#### Appendix B

#### Toxic Air Contaminant List Substances By Category December 1999

#### Category I

#### Substances identified as Toxic Air Contaminants, known to be emitted in California, with a full set of health values reviewed by the Scientific Review Panel.

Substance	CAS Number	Cancer Potency Value	Chronic Reference Exposure Level	Acute Reference Exposure Level
* Perchloroethylene (Tetrachloroethylene)	127-18-4			
(There is a potential for 12 substances to move into this category after the SRP has reviewed the noncancer chronic Reference Exposure Levels being developed under the Air Toxics "Hot Spots" Program.)				

#### **Category IIa**

Substances identified as Toxic Air Contaminants, known to be emitted in California, with one or more health values reviewed by the Scientific Review Panel or under development by the Office of Environmental Health Hazard Assessment for review by the Scientific Review Panel.

Substance	CAS Number	Cancer Potency Value (Note 1)	Chronic Reference Exposure Level (Note 2)	Acute Reference Exposure Level (Note 3)
Acetaldehyde	75-07-0			limited data available
Acetamide	60-35-5		limited data available	limited data available
Acrolein	107-02-8	i (Note1)		
Acrylamide	79-06-1			limited data available
Acrylic acid	79-10-7	ii (Note 1)		

- Health value has been reviewed by the Scientific Review Panel
- Health value is currently under development by the OEHHA
- ‡ Substance nominated for the development of additional health values
  - Substance is an active ingredient in pesticides in California

Category I and IIa

Substance	CAS Number	Cancer Potency Value (Note 1)	Chronic Reference Exposure Level (Note 2)	Acute Reference Exposure Level (Note 3)
Acrylonitrile	107-13-1			limited data available
Allyl chloride	107-05-1			limited data available
Aniline	62-53-3			limited data available
Antimony and compounds (Note 4)	7440-36-0	ii (Note1)	limited data available	limited data available
Antimony trioxide	1309-64-4	i (Note1)		limited data available
* Inorganic Arsenic and arsenic compounds (inoganic including arsine) (Note 4)	7440-38-2			
Arsine	7784-42-1	ii (Note1)		
* Asbestos [asbestiform varieties of serpentine (chrysotile), riebeckite (crocidolite), cummingtonite- grunerite (amosite), tremolite, actinolite, and anthophyllite]	1332-21-4		limited data available	limited data available
* Benzene (including benzene from gasoline)	71-43-2			
Benzyl chloride	100-44-7		limited data available	
Beryllium and compounds (Note 4)	7440-41-7			limited data available
Bis(chloromethyl)ether	542-88-1		limited data available	limited data available
Bis(2-ethylhexyl)phthalate (DEHP)	117-81-7			limited data available
* 1,3-Butadiene	106-99-0			limited data available
* Cadmium and compounds (Note 4) (metallic cadmium and cadmium compounds)	7440-43-9			limited data available
Carbon disulfide	75-15-0	ii (Note1)		
* Carbon tetrachloride (Tetrachloromethane)	56-23-5			
* Chlorinated dibenzo-p-dioxins (Note 5)	N/A			limited data available
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6			limited data available

- Health value has been approved by the Scientific Review Panel
- Health value is currently under development by the OEHHA
- ‡ Substance nominated for the development of additional health values
  - Substance is an active ingredient in pesticides in California

Substance	CAS Number	Cancer Potency Value (Note 1)	Chronic Reference Exposure Level (Note 2)	Acute Reference Exposure Level (Note 3)
International Toxicity Equivalency Factors:	_			
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9			limited data available
1,2,3,4,7,8-Hexachlorodibenzo- <i>p</i> -dioxin	39227-28-6			limited data available
1,2,3,6,7,8-Hexachlorodibenzo- <i>p</i> -dioxin	57653-85-7			limited data available
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3			limited data available
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9			limited data available
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4			limited data available
* Chlorinated dibenzofurans (Note 5)	N/A			limited data available
International Toxicity Equivalency Factors:				
2,3,7,8-Tetrachlorodibenzofuran	5120-73-19			limited data available
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9			limited data available
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9			limited data available
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9			limited data available
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5			limited data available
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4			limited data available
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7			limited data available
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0			limited data available
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6			limited data available
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4			limited data available
Chlorine	7782-50-5	ii (Note1)		
Chlorobenzene	108-90-7	ii (Note1)		limited data available
* Chloroform	67-66-3			
Chromium and compounds (Note 4)	7440-47-3		limited data available	limited data available

