

CHEMICAL LINKED TO CANCER IN MICE

Liver Disease Is Produced
in Vinyl Chloride Study

By JANE E. BRODY

An industry-sponsored study of vinyl chloride has indicated that when mice are exposed to the amount of the chemical that workers are currently permitted to inhale, the animals develop a rare fatal cancer of the liver that has been found in 12 vinyl chloride workers.

Vinyl chloride, an explosive gas, is used to make polyvinyl chloride, the basis for much of modern plastics. Some 6,500 workers are involved in the vinyl chloride-polyvinyl chloride industry. In addition, vinyl chloride has been used as a propellant in some aerosol consumer products, including hair sprays and pesticides.

The industry's laboratory finding, presented yesterday to a private briefing for Government and industry officials, raises questions about the safety of the current Federal emergency occupational standard of 50 parts of vinyl chloride per one million parts of air.

At this level of exposure for seven hours a day over seven months, several mice in the study, sponsored by the Manufacturing Chemists Association, are reported to have developed angiosarcoma, or cancer of the liver.

In a previous study, Prof. Cesare Maltoni of the Cancer Institute in Bologna, Italy, found the cancer in rats at levels of 250 parts per million and higher.

Professor Maltoni's studies to date have shown no adverse effects at 50 parts per million, and it was partly for this reason that the U.S. Department of Labor's Occupational Safety and Health Administration chose 50 parts per million for the emergency standard.

Developed Spontaneously

John O'Neill, chief of health standards development at the agency, said yesterday that the emergency standard would remain until "we have looked closely at the data and seen how good it is." He noted that mice sometimes develop angiosarcoma of the liver spontaneously.

Mr. O'Neill said that the agency expected to publish in the Federal Register next week a proposed permanent standard for vinyl chloride that would more closely reflect the judgment of its scientific advisers, the National Institute for Occupational Safety and Health. They and other scientists have said that there can be no safe level established for exposure to a cancer-causing agent, and that workers should not be exposed to any detectable levels of vinyl chloride.

The hair sprays in question, manufactured by Clairol and Bonat, Inc., are being recalled from store shelves. The Environmental Protection Agency is expected to release today the brand names of pesticides containing vinyl chloride. The agency said yesterday that all 23 manufacturers had agreed to substitute a different propellant, and all are being asked to voluntarily recall existing products containing vinyl chloride.

The environmental agency is studying what to do about the more than 300 million pounds of vinyl chloride that escape into the environment each year in the process of plastics manufacturing.

Vinyl chloride had been used as an industrial chemical for more than 30 years in this country with relatively little concern about its possible toxic effects.

In January, the B. F. Goodrich Company announced that four workers in its polyvinyl chloride plant in Louisville, Ky., had developed liver cancer. There are seven cases known at the Louisville plant and five elsewhere. The announcement led to an industrywide search for the possible effects of the chemical. Mass medical examinations were given at one plant in Niagara Falls.

The latest study, supported by the chemists association and conducted by Bio-test Laboratories, Inc., in Northbrook, Ill., was begun last summer, before the Goodrich announcement, in response to early reports of Professor Maltoni's findings.

Car With Chemical Derrails

PHILADELPHIA, April 15 (AP) — A railroad freight car derailed and leaked some of its cargo of vinyl chloride onto a main road here late last night. There were no injuries.

Thomas Hopping, a spokesman for Penn Central, said: "It is noxious. It is flammable and dangerous. But the situation right now is that we have everything under control. There is no hazard at this point in time as far as the leak is concerned."

The 38,000-gallon-tank car was one of three that derailed from a 52-car Penn Central freight. The tanker slid down an embankment onto West River Drive, blocking the four-lane road. The officials close it to traffic today.

Vaporizer Recalled

WASHINGTON, April 15 (AP) — The Food and Drug Administration announced today the recall of an aerosol drug containing vinyl chloride. The agency said that the Adams Drug Company Inc. of Pawtucket, R.I., was recalling its spray vaporizer.

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Dawson: speak with one voice

Mr. Whittemore and Mr. Brennan provided the committee with the specifics of the industry's position. SOCMA's Whittemore focused on ASP and sector-by-sector reciprocity provisions the chemical industry wants included in the trade bill. MCA's Brennan focused on the need for use of industry advice in the negotiations and for curbing "excessive" tariff cutting authority in the House bill.

Cancer bill passes, infighting goes on

A bill authorizing federal cancer research efforts to continue for three more years at a cost totaling nearly \$2.6 billion sailed through the Senate last week without a "nay" vote, despite the threat of a veto by President Nixon.

Although supporting more cancer research, the Administration opposes the bill's provision setting up a five-member Presidential panel to oversee all federal biomedical research. Neither enhanced Congressional control nor better administration of health programs would result, Frank Carlucci, Health, Education, and Welfare undersecretary, has said in urging a veto.

Sen. Edward M. Kennedy (D.-Mass.) and others won approval for the panel, particularly by questioning the wisdom of cutbacks at the National Institutes of Health, while cancer and heart disease research have received added funds.

