

TO: Distribution

FROM: T. G. Grumbles

DATE: March 21, 1988

Interoffice
Communication

SUBJ: ANALYTICAL WORK FOR REGULATORY REQUIREMENTS

VISTA

Based on a review of the list Jim Yates prepared, it is clear that benzene and the PNA's are the chemicals with the potential to appear most often in our products. Therefore, initial efforts should be prioritized towards the analytical work for those two chemicals. From a Proposition 65 standpoint warnings are required now for benzene and will be required beginning in July for the PNA's. If analytical method development is required for the PNA analysis, this should be high priority.

Second in priority, based on regulatory deadlines and product volume in commerce, would be EtO and dioxane. We already know a lot about these levels and additional work may only include data gathering, reviewing sampling frequency, and determining if current sampling frequency allows us to generate representative data.

Third in priority would be the various chlorinated compounds on the Prop 65 list. These are BCME, CCL4, chloroform, epichlorohydrin, PCB's and vinyl chloride. These chemicals have the potential to be present in less volume for commercial purposes, but the warnings will be required in October of this year, except for BCME which is required now.

The remaining analytical needs are for DEHP, nickel catalyst fines, lead acetate and arsenic. Arsenic warnings are required now.

Attached is a suggested "project" organization based on the priorities described. Also, I've listed several general issues that should be considered. It should be noted that some PCB analysis and benzene in LAB work has been done in response to other regulations in the last two years. In several cases, collection of existing data will be our first step. Please review the enclosed then we'll schedule a conference call to discuss details of the project.


T. G. Grumbles

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Enclosure

DISTRIBUTION: Jim Yates
Ron Poe
Charlie Starks

VVV 000014818

GENERAL ISSUES

- How do we represent the data?

Ranges, $\pm$ accuracy statements, not to exceed ...

- How do we collect samples and/or how many analysis do we do to assure representative data?
- How do we validate non-referenced methods? (This may or may not be an issue.)
- Pro/cons of doing the work or all of the work at an "outside" contract laboratory.
- Analytical method applicability to different products (i.e., is benzene in LAB method same as benzene in HCL?)
- Significant data currently exists for dioxane, EtO, and VCM residual levles. Some data exists for benzene and PCB's.

- How is PVC handled?

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PROPOSITION 65 CHEMICALS (EFFECTIVE DATE) AND
PRODUCTS TO BE ANALYZED - PRIORITY GROUPINGS

BENZENE
(3/1/88)

LAB
Hydrotropes
Specialty Alkylates
AlCl₃ Liquor
Muriatic Acid
Sulfonic Acids
Na Salt Slurries
N-Paraffins
Solvents (LPA, MR)
HAD
LAC
Plasticizers

PNA's
(7/1/88)

LAB
Hydrotropes
Specialty Alkylates
AlCl₃ Liquor

Sulfonic Acids
Na Salt Slurries
N-Paraffins
Solvents (LPA, MR)
HAD
LAC
ALFOLS (mp greater than 70°F)
Plasticizers

ETHYLENE OXIDE
(7/1/88)

Ether Sulfates
ALFONICS

1,4 DIOXANE
(1/1/89)

Ether Sulfates
ALFONICS

Epichlorohydrin
(10/1/87)

EDC
VCM

BCME
(3/1/88)

MECL
VCM
EDC

CCL₄
(10/1/88)

MECL
VCM
EDC

Chloroform
(10/1/88)

MECL
VCM
EDC

PCB's VCM
(1/1/89) (3/1/88)

EDC MECL
VCM EDC
PVC PVC

LAB's
Specialty Alkylates
Muriatic Acid

LEAD ACETATE
(1/1/89)

Hydrotropes
AlCl₃ Liquor
HCL
Sulfonic Acids
Ether Sulfates
Na Salt Slurries
MECL
Alumina
PVC