- Health value has been approved by the Scientific Review Panel
- Health value is currently under development by the OEHHA
- ‡ Substance nominated for the development of additional health values
  - Substance is an active ingredient in pesticides in California

Substance	CAS Number	Cancer Potency Value (Note 1)	Chronic Reference Exposure Level (Note 2)	Acute Reference Exposure Level (Note 3)
* Chromium (VI)	18540-29-9			limited data available
Cobalt and compounds (Note 4)	7440-48-4	i (Note1)		limited data available
Cresols/Cresylic Acid (isomers and mixture)	1319-77-3	ii (Note1)		limited data available
Cyanide compounds (Notes 4 & 11)	57-12-5	ii (Note1)	limited data available	
1,4-Dichlorobenzene	106-46-7			limited data available
3,3-Dichlorobenzidene	91-94-1		limited data available	limited data available
Diethanolamine	111-42-2	ii (Note 1&6)		limited data available
Dimethyl formamide	68-12-2	ii (Note1)		limited data available
1,4-Dioxane (1,4-Diethyleneoxide)	123-91-1			
Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8			
1,2-Epoxybutane	106-88-7	i (Note1)		limited data available
Ethyl benzene	100-41-4	ii (Note1)		limited data available
Ethyl carbamate (Urethane)	51-79-6		limited data available	limited data available
Ethyl chloride (Chloroethane)	75-00-3	ii (Note1)		limited data available
* Ethylene dibromide (1,2-Dibromoethane)	106-93-4			limited data available
* Ethylene dichloride (1,2-Dichloroethane)	107-06-2			limited data available
Ethylene glycol	107-21-1	ii (Note1)		limited data available
* Ethylene oxide (1,2-Epoxyethane)	75-21-8			limited data available
Ethylene thiourea	96-45-7			limited data available
Ethylidene dichloride (1,1-Dichloroethane)	75-34-3		limited data available	limited data available
* Formaldehyde	50-00-0			

- Health value has been approved by the Scientific Review Panel
- Health value is currently under development by the OEHHA
- ‡ Substance nominated for the development of additional health values
  - Substance is an active ingredient in pesticides in California

Substance	CAS Number	Cancer Potency Value (Note 1)	Chronic Reference Exposure Level (Note 2)	Acute Reference Exposure Level (Note 3)
Glycol ethers (Note 4 & 7)	N/A	ii (Note1)		
Ethylene glycol monobutyl ether	111-76-2	ii (Note1)		
Ethylene glycol monoethyl ether	110-80-5	ii (Note1)		
Ethylene glycol monoethyl ether acetate	111-15-9	ii (Note1)		
Ethylene glycol monomethyl ether	109-86-4	ii (Note1)		
Ethylene glycol monomethyl ether acetate	110-49-6	ii (Note1)		limited data available
Hexachlorobenzene	118-74-1			limited data available
Hexachloroethane	67-72-1	i (Note1)		limited data available
Hexamethylene-1,6-diisocyanate	822-06-0	ii (Note1)		limited data available
Hexane	110-54-3	ii (Note1)		limited data available
Hydrazine	302-01-2			limited data available
Hydrochloric acid	7647-01-0	ii (Note1)		
Hydrogen fluoride (Hydrofluoric acid)	7664-39-3	ii (Note1)		
Isophorone	78-59-1	i (Note1)		limited data available
* Inorganic Lead and Inorganic lead compounds (includes elemental lead) (Note 4)	N/A		(Note 8) limited data available	limited data available
Lead compounds (Note 4) (does not include elemental lead)	7439-92-1	i (Note 1)	limited data available	limited data available
Lindane	58-89-9			limited data available
Maleic anhydride	108-31-6	ii (Note1)		limited data available
Manganese and compounds (Note 4)	7439-96-5	ii (Note1)		limited data available
Mercury and compounds (Note 4)	7439-97-6	ii (Note1)		

- Health value has been approved by the Scientific Review Panel
- Health value is currently under development by the OEHHA
- ‡ Substance nominated for the development of additional health values
  - Substance is an active ingredient in pesticides in California

