoes radioactive decay.
- Note 13: Fine mineral fibers: Includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.
- Note 14: Environmental tobacco smoke: An AB 1807-type of health assessment for Environmental Tobacco Smoke was conducted by the Office of Environmental Health Hazard Assessment (OEHHA) and was approved by the Scientific Review Panel on June 19, 1997. The Air Resources Board accepted the report from OEHHA on October 23, 1997 and subsequently forwarded to the Department of Health Services' Tobacco Control Program for appropriate action.