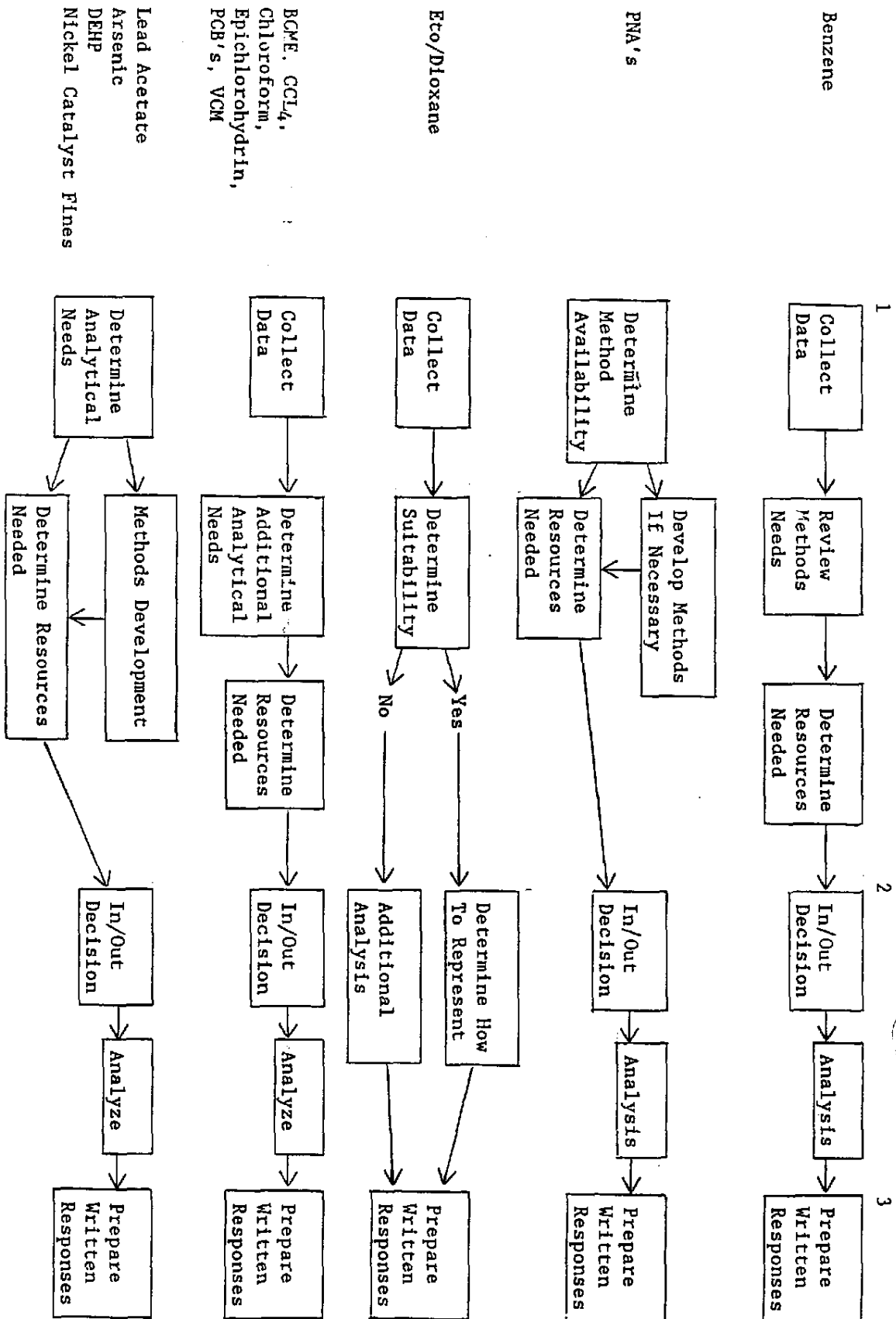
ARSENIC
(3/1/88)

Hydrotropes
AlCl₃
HCL
Sulfonic Acids
Ether Sulfates
Na Salt Slurries
Ether Sulfates
Alumina
PVC

NICKEL CATALYST FINES
(10/1/88)

ALFOLS
ALFONICS
Solvents

VVV 000014820



1 Collect data: Correspond with plants
 2 In/out decision: decision on whether to use outside contract laboratory
 3 The end product would be a form or standard response letter

SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT OF 1986
(PROPOSITION 65)

CHEMICALS KNOWN TO CAUSE CANCER OR REPRODUCTIVE TOXICITY
January 1, 1988

The Safe Drinking Water and Toxic Enforcement Act of 1986 requires that the Governor revise and republish at least once per year the list of chemicals known to the State to cause cancer or reproductive toxicity. Comments should be directed 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

Note: (1) 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.