Substance	CAS Number	Cancer Potency Value (Note 1)	Chronic Reference Exposure Level (Note 2)	Acute Reference Exposure Level (Note 3)
Mercuric chloride	7487-94-7	i (Note1)	limited data available	limited data available
Methanol	67-56-1	ii (Note1)		
Methyl bromide (Bromomethane)	74-83-9	ii (Note1)		
Methyl chloroform (1,1,1-Trichloroethane)	71-55-6	ii (Note1)		
Methyl ethyl ketone (2-Butanone)	78-93-3	ii (Note1)		
Methyl isocyanate	624-83-9	ii (Note1)		limited data available
Methyl methacrylate	80-62-6	iii (Note1)		limited data available
‡ Methyl tertiary butyl ether	1634-04-4			limited data available
4,4-Methylene bis(2-chloroaniline)	101-14-4		limited data available	limited data available
* Methylene chloride (Dichloromethane)	75-09-2			
4,4-Methylenedianiline	101-77-9			limited data available
Methylene diphenyl diisocyanate	101-68-8	ii (Note1)		limited data available
Naphthalene	91-20-3	ii (Note1)		limited data available
* Nickel and compounds (Note 4) (metallic nickel and inorganic nickel compounds)	7440-02-0			
Nitrobenzene	98-95-3	i (Note1)		limited data available
2-Nitropropane	79-46-9	i (Note1)		limited data available
N-Nitrosodimethylamine	62-75-9		limited data available	limited data available
N-Nitrosomorpholine	59-89-2		limited data available	limited data available
* Particulate emissions from diesel-fueled engines	N/A			limited data available
Pentachlorophenol	87-86-5			limited data available
Phenol	108-95-2	ii (Note1)		

- Health value has been approved by the Scientific Review Panel
- Health value is currently under development by the OEHHA
- ‡ Substance nominated for the development of additional health values
  - Substance is an active ingredient in pesticides in California

Substance	CAS Number	Cancer Potency Value (Note 1)	Chronic Reference Exposure Level (Note 2)	Acute Reference Exposure Level (Note 3)
Phosgene	75-44-5	ii (Note1)		
Phosphine	7803-51-2	ii (Note1)		limited data available
Phosphorus	7723-14-0	ii (Note1)		limited data available
Phthalic anhydride	85-44-9	ii (Note1)		limited data available
Polychlorinated biphenyls (Aroclors)	1336-36-3		limited data available	limited data available
Polycyclic Organic Matter (Note 9)				
Polycyclic Aromatic Hydrocarbon (PAH)				
including but not limited to:				
Benzo[a]pyrene (Note 10)	50-32-8		limited data available	limited data available
Potency Equivalency Factors for PAHs (Note 1	0)			
Benz[a]anthracene	56-55-3		limited data available	no data available
Benzo[b]fluoranthene	205-99-2		limited data available	no data available
Benzo[j]fluoranthene	205-82-3		limited data available	no data available
Benzo[k]fluoranthene	207-08-9		limited data available	no data available
Chrysene	218-01-9		limited data available	no data available
Dibenz[a,h]acridine	226-36-8		limited data available	no data available
Dibenz[a,j]acridine	224-42-0		limited data available	no data available
Dibenz[a,h]anthracene	53-70-3		limited data available	no data available
Dibenzo[a,e]pyrene	192-65-4		limited data available	no data available
Dibenzo[a,h]pyrene	189-64-0		limited data available	no data available
Dibenzo[a,i]pyrene	189-55-9		limited data available	no data available
Dibenzo[a,l]pyrene	191-30-0		limited data available	no data available
7H-Dibenzo[c,g]carbazole	194-59-2		limited data available	no data available

- Health value has been approved by the Scientific Review Panel
- Health value is currently under development by the OEHHA
- ‡ Substance nominated for the development of additional health values
  - Substance is an active ingredient in pesticides in California

