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CHEMICAL SPECIALTIES MANUFACTURERS ASSOCIATION

202/872-8110

March 26, 1987

TO: CSMA Membership
FROM: George G. Misko *GBM*
Regulatory Counsel
RE: California Proposition 65:
Lists of Covered Chemicals

Route: _____
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X-7: _____

Proposition 65, enacted in California by referendum in November, 1986, prohibits the contamination of drinking water with chemicals known to cause cancer or reproductive toxicity, and require warnings prior to exposing any individuals to chemicals known to cause cancer or reproductive toxicity. The law requires the Governor of California to publish a list of those chemicals "known to the State to cause cancer or reproductive toxicity" by March 1, 1987. The chemicals on that list are those to which the drinking water prohibitions and warning requirements apply.

On February 27, 1987, Governor Deukmejian published two lists of toxic chemicals. The first list of 29 chemicals are those which have been determined to cause cancer or reproductive toxicity. The second list of approximately 250 chemicals will be reviewed by a Scientific Advisory Panel established by the Governor. The decision to include these chemicals on the list of covered chemicals will be based upon the Scientific Panel's review. Copies of these two lists of chemicals are attached.

Following publications of the two lists by the Governor, a number of environmental groups, among others, filed suit against the Governor. The suit generally alleges that the Governor did not include enough chemicals on the first list.

CSMA also has available interpretive guidelines and procedures promulgated by the California Department of Health and Welfare. The interpretive guidelines provide definitions to many of the terms used in the Act. The procedures review the steps the Department of Health will take to make safe use determinations. If you desire copies of these documents, please contact Marlene Copeland, (202) 872-8110, at CSMA.

We will keep you advised of other steps taken to implement Proposition 65.

:mc

VVV 000009022

CHEMICALS KNOWN TO CAUSE CANCER OR REPRODUCTIVE TOXICITY

The Safe Drinking Water and Toxic Enforcement Act of 1986 requires the Governor to publish by March 1, 1987 a list of those chemicals known to the State to cause cancer or reproductive toxicity. Health and Safety Code Section 25249.8(a). The attached list includes all those chemicals which are known to cause cancer in humans as determined by World Health Organization's International Agency for Research on Cancer (IARC) or the United States Public Health Service's National Toxicology Program (NTP). In addition, the list includes the three chemicals currently regulated by the United States Department of Labor's Occupational Safety and Health Administration (OSHA) as reproductive toxicants.

The Safe Drinking Water and Toxic Enforcement Act of 1986 requires that the attached list be revised and republished at least once per year. Therefore, new chemicals may be added to the list based on the recommendations of the Safe Drinking Water and Toxic Enforcement Act Scientific Advisory Panel, changes to determinations of IARC or NTP, or changes to federal OSHA regulations.

Questions about the list or requests for copies of the current list should be addressed to the State's lead agency for implementation of the Safe Drinking Water and Toxic Enforcement Act:

State of California
Health and Welfare Agency
1600 Ninth Street, Room 450
Sacramento, CA 95814

VVV 000009023

LIST OF CANDIDATE CHEMICALS

The Safe Drinking Water and Enforcement Act of 1986 (the Act) requires the Governor to publish a list of chemicals known to the State to cause cancer or reproductive toxicity and to revise and republish the list in light of additional knowledge. A primary list of chemicals known to the State to cause cancer or reproductive toxicity has been published as required by the Act. However, it is also necessary to begin the process of considering additions to this primary list. What follows is a list of candidate chemicals which is being referred to as the Safe Drinking Water and Toxic Enforcement Act Scientific Advisory Panel for its consideration and opinion.

This list of candidate chemicals includes chemicals for which there is limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals as identified by the World Health Organization's International Agency for Research on Cancer (IARC) or by the United States Public Health Service's National Toxicology Program (NTP). Under the terms of the Act, the Scientific Advisory Panel is responsible for reviewing the available data concerning these chemicals and any other chemicals which are suspected carcinogens or reproductive toxicants and forming an opinion on whether such chemicals have been clearly shown through scientifically valid testing according to generally accepted principles to cause cancer or reproductive toxicity.

Any questions about this list of candidate chemicals or suggestions for additional chemicals to be considered by the Scientific Advisory Panel should be addressed to the lead agency for implementation of the Act:

State of California
Health and Welfare Agency
1600 Ninth Street, Room 450
Sacramento, CA 95814

- Note: (1) An asterisk (*) indicates that the compound(s) responsible for the carcinogenic effect in humans cannot be specified.
- (2) The identification number is the Chemical Abstracts Service (CAS) Registry Number. No CAS number is given when several substances are presented as a single listing.

