

OSHA HOLDS HEARINGS ON WORKER EXPOSURE TO VINYL CHLORIDES

The Occupational Safety and Health Administration last week opened its hearings on standards for worker exposure to vinyl chlorides. The proceedings were in that sort of atmosphere peculiarly unique to public discussion in Washington of an issue that has gained emotional appeal and where many hard facts are not easy to come by. There was the almost filled hearing room; the glare of lights for the television cameras; the claims and counterclaims; lawyers for industry trying to trap the government witnesses; industry public relations men scurrying around the hearing room and the press room; the dramatic telegram disclosing new information; and underneath it all the droning voices of the scientific witnesses trying to report as unemotionally as possible the less than exact evidence that points the finger towards vinyl chlorides as the cause of death to at least 21 human beings.

The OSHA hearings, conducted by an administrative law judge, revolve around the proposal to limit worker exposure to less than any detectable level of vinyl chlorides in the workplace. The plastics industry complained that the standard would be impossible to meet in the first place, and if it were attempted, could cost as much as \$90-billion in lost production and up to 2.2-million jobs. Even OSHA isn't so sure. Daniel P. Boyd, director of the Office of Standards Development told the hearing that "I would like to emphasize while OSHA has proposed a specific standard concerning vinyl chloride, we regard it as just that -- a proposal."

However, it was also clear that the evidence is mounting that a low level of worker exposure to VC may be required. Boyd read a telegram from Dr. Cesare Maltoni, director of the Institute of Oncology, Bologna, Italy, who has been conducting much of the leading research on VC. The telegram reads: "Our project on VC carcinogenesis includes 15 experiments, one now completely ended, other ones already with results, other ones started few months or few weeks ago. The up-to-date results indicate that VC administered by inhalation produces in rats zymbal gland carcinomas, nephroblastomas, angiosarcomas of liver and other sites, skin carcinomas and probably hepatomas and neuroblastomas. Over 64 rats exposed to 50 ppm for 1 year we observed in the last 3 animals surviving 135 weeks from the beginning of the experiment 1 liver angiosarcoma, 1 intrabdominal angiosarcoma and 1 nephroblastoma. Moreover in the same group a subcutaneous angiopericitoma was observed. None of these tumors have been observed on control rats. In mice VC produces angiosarcomas and angiomas of liver and of other sites, pulmonary tumors, mammary carcinomas and skin tumors. Over 60 mice exposed to 50 ppm for 7 months at the present moment, after 49 weeks of experiment, we have observed 9 mammary carcinomas, 2 liver fibroangiomas and 2 subcutaneous angiomas. Only one lung adenoma was observed in one control mouse."

Boyd then went on to say that based on Maltoni's work, plus other work, "our present judgment is that VC is a carcinogenic agent."

The plastics industry, which brought a parade of witnesses and had requested four hours to give its testimony, offered a substitute standard, presented by Anton Vittone, chairman of the society's VC monomer and PVC producers. Vittone is president of B.F. Goodrich Chemical Co. The recommendations: for PVC resin plants the standard by Oct. 5, 1974 would be 40 ppm of VCM, with levels above this requiring "the use of practical and effective respiratory protection." By Oct. 1975, the ceiling would drop to 25 ppm, with levels above this requiring respiratory protection. For vinyl chloride monomer plants, the ceiling by this October would be 25 ppm, and by Oct. 1977, would drop to 10 ppm.

Vittone questioned the ability to use animal data for determining the effect on humans. "We all must be aware of the inherent uncertainties of extrapolating from animals to humans," he said. However, earlier in the hearings this question received a slightly different slant. Dr. H.F. Kraybill of the National Cancer Institute, in answer to a question from the audience, said that there is a "high index of credibility" in extrapolating data from rats to man. Kraybill, in his testimony, came down hard on the need to control VC. "If man responds to low level exposure to vinyl

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chloride as has the rodent," he said, "a low level, continuous exposure of 50 ppm for man would have a high probability for inducing liver cancer."

Since the time it takes for the effect of VC to become apparent is quite long, the OSHA proposal calls for a system of recordkeeping of employee health. The proposal now is for a 20-year recordkeeping period. However, during questioning, a spokesman for Ralph Nader's Health Research Group extracted from an official from the National Institute for Occupational Safety and Health, William Lloyd, the promise that he would try and have the time period extended to 30 years.

The plastics industry contention that \$90-billion would be lost in production and up to 2.2-million persons would be thrown out of work by the standard was disputed by a draft environmental impact statement on the proposed regulation. The plastics industry relied on the prestigious firm of Arthur D. Little for its information. The proposed OSHA impact statement, though, says that the standard "for the most part will likely cause a slight decrease in productivity and small increase in costs for the products made from vinyl chlorides." It goes on to say that most companies producing or using VC or PVC "will be able to absorb such costs, so that the economic impact will be minimal in these cases," however, for some firms, "substantial capital costs" may be incurred.

Perhaps not too surprising, strong support for the standard was voiced by organized labor. Taking an extremely hard line, the Industrial Union Department of the AFL-CIO said it has concluded that the goal of no detectable level for VC "is both necessary and feasible," as was put by United Rubber Worker president Peter Bommarino, who presented the main labor position. He said that the nation is being "blackmailed" by management statements that the standards are not feasible and will mean an end to more than a million jobs. It is labor's position, he said, that the country has survived "for nearly two hundred years without polyvinyl chloride and we can survive in the future without it." He went on to say that if PVC cannot be produced and used safely, "then the proposed standard must be replaced by an orderly procedure to phase out vinyl chloride production and find substitutes for its products, or to phase out the products themselves."

Opening up another front in the VC area were spokesmen for the nation's meatcutters. Ralph Quattrocchi, safety director for the Amalgamated Meat Cutters/Retail Food Store Employees Union, alleged that hundreds and perhaps thousands of meatcutters are suffering from "meat wrappers syndrome." This is a malady which "afflicted workers who wrap meat and breathe the fumes emitted when the PVC film is cut with the hot wire." The disease, he said, "is characterized by breathlessness, wheezing, coughing, and dizziness."

He acknowledged that to date tests run by NIOSH, New York's department of labor and others show that VCM is not in the decomposition of PVC meat wrapping film. However, he said, this does not mean that "the fumes generated during the process of wrapping meat contain no vinyl chloride." What it does say, he added, is that "with today's technology, none were detected."

Also appearing at the hearing was Dr. Irving J. Selikoff, Mt. Sinai School of Medicine, New York, who reiterated many of his earlier statements on VC. Selikoff said that in view of the scientific evidence now being developed, "I suggest that the only prudent course for the prevention of hemangiosarcoma of the liver among vinyl chloride workers is to provide a work environment with no detectable level of vinyl chloride."

Selikoff said he is "optimistic that we will be able to control vinyl chloride hazards" and that the use of PVC will continue to "flourish and expand." However, he added a strong constraint, saying that it is critical that "we eliminate health hazards associated with production of the monomer, its polymerization and the use of the polymer." He said he finds it unlikely that the previous "curious calm" about VC over the past years will continue.

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