Substance	CAS Number	Cancer Potency Value (Note 1)	Chronic Reference Exposure Level (Note 2)	Acute Reference Exposure Level (Note 3)
7,12-Dimethylbenz[a]anthracene	57-97-6		limited data available	limited data available
1,6-Dinitropyrene	4239-76-48		limited data available	no data available
1,8-Dinitropyrene	4239-76-59		limited data available	no data available
Indeno[1,2,3-cd]pyrene	193-39-5		limited data available	no data available
3-Methylcholanthrene	56-49-5		limited data available	limited data available
5-Methylchrysene	3697-24-3		limited data available	no data available
5-Nitroacenaphthene	602-87-9		limited data available	no data available
6-Nitrochrysene	7496-02-8	7496-02-8		no data available
2-Nitrofluorene	607-57-8	607-57-8		no data available
1-Nitropyrene	5522-43-0		limited data available	limited data available
4-Nitropyrene	57835-92-4		limited data available	no data available
1,3-Propane sultone	1120-71-4		limited data available	limited data available
Propylene oxide	75-56-9			
Selenium and compounds (Note 4)	7782-49-2	ii (Note1)		limited data available
Hydrogen selenide	7783-07-5	ii (Note1)		
‡ Styrene	100-42-5	i (Note1)		
Styrene oxide	96-09-3	i (Note1)		limited data available
1,1,2,2-Tetrachloroethane	79-34-5		limited data available	limited data available
Toluene	108-88-3	ii (Note1)		
Toluene-2,4-diisocyanate	584-84-9			limited data available
1,1,2-Trichloroethane	79-00-5			limited data available
* Trichloroethylene	79-01-6			limited data available
2,4,6-Trichlorophenol	88-06-2	_	limited data available	limited data available

- Health value has been approved by the Scientific Review Panel
- Health value is currently under development by the OEHHA
- ‡ Substance nominated for the development of additional health values
  - Substance is an active ingredient in pesticides in California

Substance	CAS Number	Cancer Potency Value (Note 1)	Chronic Reference Exposure Level (Note 2)	Acute Reference Exposure Level (Note 3)
Triethylamine	121-44-8	ii (Note 1)		
Vinyl acetate	108-05-4	i (Note1)		limited data available
* Vinyl chloride (Chloroethylene)	75-01-4			
Vinylidene chloride (1,1-Dichloroethylene)	75-35-4	ii (Note1)		limited data available
Xylenes (mixed isomers)	1330-20-7	ii (Note1)		
m-Xylene	108-38-3	ii (Note1)		
o-Xylene	95-47-6	ii (Note1)		
p-Xylene	106-42-3	ii (Note1)		

<sup>-</sup> Health value has been approved by the Scientific Review Panel

<sup>-</sup> Health value is currently under development by the OEHHA

<sup>‡ -</sup> Substance nominated for the development of additional health values

<sup>-</sup> Substance is an active ingredient in pesticides in California

Substance	CAS Number	Cancer Potency Value (Note 1)	Chronic Reference Exposure Level (Note 2)	Acute Reference Exposure Level (Note 3)
Ammonia	7664-41-7	ii (Note 1)		
Chlorine dioxide	10049-04-4	ii (Note1)		limited data available
Chloropicrin	76-06-2	ii (Note1)		
Copper and compounds (Note 4)	7440-50-8	ii (Note1)	limited data available	
Creosotes	N/A		limited data available	limited data available
Ethylene	74-85-1	ii (Note1)		limited data available
Glutaraldehyde	111-30-8	ii (Note1)		limited data available
Hexachlorocyclohexanes	608-73-1			limited data available
Hydrogen sulfide	7783-06-4	ii (Note1)		
Isopropyl alcohol	67-63-0	ii (Note1)		
Michler's ketone (4,4'-Bis(dimethylamino)benzophenone)	90-94-8		limited data available	limited data available
Nitric acid	7697-37-2	ii (Note1)		
Phosphoric acid	7664-38-2	ii (Note1)		limited data available
Silver and compounds (Note 4)	7440-22-4	ii (Note1)		limited data available
Sodium hydroxide	1310-73-2	ii (Note1)		
Sulfuric acid	7664-93-9	ii (Note1)		
Zinc and compounds (Note 4)	7440-66-6	ii (Note1)		limited data available

- To be listed as a Toxic Air Contaminant, these substances will go though a comprehensive AB 1807 risk assessment.
- Substance is an active ingredient in pesticides in California
- Health value has been reviewed by the Scientific Review Panel
- Health value is currently under development by the OEHHA
- ‡ Substance nominated for the development of additional health values

# Substances known to be emitted in California, and are NOMINATED for development of health values or additional health values.

Category IIIa Identified as Toxic Air Contami	nants	Category IIIb NOT Identified as Toxic Air Contamin	
Substance	CAS Number	Substance	CAS Number
Methyl tertiary butyl ether (Note 15) (Substance also in Category IIa)	1634-04-4	Crystalline silica	7631-86-9
Polycyclic Organic Matter (Note 9)	N/A		
Other PAHs and Nitro-PAHs not listed in Category IIa or IVa (specific PAHs still to be determined)			
Styrene (Substance also in Category IIa)	100-42-5		

To be listed as a Toxic Air Contaminant, these substances will go though a comprehensive AB 1807 risk assessment.

