



PPG INDUSTRIES, INC. INDUSTRIAL CHEMICAL DIVISION - U. S. P. O. BOX 1000 LAKE CHARLES, LA. 70602

H. B. LOVEJOY, M. D.
Plant Physician

July 5, 1979

Charles E. Becker, M.D.
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1001 Potrero Avenue
San Francisco, CA 94110

Dear Chuck:

I found your letter waiting for me when I returned as well as a stack at least two feet tall and I am just getting around to answering you.

The primary products of PPG in Lake Charles are Chlorine and Sodium Hydroxide (Caustic) manufactured by the electrolysis of brine. We also manufacture chlorinated organics with our own chlorine and ethylene from a nearby oil refinery as raw materials and sell the various solvents as well as vinyl and vinylidene only in monomer form.

We use mercury only in one of the chlorine manufacturing processes. Operators, cell repair people and some maintenance people are exposed to mercury. I am enclosing an area monitoring report with an outline of the mercury cell room and the various air levels. We also do personal monitoring for mercury at varying intervals. These individuals always carry with them the "Comfo II" respirator and use this when exposure to mercury is likely. We monitor individuals biologically only by urine mercury levels and use 200 ug/l as a warning level calling the employee and his supervisor in for a conference concerning work and personal hygiene habits. This also alerts the supervisor that he may have to replace an employee. If the mercury level in the urine reaches 250 ug/l, the employee is shifted to a different area of the plant and urine mercury levels will be repeated at weekly intervals until the employee has returned to less than 150 ug/l on two successive weeks. Fortunately, this does not happen very often.

We also have a few people in inorganic lead. Molten lead is used in the diaphragm cell area where it is poured around carbon anodes in the diaphragm cell repair area. I am sending a copy of the recent blood lead levels. Also a copy of my thinking on the classification of chlorine inhalation cases is enclosed.

SL 085136

Charles E. Becker, M.D.

Page 2

July 5, 1979

I am not certain what you mean by learning more about the actual processes that go on with PPG, Inc. If you will be more explicit, I will try to supply the information.

I appreciate you sending me the bibliography on lead and will be happy to work with you in any way I can concerning evaluation of mercury exposure problems.

Enjoyed being with you in Cincinnati and hope to see you again soon.

Sincerely,



H. B. Lovejoy, M.D.

/lb

enclosures (3)

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CHEMICALS



INDUSTRIES

INTEROFFICE / LAKE CHARLES

TO Fred Dehn DATE May 15, 1979
FROM H. E. Dovejoy, M.D. SUBJECT NIOSH Guidelines on
Pregnancies and Work

Hal
I am enclosing title page from page 16 of "NIOSH Guidelines on Pregnancies and Work" which lists vinyl and tetrachlorethylene but not trichlor. It lists perchlor as both a mutagen and teratogen. I was quoting from memory and I am sorry that I misinformed you; however, I feel that there is very little difference between the two in this respect. If I can find any additional information, I will forward it to you.

I still feel that women who may become pregnant should not be exposed to any chlorinated hydrocarbons.

lb

enclosure

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GUIDELINES ON PREGNANCY AND WORK

The American College of
Obstetricians and Gynecologists
Chicago, Illinois 60601

312-222-1600

Contract No. 210-76-0159

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
Center for Disease Control
National Institute for Occupational Safety and Health
5600 Fishers Lane
Rockville, Maryland 20857

September 1977

For sale by the Superintendent of Documents, U.S. Government
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CHART OF TOXINS AND EFFECTS

AGENTS	DEFINITIVE SYSTEMIC TOXICITY					SUSPECTED REPRODUCTIVE EFFECTS					AIR STANDARDS*		
	Neurologic	Hepatic	Renal	Hematologic	Cardiovascular	SPECIAL EFFECTS	Cardiotoxicity	Reduced Fertility	Spontaneous Abortion	Mutagenesis	SUGGESTED BIOLOGICAL TESTING	OSHA (existing)	NIOSH (proposed)
Heavy metals													
Cadmium	•	•	•	•	•		•	•	•	•	Urine cadmium Quant. low molecular weight proteins	Air 0.1 mg/M ³ dust 0.2 mg/M ³	40 µg/M ³
Lead	•	•	•	•	•		•	•	•	•	Blood lead** Blood zinc protoporphyrin Urine ALA Urine coproporphyrin	Inorganic 0.2 mg/M ³ (Proposed 0.1 mg/M ³)	Inorganic 0.1 mg/M ³ and Blood Lead 80 µg/100gms
Mercury	•	•								•	Blood mercury Urine mercury	Inorganic 0.1 mg/M ³ organic 0.01 mg/M ³	Inorganic 0.05 mg/M ³
Organic solvents													
Benzene (benzol)	•	•					•	•	•	•	Urine phenols CBC	10 ppm (emergency proposed: 1 ppm)	1 ppm
Halogenated hydrocarbons													
2-chlorobiphenyls (chlorobiphenyls)	•	•	•	•	•		•	•	•	•	Liver function test	25 ppm	1 ppm
Dibromochloropropane	•	•					•	•			Sperm count Serum testosterone	10 ppb (emergency proposed)	10 ppb
Epichlorohydrin	•	•	•								Liver function test	20 mg/M ³	2 mg/M ³
Ethylene dibromide	•	•					•	•				20 ppm	1 mg/M ³
Polychlorinated biphenyls (PCB's)	•	•				Chloracne	•	•			Blood analysis Adipose tissue Serum transaminase	Compounds with 42% chlorine 1 mg/M ³ 54% chlorine 0.5 mg/M ³	1 µg/M ³
Tetrachloroethylene (Perchloroethylene)	•	•	•				•	•	•			100 ppm	50 ppm
Vinyl chloride	•	•	•			Acrosteolysis	•	•			Liver function test	1 ppm	1 ppm
Hypoxic agents													
Carbon monoxide	•	•	•							•	Carbonyl hemoglobin	50 ppm	35 ppm
Anesthetic gases													
Halogenated gases e.g. halothane, methoxyflurane	•	•					•	•	•	•		not specified	Halogenated anesthetics 2 ppm based on weight of specific gas sampled not >1 hour
Pesticides													
Carbaryl	•						•					50 mg/M ³	50 mg/M ³
Chlorinated hydrocarbons (e.g. chlordane)				•			•	•			Adipose tissue analysis Blood analysis	varies with specific compounds e.g. Chlordane 0.5 mg/M ³	
Chlordane (lupone)	•	•				Pneumic and joint pain	•	•			Blood analysis	emergency standard 1 µg/M ³	1 µg/M ³
Estrogenic compounds													
Diethylstilbestrol				•			•	•	•		Blood analysis	not specified	not specified
Ionizing radiation (Whole body)													
X-rays and gamma rays						Gastro-intestinal disorders	•	•	•	•	Personal film badge dosimetry Thermoluminescent dosimetry	NCRP recommendation 1.25 rad/quarter, 5 rad/year Pregnancy 0.5 rem/life pregnancy	
Miscellaneous substances													
Carbon disulfide	•	•				Reinopathy	•	•	•		Urine xanthine-oxidase test	20 ppm	3 mg/M ³
Ethylene Oxide				•							CBC	50 ppm	50 ppm

- Animal and/or human data
- Time weighted average 40-hr week, 8-hr day (OSHA), 10-hr day (NIOSH)
- In pregnancy, blood lead less than 40 µg/100 gms is suggested
- Evidence only male infertility; no data on females