

New Rules Stir Dispute: Low Deadly Is Vinyl Chloride?

By DAVID NESS
Beacon Journal Washington Bureau

WASHINGTON — The first clear warning that vinyl chloride — a basic building block in countless household items — was dangerous to factory workers came last winter.

Alarmed officials of the National Institute of Occupational Safety and Health (NIOSH) notified the U.S. Labor Department that seven B.F. Goodrich Chemical Co. workers in Louisville, Ky., had died of a rare liver cancer, called angiosarcoma.

The death, NIOSH told officials of the Federal Occupational Safety and Health Administration (OSHA), were almost certainly linked to prolonged exposure to vinyl chloride gas.

VINYL CHLORIDE gas is the basic ingredient in polyvinyl chloride (PVC), a plastic used in making everything from baby bottles to automobile dashboards. The finished plastic products are not suspected of causing any disease, unless they are heated or saved, in which case they could release VC gas or PVC resins, thought to be hazardous.

Within three weeks after learning of the hazard, OSHA convened public hearings, in mid-February, to examine the mounting evidence and study the recommendations of Federal researchers, industry chemists and labor union officials.

In March, OSHA teams inspected several plants making and processing VC and PVC. By early April, OSHA issued an emergency temporary standard, lowering the permissible level of VC from 500 to 50 parts per million in the air of factories.

The 50 ppm standard was a stop-gap, designed to reduce the risk until a permanent

standard could be developed. In the meantime, Bio-Test Laboratories of Northbrook, Ill., released the findings of its preliminary research on the impact of VC on mice.

Some laboratory mice, Bio



Peter Bommarito

Test reported, exposed over several months to 550 ppm of VC had developed liver cancer.

ON MAY 10, OSHA proposed a new permanent vinyl chloride standard, to be effective Oct. 5, reducing the allowable amount to a "no detectable" level. In practical terms, this means about 1 or 2 parts per million of VC in the air.

OSHA's proposal was greeted with howls of protest in the plastic, chemical and rubber industries.

For the past several days, OSHA has been conducting hearings on the proposed "no detectable level" standard.

Anton Vittone, president of B.F. Goodrich, Unumco and chairman of the Society of the Plastics Industry vinyl chloride committee, told hearing examiners:

"The committee is unanimous in its position that the proposed permanent standard is not technologically feasible, and, if adopted, would shut down the industry."

Officials from different companies estimated that from 1.6 to 2.2 million workers would be put out of work if the government standard were imposed.

"In the United States," said Ralph L. Harding, Jr., president of the Society of Plastics Industry, "there are 13 plant

plants and 36 plants which polymerize the monomer into polyvinyl chloride."

IN ADDITION, said Goodrich's Philip J. Weaver, "there are at least 3,000 and possibly 4,000 . . . owner-managed small businesses" engaged in various phases of the PVC processing industry.

"These typically small companies," Weaver added, "do not generally have the highly scientific capabilities required for detection of vinyl chloride" at the level proposed by the government.

Beyond that, other officials said, there are scores of spin-off companies, engaged in the distribution and merchandising of plastic products, that also would collapse if the manufacturers shut down.

In response to this testimony, Peter I. Bommarito, president of United Rubber Workers International, accused the industry of trying to "black-mail" the government into backing away from the standard with threats of dire economic consequences.

"If PVC cannot be made and used safely," Bommarito said, "then the proposed standard must be replaced by an orderly procedure to phase out vinyl chloride production and find substitutes . . . We have both our jobs and our lives at stake . . . The vital organs of our bodies are not for sale."

But Bommarito's argument was not pegged solely to the contention that the PVC industry should be scrapped.

HE ALSO argued that the technical ability to comply with the standard already exists in most instances. And where it doesn't, he said, the industry could readily develop the capability if it quit complaining and got to work on it.

"The rubber workers of America," Bommarito told reporters later, "are willing to help solve this problem if the companies will let us."

Both in comments submitted for the record and in questionnaires of companies

industry lawyers cast doubt on assertions that the technology exists and questioned the validity of laboratory research on mice and other small mammals.

"We all must be aware of

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— Peter Bommarito

the inherent uncertainties of extrapolating from animals to humans," Vittone said.

Though Firestone Plastics Co. has not yet made its formal presentation to OSHA, one of its lawyers, Walter B. Cona, repeatedly said various union and government witnesses on both the techni-

cal and medical aspects of the problem.

A FIRESTONE public relations man, asked about the company's strategy, issued a three-sentence press release, stating in part: "We believe that statements with those accuracy or relevance we disagree should be challenged."

That, of course, is what a public fact-finding hearing is all about.

But one NIOSH official was overheard remarking, "They (industry lawyers) seem to be trying to build a case that vinyl chloride is just harmless stuff."

World-wide, NIOSH director Marcus M. Key told the hearing examiners, 19 cases of liver cancer among PVC and VC workers have been confirmed. The incidence of the disease is many-fold higher among plastics workers than among the general population, where only 20 or 30 cases a year are detected, Dr. Key said.

Thirteen of the 19 con-

firmed cases, he went on, were reported in the United States, with the remainder in Europe.

In addition to the seven cases at Goodrich's Louisville plant, Dr. Key said, there have been three cases at Goodyear's plant in Niagara Falls, N.Y., two cases at the Union Carbide plant in South Charleston, W. Va., and one case at Firestone's plant in Pottstown, Pa.

One of the major difficulties in diagnosing the disease and tracing its cause, Dr. Key said, is its long period of latency. Most of the afflicted plastic workers, he said, had been on the job for 20 years.

MEDICAL researchers, despite doubts raised by some industry figures, are certain of one thing: that long exposure to VC causes angiosarcoma or lesser liver ailments.

Dr. Irving J. Selikoff, of Mt. Sinai Medical School in New York City, helped set up clinical examinations of 354

workers exposed to vinyl chloride.

"These workers," he said, "demonstrated a significant prevalence of liver abnormalities, peripheral vascular (vein) changes, and lung ab-



Anton Vittone

normalities. The latter may reflect exposure to polyvinyl chloride dust, rather than to the monomer gas."

A search of the records of former workers at the same plant, Dr. Selikoff said, turned up the finding that

over a period of 17 years, 24 had died — including three who had liver cancer and a fourth who died of complications stemming from liver disease.

The issue confronting the government is how much exposure to the gas is hazardous?

THE COMPANIES say that no evidence exists to show that prolonged exposure to 50 parts per million is harmful to human beings.

But government and private researchers are not so sure about that. "If man responds to low level exposure . . . as has the rodent," Dr. H. P. Kraybill of the National Cancer Institute said, "continuous exposure to 50 ppm for man would have a high probability for inducing liver cancer."

The medical men, in effect, are saying that an extra margin of safety is warranted, particularly in view of the fact that no one knows for certain what a lethal level is.

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