(2) The date refers to the initial appearance of the chemical on the list.

CARCINOGENS

<u>Chemical</u>	<u>CAS Number</u>	<u>Date</u>
2-Acetylaminofluorene	53963	July 1, 1987
Acrylonitrile	107131	July 1, 1987
Adriamycin	23214928	July 1, 1987
AF-2; [2-(2-furyl)-3-(5-nitro-2-furyl)]acrylamide	3688537	July 1, 1987
Aflatoxins	----	January 1, 1988
ortho-Aminoazotoluene	97563	July 1, 1987
4-Aminodiphenyl	92671	February 27, 1987
2 Amino-5-(5-nitro-2-furyl)-1,3,4-thiadiazole	712685	July 1, 1987
Amitrole	61825	July 1, 1987
ortho-Anisidine and ortho-Anisidine hydrochloride	90040	July 1, 1987
Analgesic mixtures containing phenacetin	---	February 27, 1987
Aramite	140578	July 1, 1987
Arsenic (inorganic arsenic compounds)	---	February 27, 1987
Asbestos	1332214	February 27, 1987
Auramine	492808	July 1, 1987
Azaserine	115026	July 1, 1987
Azathioprine	446866	February 27, 1987
Benz[a]anthracene	56553	July 1, 1987
Benzene	71432	February 27, 1987
Benzidine [and its salts]	92875	February 27, 1987
Benzo[b]fluoranthene	205992	July 1, 1987
Benzo[j]fluoranthene	205823	July 1, 1987
Benzo[k]fluoranthene	207089	July 1, 1987
Benzo[a]pyrene	50328	July 1, 1987
Benzotrichloride	98077	July 1, 1987

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Benzyl violet 4B	1694093	July 1, 1987
Beryllium and beryllium compounds	---	October 1, 1987
N,N-Bis(2-chloroethyl)-2-naphthylamine (Chlornapazine)	494031	February 27, 1987
Bischloroethyl nitrosourea (BCNU)	154938	July 1, 1987
Bis(chloromethyl)ether	542881	February 27, 1987
1,4-Butanediol dimethanesufonate (Myleran)	55981	February 27, 1987
beta-Butyrolactone	3068880	July 1, 1987
Cadmium and cadmium compounds	---	October 1, 1987
Carbon tetrachloride	56235	October 1, 1987
Certain combined chemotherapy for lymphomas	---	February 27, 1987
Chlorambucil	305033	February 27, 1987
Chlordecone (Kepone)	143500	January 1, 1988
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU)	13010474	January 1, 1988
Chloroform	67663	October 1, 1987
Chloromethyl methyl ether (technical grade)	107302	February 27, 1987
4-Chloro-ortho-phenylenediamine	95830	January 1, 1988
Chromium (hexavalent compounds)	---	February 27, 1987
Coke oven emissions	---	February 27, 1987
Conjugated estrogens	---	February 27, 1987
para-Cresidine	120718	January 1, 1988
Cupferron	135206	January 1, 1988
Cycasin	14901087	January 1, 1988
Cyclophosphamide	50180	February 27, 1987
Dacarbazine	4342034	January 1, 1988
Daunomycin	20830813	January 1, 1988
DDT (1,1,1-Trichloro-2,2-bis(p-chlorophenyl)ethane)	50293	October 1, 1987
Degraded Carrageenan (not food grade carrageenan)	---	January 1, 1988
2,4-Diaminoanisoole sulfate	39156417	January 1, 1988
4,4'-Diaminodiphenyl ether	101814	January 1, 1988
2,4'-Diaminotoluene	95807	January 1, 1988
Dibenz[a,h]acridine	226368	January 1, 1988
Dibenz[a,j]acridine	224420	January 1, 1988
Dibenz[a,h]anthracene	53703	January 1, 1988
7H-Dibenzo[c,g]carbazole	194592	January 1, 1988
Dibenzo[a,e]pyrene	192654	January 1, 1988
Dibenzo[a,h]pyrene	189640	January 1, 1988
Dibenzo[a,i]pyrene	189559	January 1, 1988
Dibenzo[a,l]pyrene	191300	January 1, 1988
1,2-Dibromo-3-chloropropane (DBCP)	96128	July 1, 1987
3-3'-Dichlorobenzidine	91941	October 1, 1987
3,3'-Dichloro-4,4'-diaminodiphenyl ether	28434868	January 1, 1988
Diepoxybutane	1464535	January 1, 1988
→ Di(2-ethylhexyl)phthalate	117817	January 1, 1988
1,2-Diethylhydrazine	1615801	January 1, 1988
Diethyl sulfate	64675	January 1, 1988
Diethylstilbestrol	56531	February 27, 1987
Dihydrosafrole	94586	January 1, 1988
3-3'-Dimethoxybenzidine (ortho-Dianiasidine)	119904	January 1, 1988
4-Dimethylaminoazobenzene	60117	January 1, 1988
trans-2-[(Dimethylamino)methylimino]-5-[2-5-nitro-2-furyl]vinyl]-1,3,4-oxadiazole	55738540	January 1, 1988
3,3'-Dimethylbenzidine (ortho-Tolidine)	119937	January 1, 1988