CARCINOGENS

<u>Chemical</u>	<u>CAS Number</u>
4-Aminobiphenyl	92671
Analgesic mixtures containing phenacetin*	---
Arsenic and arsenic compounds*	---
Asbestos	1332214
Azathioprine	446866
Benzene	71432
Benzidine [and its salts]	92875
N,N-Bis(2-chloroethyl)-2-naphthylamine (Chlornapazine)	494031
Bis(chloromethyl)ether	542881
1,4-Butanediol dimethanesulfonate (Myleran)	55981
Certain combined chemotherapy for lymphomas*	---
Chlorambucil	305033
Chloromethyl methyl ether (technical grade)	107302
Chromium and certain chromium compounds*	---
Coke oven emissions*	--- VVV 000009025
Conjugated estrogens*	---
Cyclophosphamide	50180
Diethylstilbestrol	56531
Fluphalan	148823
Methoxsalen with ultraviolet A therapy (PUVA)	298817
Mustard Gas	505602

2-Naphthythylamine	91598
Soots, tars and mineral oils* (mineral oils may vary in composition, particularly in relation to their content of carcinogenic polycyclic aromatic hydrocarbons)	---
Thorium dioxide	1314201
Treosulfan	299752
Vinyl chloride	75014

REPRODUCTIVE TOXICANTS

1,2,Dibromo-3-chloropropane	96128
Ethylene oxide	75218
Lead	7439921

Candidate Chemical Carcinogens
(Chemicals showing limited evidence for carcinogenicity in
people and/or sufficient evidence in animals)

Note: The identification number is the Chemical Abstracts Service (CAS) Registry Number. No CAS number is given when several substances are presented as a single listing.

	<u>CAS Number</u>
2-Acetylaminofluorene	53963
Acrylonitrile	107131
Actinomycins	---
Adriamycin	23214928
AF-2; [2-(2-furyl)-3-(5-nitro-2-furyl)acrylamide	3688537
Aflatoxins	---
-Aminoanthraquinone	117793
ortho-Aminoazotoluene	97563
1-Amino-2-methylanthraquinone	82280
2 Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole	712685
Amitrole	61825
ortho-Anisidine and ortho-Anisidine hydrochloride	90040
Aramite	140578
Auramine	492808
Azaserine	115026
 Benz[a]anthracene	 56553
Benzo[b]fluoranthene	205992
Benzo[j]fluoranthene	205823
Benzo[k]fluoranthene	207089
Benzo[a]pyrene	50328

VVV 000009027

Benzotrichloride	98077
Benzyl violet 4B	1694093
Beryl ore	---
Beryllium	7440417
Beryllium compounds:	
Beryllium aluminum alloy	12770502
Beryllium chloride	7787475
Beryllium fluoride	7787497
Beryllium hydroxide	13327327
Beryllium oxide	1304569
Beryllium phosphate	13598157
Beryllium sulfate	13510491
Zinc beryllium silicate	15191852
2-(p-tert-Butylphenoxy) isopropyl-2-chloroethyl sulfite	140578
beta-Butyrolactone	3068880
Cadmium	7440439
Cadmium compounds:	
Cadmium chloride	10108642
Cadmium oxide	1306190
Cadmium sulfate	10124364
Cadmium sulfide	1306236
Carbon tetrachloride	56235
Carrageenan (degraded)	vvv 000009028 ---
Chlordecone (Kepone)	143500
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)	13010474

Chloroform	67663
4-Chloro-ortho-phenylenediamine	95830
Citrus Red No. 2	6358538
para-Cresidine	120718
Cupferron	135206
Cycasin	14901087
Dacarbazine	4342034
Daunomycin	20830813
DDT (1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane	50293
N,N'-Diacetylbenzidine	613354
2,4-Diaminoanisoie sulfate	39156417
4,4'-Diaminodiphenyl ether	101814
2,4'Diaminotoluene	95807
Dibenz[a,h]acridine	226368
Dibenz[a,j]acridine	224420
Dibenz[a,h]anthracene	53703
7H-Dibenzo[c,g]carbazole	194592
Dibenzo[a,e]pyrene	192654
Dibenzo[a,h]pyrene	189640
Dibenzo[a,i]pyrene	189559
Dibenzo[a,l]pyrene	191300
1,2-Dibromo-3-chloropropane	96128
3,3'-Dichlorobenzidine [and its salts]	91941
3,3'-Dichloro-4,4'-diaminodiphenyl ether	28434868
Diepoxybutane	1464535

VVV 000009029

Di(2-ethylhexyl)phthalate	117817
1,2-Diethylhydrazine	1615801
Diethyl sulfate	64675
Dihydrosafrole	94586
Dihydroxymethylfuratrizine (Panfuran S)	556127
3-3'-Dimethoxybenzidine (ortho-Dianiasidine)	119904
4-Dimethylaminoazobenzene	60117
trans-2-[(Dimethylamino)methylimino]-5-[2-5-nitro-2-furyl)vinyl]- 1,3,4-oxadiazole	55738540
3,3'-Dimethylbenzidine (ortho-Tolidine)	119937
Dimethylcarbamoyl chloride	79447
1,1 Dimethylhydrazine	57147
1,2 Dimethylhydrazine	540738
Dimethyl sulfate	77781
1,4-Dioxane	123911
Direct Black 38 (technical grade)	1937377
Direct Blue 6 (technical grade)	2602462
Epichlorohydrin	106898
Estradiol 17B	50282
Estrone	53167
Ethinylestradiol	57636
Ethylene dibromide	106934
Ethylene dichloride	107062
Ethyleneimine	151564
Ethylene oxide	75218