B - 11 Category III

Category IVa

# Substances identified as Toxic Air Contaminants, known to be emitted in California, and are TO BE EVALUATED for entry into Category III

Substance	CAS Number	Substance	CAS Number
Acetonitrile	75-05-8	Fine mineral fibers (Note 13)	N/A
Acetophenone	98-86-2	Hydroquinone	123-31-9
o-Anisidine	90-04-0	Methyl chloride (Chloromethane)	74-87-3
Biphenyl	92-52-4	Methyl hydrazine	60-34-4
Carbonyl sulfide	463-58-1	Methyl isobutyl ketone (Hexone)	108-10-1
Catechol	120-80-9	Pentachloronitrobenzene (Quintobenzene)	82-68-8
Chloroacetic acid	79-11-8	p-Phenylenediamine	106-50-3
Chlorobenzilate	510-15-6	Polycyclic Organic Matter (POM) (Note 9)	N/A
Chloroprene	126-99-8	(other POMs not listed in Category IIa or III)	
Cumene	98-82-8	including but not limited to:	
Dibenzofuran	132-64-9	Anthracene	120-12-7
Dibutylphthalate	84-74-2	Propionaldehyde	123-38-6
1,3-Dichloropropene (Telone)	542-75-6	Propylene dichloride	78-87-5
1,1-Dimethyl hydrazine	57-14-7	1,2-Propylenimine (2-Methyl aziridine)	75-55-8
Dimethyl phthalate	131-11-3	Radionuclides (including radon) (Note 12)	N/A
Dimethyl sulfate	77-78-1	Titanium tetrachloride	7550-45-0
Ethyl acrylate	140-88-5	1,2,4-Trichlorobenzene	120-82-1
		2,2,4-Trimethylpentane	540-84-1

<sup>-</sup> Substance is an active ingredient in pesticides in California

#### **Category IVb**

# Substances NOT identified as Toxic Air Contaminants, known to be emitted in California, and are TO BE EVALUATED for entry into Category III.

Substance	CAS Number	Substance	CAS Number
Aluminum and compounds (Note 4)	7429-90-5	Decabromodiphenyl oxide	1163-19-5
Ammonium nitrate	6484-52-2	Dialkylnitrosamines	N/A
Ammonium sulfate	7783-20-2	Diaminotoluene (mixed isomers)	N/A
Barium and compounds (Note 4)	7440-39-3	Dicofol	115-32-2
Benzoyl chloride	98-88-4	Environmental Tobacco Smoke (Note 14)	N/A
Bis(2-ethylhexyl)adipate	103-23-1	Gasoline Vapors	N/A
Bromine and compounds (inorganic) (Note 4)	7726-95-6	4,4'-Isopropylidenediphenol	80-05-7
Butyl acrylate	141-32-2	Molybdenum trioxide	1313-27-5
n-Butyl alcohol	71-36-3	Nitrilotriacetic acid	139-13-9
sec-Butyl alcohol	78-92-2	Peracetic acid	79-21-0
tert-Butyl alcohol	75-65-0	2-Phenylphenol	90-43-7
Butyl benzyl phthalate	85-68-7	Propene	115-07-1
Carbon black and Carbon black extracts	1333-86-4	Terephthalic acid	100-21-0
Chlorinated fluorocarbons	N/A	Thiourea	62-56-6
Chlorophenols	N/A	1,2,4-Trimethylbenzene	95-63-6
Cumene hydroperoxide	80-15-9		
Cyclohexane	110-82-7		

<sup>-</sup> To be listed as a Toxic Air Contaminant, these substances will go though a comprehensive AB 1807 risk assessment.

<sup>-</sup> Substance is an active ingredient in pesticides in California

### Category V

Substances identified as Toxic Air Contaminants, and NOT KNOWN TO BE EMITTED from stationary source facilities in California based on information from the AB 2588 Air Toxic "Hot Spots" Program and the California Toxic Release Inventory.