Dimethylcarbamoyl chloride	79447	January 1, 1988
1,2 Dimethylhydrazine	540738	January 1, 1988
Dimethyl sulfate	77781	January 1, 1988
1,4-Dioxane	123911	January 1, 1988
Direct Black 38 (technical grade)	1937377	January 1, 1988
Direct Blue 6 (technical grade)	2602462	January 1, 1988
Epichlorohydrin	106898	October 1, 1987
Estradiol 17 B	50282	January 1, 1988
Estrone	53167	January 1, 1988
Ethinylestradiol	57636	January 1, 1988
Ethylene dibromide	106934	July 1, 1987
1,2-Dichloroethane (Ethylene dichloride)	107062	October 1, 1987
Ethyleneimine	151564	January 1, 1988
Ethylene oxide	75218	July 1, 1987 ←
Ethylene thiourea	96457	January 1, 1988
Ethyl methanesulfonate	62500	January 1, 1988
Formaldehyde (gas)	50000	January 1, 1988
Formylhydrazino-4-(5-nitro-2-furyl)thiazole	3570750	January 1, 1988
Glycylaldehyde	765344	January 1, 1988
Gyromitrin (acetaldehyde methylformylhydrazone)	16568028	January 1, 1988
Hexachlorobenzene	118741	October 1, 1987
Hexachlorocyclohexane (technical grade)	---	October 1, 1987
Hexamethylphosphoramide	680319	January 1, 1988
Hydrazine and hydrazine sulfate	302012	January 1, 1988
Hydrazobenzene	122667	January 1, 1988
Indeno [1,2,3-cd]pyrene	193395	January 1, 1988
Iron dextran complex	9004664	January 1, 1988
Lead acetate	301042	January 1, 1988
Melphalan	148823	February 27, 1987
Methoxsalen with ultraviolet A therapy (PUVA)	298817	February 27, 1987
2-Methylaziridine (propyleneimine)	75558	January 1, 1988
4,4'Methylene bis(2-chloroaniline)	101144	July 1, 1987
4,4'Methylenedianiline and its dihydrochloride	101779	January 1, 1988
Metronidazole	443481	January 1, 1988
Michler's ketone	90948	January 1, 1988
Mirex	2385855	January 1, 1988
Mustard Gas	505602	February 27, 1987
2-Naphthylamine	91598	February 27, 1987
Nickel refinery dust from the pyrometallurgical process	---	October 1, 1987
Nickel carbonyl	13463393	October 1, 1987
Nickel subsulfide	12035722	October 1, 1987
Nitrilotriacetic acid	139139	January 1, 1988
Nitrofen (technical grade)	1836755	January 1, 1988
Nitrogen mustard	51752	January 1, 1988
2-Nitropropane	108032	January 1, 1988
N-Nitrosodi-n-butylamine	924163	October 1, 1987