VVV 000009030

Ethylene thiourea	96457
Ethyl methanesulfonate	62500
Formaldehyde	50000
Formylhydrazino)-4-(5-nitro-2-furyl)thiazole	3570750
Glycialdehyde	765344
Gyromitrin (acetaldehyde methylformylhydrazone)	16568028
Hexachlorobenzene	118741
Hexamethylphosphoramide	680319
drazine and hydrazine sulfate	302012
Hydrazobenzene	122667
Indeno[1,2,3-cd]pyrene	193395
Iron dextran complex	9004664
Isosafrole	120581
Lasiocarpine	303344
Lead	7439921
Lead compounds:	
Lead acetate	301042
Lead phosphate	7446277
Lead subacetate	1335326
Lindane and other hexachlorocyclohexane isomers	58899

Merphalan	531760
Mestranol	72333
5-Methyl chrysene	3697243
2-Methylaziridine (propyleneimine)	75558
Methylazoxymethanol; methylozaoxymethyl acetate	592621
4,4'-Methylene bis(2-chloroaniline) (MBOCA)	101144
4,4'-Methylene bis(2-methylaniline)	838880
4,4'-Methylenedianiline and its dihydrochloride	101779
Methyl iodide	74884
Methyl methanesulfonate	66273
2-Methyl-1-nitroanthraquinone (of uncertain purity)	129157
N-Methyl-N'-Nitro-N-nitrosoguanidine	70257
Methylthiouracil	56042
Metronidazole	443481
Michler's ketone	90948
Mirex	2385855
Mitomycin C	50077
Monocrotaline	315220
5-(Morpholinomethyl)-3-[(5-nitro-furfurylidene)-amino]- 2-oxalolidinone	139913
Nafenopin	3771195
Nickel	7440020
Nickel compounds:	
Nickel carbonyl	13463393
Nickel carbonate	3333673

Nickel hydroxide	12054487
Nickel subsulfide	12035722
Niridazole	61574
Nitrilotriacetic acid	139139
4-Nitrobiphenyl	92933
5-Nitroacenaphthene	602879
5-Nitro-o-anisidine	99592
Nitrofen (technical grade)	1836755
1-[(5-Nitrofurfurylidene)-amino]-2-imidazolidinone	555840
N-[4-(5-Nitro-2-furyl)-2-thiazolyl]acetamide	531828
Nitrogen mustard and its hydrochloride	51752
Nitrogen mustard N-oxide and its hydrochloride	302705
2-Nitropropane	108032
N-Nitrosodi-n-butylamine	924163
N-Nitrosodiethanolamine	116547
N-Nitrosodiethylamine	55185
N-Nitrosodimethylamine	62759
p-Nitrosodiphenylamine	156105
N-Nitrosodi-n-propylamine	621647
N-Nitroso-N-ethylurea	759739
N-Nitrosomethylethylamine	10595956
N-Nitroso-N-methylurea	684935
N-Nitroso-N-methylurethane	615532
N-Nitrosomethylvinylamine	4549400
N-Nitrosomorpholine	59892
N-Nitrosomornicotine	VVV 000009033 16543558

N-Nitrosopiperidine	100754
N-Nitrosopyrrolidine	930552
N-Nitrososarcosine	13256229
Orange Oil SS	2646175
Oxymetholone	434071
Phenacetin	62442
Phenazopyridine and its hydrochloride	136403
Phenoxybenzamine and its hydrochloride	59861
Phenytoin and sodium salt of phenytoin	57410
Polybrominated biphenyls	---
Polychlorinated biphenyls	---
Ponceau MX	3761533
Ponceau 3R	3564098
Procarbazine and its hydrochloride	366701
Progesterone	57830
1,3-Propane sultone	1120714
beta-Propiolactone	57578
Propylthiouracil	51525
Reserpine	50555
Saccharin;sodium saccharin	81072; 128449
Safrole	94597
Selenium sulfide	7488564

Sterigmatocystin	10048132
Streptozotocin	18883664
Sulfallate	95067
Testosterone and its esters	58220
2,3,7,8-Tetrachlorodibenzo-para-dioxin (TCDD)	1746016
Thioacetamide	62555
4,4'-Thiodianiline	139651
Thiourea	62566
Toluene diisocyanate	584849
ortho-Toluidine and its hydrochloride	636215
Boxaphene (polychlorinated camphenes)	8001352
2,4,6-Trichlorophenol	88062
Tris(1-aziridinyl)phosphine sulfide (thiotepa)	52244
Tris(2,3-dibromopropyl)phosphate	126727
Trp-P-1 (Tryptophan-P-1)	62450060
Trp-P-2 (Tryptophan-P-2)	62450071
Trypan Blue (commercial grade)	72571
Uracil mustard	66751
Urethane	51796