Substance	CAS Number	Substance	CAS Number
2-Acetylaminofluorene	53-96-3	4,6-Dinitro-o-cresol, and salts	534-52-1
4-Aminobiphenyl	92-67-1	2,4-Dinitrophenol	51-28-5
Benzidine	92-87-5	2,4-Dinitrotoluene	121-14-2
Benzotrichloride	98-07-7	1,2-Diphenylhydrazine	122-66-7
Bromoform	75-25-2	Ethylene imine (Aziridine)	151-56-4
Calcium cyanamide	156-62-7	Heptachlor	76-44-8
Caprolactam	105-60-2	Hexachlorobutadiene	87-68-3
Chloramben	133-90-4	Hexachlorocyclopentadiene	77-47-4
Chlordane	57-74-9	Hexamethylphosphoramide	680-31-9
2-Chloroacetophenone	532-27-4	Methyl iodide (Iodomethane)	74-88-4
Chloromethyl methyl ether	107-30-2	4-Nitrobiphenyl	92-93-3
Coke oven emissions	N/A	4-Nitrophenol	100-02-7
o-Cresol	95-48-7	N-Nitroso-N-methylurea	684-93-5
p-Cresol	106-44-5	Parathion	56-38-2
DDE (p,p-Dichlorodiphenyldichloroethylene)	72-55-9	beta-Propiolactone	57-57-8
Diazomethane	334-88-3	Quinoline	91-22-5
1,2-Dibromo-3-chloropropane	96-12-8	Quinone	106-51-4
Dichloroethyl ether (Bis(2-chloroethyl)ether)	111-44-4	2,4-Toluene diamine	95-80-7
N,N-Diethyl aniline (N,N-Dimethyl aniline)	121-69-7	o-Toluidine	95-53-4
Diethyl sulfate	64-67-5	Toxaphene (Chlorinated camphene)	8001-35-2
3,3-Dimethoxybenzidine	119-90-4	2,4,5-Trichlorophenol	95-95-4
4-Dimethyl aminoazobenzene	60-11-7	Vinyl bromide	593-60-2
3,3-Dimethyl benzidine	119-93-7		
Dimethyl carbamoyl chloride	79-44-7		

B - 14 Category V

#### Category VI

Substances identified as Toxic Air Contaminants, NOT KNOWN TO BE EMITTED from stationary source facilities in California, and are active ingredients in pesticides in California.

For further information regarding the pesticidal uses of these compounds, please contact the Department of Pesticide Regulation.

Substance	CAS Number	Substance	CAS Number
Captan	133-06-2	Dichlorvos	62-73-7
Carbaryl	63-25-2	Methoxychlor	72-43-5
m-Cresol	108-39-4	Propoxur (Baygon)	114-26-1
2,4-D, salts and esters (2,4-Dichlorophenoxyacetic acid)	94-75-7	Trifluralin	1582-09-8

<sup>-</sup> Substance is an active ingredient in pesticides in California

#### **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 though a comprehensive AB 1807 risk assessment.

Health value reviewed by the Scientific Review Panel.

Health value under development by the Office of Environmental Health Hazard Assessment for review by the Scientific Review Panel.

‡ These substances have been nominated for the development of additional health values.

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 1: Substances in Category IIa & IIb without a draft or Scientific Review Panel reviewed Cancer Potency Value have been divided into 3 groups depending on their cancer classification by the U.S Environmental Protection Agency (U.S. EPA) or the International Agency for Research on Cancer (IARC).
  - i Classified by U.S. EPA and/or IARC as a probable or possible human carcinogen (Group B1, B2, C, 2A, or 2B substances);
  - ii Classified by U.S. EPA and/or IARC as insufficient/inadequate data exist to classify as to carcinogenicity to humans (Group 3 or D substances), or no data or value available at this time:
  - iii Considered not likely to be carcinogenic to humans by U.S. EPA and/or IARC (Group 4 or E substances).
- Note 2: The literature was reviewed for substances in Category IIa & IIb without a draft or Scientific Review Panel reviewed Chronic Reference Exposure Level. "Limited data available" was added to the row if some chronic toxicity data was found in the literature. "No data available" was added to the row if no chronic toxicity data was found in the literature.
- Note 3: The literature was reviewed for substances in Category IIa & IIb without a draft or Scientific Review Panel reviewed Acute Reference Exposure Level. "Limited data available" was added to the row if some acute toxicity data was found in the literature. "No data available" was added to the row if no acute toxicity data was found in the literature.
- 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.
- 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.
- Note 15: The OEHHA completed its inhalation cancer potency risk assessment on MTBE and the Scientific Review Panel approved it at its November 1999 meeting.

ARB/SSD/SES December 1999