N-Nitrosodiethanolamine	1116547	January 1, 1988
N-nitrosodiethylamine	55185	October 1, 1987
N-nitrosodimethylamine	62759	October 1, 1987
p-Nitrosodiphenylamine	156105	January 1, 1988
N-Nitrosodi-n-propylamine	621647	January 1, 1988
N-nitroso-N-ethylurea	759739	October 1, 1987
N-nitroso-N-methylurea	684935	October 1, 1987
N-Nitrosomethylvinylamine	4549400	January 1, 1988
N-Nitrosomorpholine	59892	January 1, 1988
N-Nitrosornicotine	16543558	January 1, 1988
N-Nitrosopiperidine	100754	January 1, 1988
N-Nitrosopyrrolidine	930552	October 1, 1987
N-Nitrososarcosine	13256229	January 1, 1988
Oxymetholone	434071	January 1, 1988
Panfuran S	---	January 1, 1988
Phenazopyridine and its hydrochloride	136403	January 1, 1988
Phenytoin and sodium salt of phenytoin	57410	January 1, 1988
Polybrominated biphenyls	---	January 1, 1988
Polychlorinated biphenyls (containing 60 or more percent chlorine by molecular weight)	---	January 1, 1988
Procarbazine and its hydrochloride	366701	January 1, 1988
Progesterone	57830	January 1, 1988
1,3-Propane sultone	1120714	January 1, 1988
beta-Propiolactone	57578	January 1, 1988
Propylthiouracil	51525	January 1, 1988
Sodium saccharin	128449	January 1, 1988
Safrole	94597	January 1, 1988
Soots, tars, and lubricant base oils and derived products, specifically vacuum distillates, acid treated oils, aromatic oils, mildly solvent-refined oils, mildly hydrotreated oils, and used engine oils; and mineral oils, when used in occupations such as mulespinning, metal machining, and jute processing.	---	February 27, 1987
Streptozotocin	18883664	January 1, 1988
Sulfallate	95067	January 1, 1988
2,3,7,8-Tetrachlorodibenzo-para-dioxin (TCDD)	1746016	January 1, 1988
Thioacetamide	62555	January 1, 1988
Thiourea	62566	January 1, 1988
Thorium dioxide	1314201	February 27, 1987
ortho-Toluidine and its hydrochloride	95534	January 1, 1988
Toxaphene (polychlorinated camphenes)	8001352	January 1, 1988
2,4,6-Trichlorophenol	88062	January 1, 1988
Treosulfan	299752	February 27, 1987
Tris(1-aziridinyl)phosphine-sulfide (thiotepa)	52244	January 1, 1988
Tris(2,3-dibromopropyl)phosphate	126727	January 1, 1988
Urethane	51796	January 1, 1988
Vinyl chloride	75014	February 27, 1987

REPRODUCTIVE TOXICANTS

Aminopterin	54626	July 1, 1987
Chlorcyclizine hydrochloride	82939	July 1, 1987
1,2-Dibromo-3-chloropropane (DBCP)	96128	February 27, 1987
Diethylstilbestrol (DES)	56531	July 1, 1987
Diphenylhydantoin	630933	July 1, 1987
Ethyl alcohol in alcoholic beverages	64175	October 1, 1987
Ethylene oxide	75218	February 27, 1987
Etretinate	54350480	July 1, 1987
Isotretinoin	4759482	July 1, 1987
Lead	---	February 27, 1987
Methyl mercury	---	July 1, 1987
Thalidomide	50351	July 1, 1987
Valproate	99661	July 1, 1987
Warfarin	81812	July 1, 1987

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