Among Sen. Kennedy's arguments for the bill is what he calls the need to counter a "chemical onslaught." Some 10,000 new chemicals are produced yearly in quantities of 1 ton or more. About 500 are tested in the U.S. each year, he adds. "Obviously at this level we cannot catch up with testing the older chemicals or even make a dent in the yearly inundation of the new," he concludes.

Similar viewpoints on testing

new and old chemicals were heard at an American Cancer Society seminar in St. Augustine, Fla., where the current cancer scare over vinyl chloride was aired. There, Dr. Irving J. Selikoff, Mount Sinai School of Medicine, New York City, estimated that perhaps 5% of the polyvinyl chloride work force will get an incurable liver cancer.

Although this estimate is based largely on medical studies at a Goodyear Tire & Rubber PVC plant, much more is expected to be learned when the New York Academy of Sciences holds a by-invitation-only meeting May 10-11 with papers given by virtually all the top scientists studying vinyl chloride.

Benzene shortage pinned on government

Benzene supplies are 10 to 15% below anticipated demand and they are likely to stay that way. Big consumers such as styrene makers are being forced to cut back production. And much of the blame for this situation lies with the Federal Energy Office.

These are the major findings of a new report by the Petrochemical Energy Group (PEG), an organization of 21 major chemical producers. According to the organization, companies in the chemical industry are still experiencing significant shortages of particular feedstocks of as much as 50% in some cases.

Total U.S. benzene production in 1973, PEG estimates, was 1.45 billion gallons, and imports amounted to 23 million gallons. With demand estimated at 1.74 billion gallons (based on available derivative capacity), a potential 260 million gallon shortage resulted. A PEG spokesman sees this shortfall persisting into 1974.

PEG claims that, despite priorities given petrochemicals in the mandatory petroleum allocation program, crude oil allocations to refiners may have reduced benzene production by forcing refiners with large benzene extraction facilities (such as Gulf Oil) to sell "excess" crude to smaller refiners that don't have benzene capacity.

FEO refinery yield programs also may be discouraging benzene output by shifting refinery output toward middle distillates or gasoline.

PEG recommendations for easing supplies include that:

- FEO make allowances for benzene needs before allocating crude oil among refiners, and start a refinery monitoring program to maxi-

mize use of benzene extraction at fractionating capacity.

- FEO modify petroleum allocation regulations to assure feedstock needs for new benzene capacity.

- The Environmental Protection Agency reconsider its plans for removing lead from gasoline, since additional benzene will be needed for octane building.

Strike continues at Dow Midland complex

Dow Chemical's Midland, Mich., production facilities set a new record last Wednesday by operating at more than 90% of capacity the first time ever, a Dow spokesman boasts. What makes the boast interesting is that the Midland complex is being struck by its hourly workers and is being operated by some 2700 salaried employees working 12-hour shifts.

The strike began March 18 after contract negotiations between United Steel Workers Local 12075 and the company broke down. The contract had expired March 11, but was extended while negotiations went on. However, a majority of the 5300 union members rejected Dow's offer of \$1.62 per hour in additional wages and benefits (74 cents in actual wages) spread over a three-year period. According to Dow, the current average hourly rate at Midland is \$5.32 for union workers.

At the outset there was mass picketing at the Midland works and also picketing at company headquarters. There were reports of minor scuffles between striking and nonstriking employees, but the situation is now said to be quiet.

Dow went to court March 19 to get an injunction against the strikers; instead, the union local signed a letter of understanding (in lieu of injunction) limiting it to 75 pickets at each plant gate and at headquarters. However, Dow says, there was difficulty getting trucks in and out of the plant, and some harassment of nonstriking workers. So Dow went back to court on March 23 and obtained a preliminary injunction that enjoined mass picketing, and called on both parties to resume negotiations in good faith. At press time, negotiations were still under way, but there were no predictions as to the outcome.

A side effect of the strike is that Dow, for the first time in its history, will hold its annual stockholders meeting outside of Midland. The meeting will be held instead in Miami on May 8.

To - A.B. Steele

R. M. Wheeler

M. E. Esinkhour

T. W. Connolly

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R. N. WHEELER JR.

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EPA toward VCL emission regulations as
discussed at your meeting yesterday.

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GROUP REPORTS AIRBORNE VINYL CHLORIDE THREAT IN INDUSTRIAL AREAS

There is a "fearful possibility" that residents of industrial areas including Houston, southern Louisiana and western Kentucky are being exposed to hazardous levels of vinyl chloride, and Environmental Protection Agency should require all state air pollution control agencies to monitor chemical plant emissions to determine the extent of the hazard, Center for Science in the Public Interest urged April 25 in a report to EPA.

Three areas singled out appear to have most serious problem, group said, but Painesville, Ohio, and Long Beach, Calif., also should receive special attention. Vinyl chloride is being emitted from smokestacks at larger plants and EPA documents indicate concentrations of 0.37 parts per million have been found in some areas of Texas, center reported.

Group estimated that about 9,000 grams of vinyl chloride are emitted for every batch of the chemical produced in a 10,000-gallon reactor. Concentrations 100 meters downwind from plants will approach 200 ppm and "certain towns and cities may be seriously affected by vinyl chloride pollution."